O BERIMBAU

A PROJECT OF ETHNOMUSICOLOGICAL RESEARCH, MUSICOLOGICAL ANALYSIS, AND CREATIVE ENDEAVOR

by

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A stretched string is a thing of beauty…[1]

[1] Harry Partch, *Genesis of a Music,* (New York: Da Capo, 1974), 100.

DEDICATION

To Naná Vasconcelos, whose wonderful music planted the seed,

and

to all of my teachers past and present.

ACKNOWLEDGEMENTS

I have been helped tremendously along this journey by a number of very special people and institutions that I wish to acknowledge. First and foremost are thanks to Erin Lesser, who has patiently endured my obsession during the course of writing this thesis, was its first editor, and has been invaluably supportive all along the way. Thanks to all of my teachers and professors past and present, who have shaped my thinking, my playing and inspired my musical development: Steven Schick, Chris Lamb, Duncan Patton, Jim Priess, Erik Charlston, Claire Heldrich, Jeff Milarsky, Patti Monson, Nils Vigeland, Jeffrey Langford, Reiko Futing, David Noon, Dane Richeson, Ken Schaphorst, Bridget Reischl, Alan Gimbel, David Rush, Vicki Jenks, Mike Turk, David Viemeister. Thank you to Frederick Moehn who has given me a welcome perspective in critical thinking that no one else could, and also for providing me the wonderful opportunity to meet Gerhard Kubik. To Kubik, whose works and life are an incredible inspiration, and who introduced me to Marcelina Gomes; to Marcelina, whose own scholarship plays a crucial role in the current chapter on Angola; to, João Soeiro Carvalho, ethnomusicologist in Lisbon, who made available to me wonderful resources related to the discussion of Mozambique and Angola; to Martin Scherzinger, ethnomusicologist from South Africa, for his reflective answers to my many queries; to the Banff Centre for the Arts, whose resources and staff made the technical development of my work possible; to everyone at the Sacatar Foundation, *'Obrigado, Gente!'*; to everyone else in Brazil who have made my time there such a joy; and finally, to my parents, who have always believed.

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ABSTRACT

The purpose of this thesis is to collect my historical findings and musical transcriptions in a way that illuminates the development of my own creative project with the berimbau. I create links between the old and the new by drawing parallels that guide creative work along the lines of what has been done in the past. Because the research is in large part my own, or my extrapolations and extensions of what research has been done before me, the story is a personal one. Telling it shall at times take on a narrative form that I hope is engaging and informative.

INDEX WORDS: berimbau, capoeira, Naná Vasconcelos, percussion, Brazil.

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[2] John M. Schechter, "Berimbau," *The New Grove Dictionary of Music and Musicians,* ed. Stanley Sadie, 20 vols. (London: Macmillan, 2000) II: 348.

A West African Legend of the origin of the Musical Bow…

A girl went out for a walk. As she passed by a stream, she bent down and took the water into the cup of her hands. At that moment, greedily satiating her thirst, a man gave her a strong blow on the back of the neck. Dying, she immediately was transformed into a musical bow; her body became the stave, her insides the string, her head the cabaça, and her spirit became dolorous, sentimental music.[3]

[3] Déo Lemba, *Meu Berimbau Instrumento Genial*, (Salvador, Bahia: Independent Publication, 2002), 5. My translation.

The Berimbau

The purpose of this thesis is to collect my historical findings and musical transcriptions in a way that illuminates the development of my own creative project with the berimbau. I intend to create links between the old and the new, by drawing parallels that guide creative work along the lines of what has been done in the past. Because the research is in large part my own, or my extrapolations and extensions of what research has been done before me, the story is a personal one. Telling it shall at times take on a narrative form that I hope is engaging and informative.

* * *

The berimbau is one member of a large family of instruments known as *musical bows*. Musical bows are widely distributed globally, from the Orient through the Occident with many stops in between. Henry Balfour's *A Natural History of Musical Bows* (1899), among the first writings on the subject, contains an engaging albeit rudimentary map of the world that details the extent of such spread.[1] The berimbau is a representative from Brazil with African roots. Its closest relatives come from a region of southwest Africa currently occupied by the country of Angola.

Musical bows are ancient instruments. The literature mentions depictions in cave paintings from 15,000 BCE.[2] Balfour attempts to draw a lineage back to mythical stories from a variety of world cultures, making references to hunting bows turned musical bows in the stories of ancient Greece, India and Japan.[3] Indeed, the connection to a hunting bow, in a variation on the trope, "Which came first?" is an oft-debated pastime for

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[1] Henry Balfour, *The Natural History of the Musical Bow,* (Oxford: Clarendon Press, 1899), 88.

[2] David K. Rycroft, "Musical Bow," *New Grove,* XII: 466.

[3] Henry Balfour, *Natural History*, 3-4.

ethnomusicologists in the field. To this day there are musical bows that double as hunting bows when the opportunity arises.

Musical bows from around the world are manifest in many forms, but they are generally distinguished into categories according to the presence or absence of supplementary resonance. In the case of such presence, further categories divide along the line of the manner of resonance. These further categories are three: *mouth-resonated*, as in the case of the ubiquitous jaw harp, *ground-resonated*, and *gourd-resonated*. While Balfour posited an evolutionary line through the bow family that placed gourd-resonated bows on top of the pyramid as the most sophisticated form of bow, there are non-gourd bows (such as the *xizambi*,[4] a mouth-resonated scraped-bow of the Tsonga people from southern Mozambique) that are incredibly sophisticated from a performance perspective, leaving this author to doubt the value of such Darwinist superimposition. The *xizambi*, along with countless others, is a fascinating instrument, worthy in every sense of attention and study. As the berimbau falls into the category of gourd-resonated musical bows, however, this thesis concerns itself only with specimens of this genre.

Three musical bows. These are the three bows of *Capoeira Angola*, distinguished by the gradual decrease in size of the gourd. For a discussion, see the chapter, *Capoeira*.

[4] See Thomas Johnston's detailed article, "Xizambi Friction-Bow Music of the Shangana-Tsonga," *African Music* 4, no. 4 (1970): 81-95.

Instrument design

Gourd-resonated musical bows are instruments of simple construction. They consist of a hardwood or bamboo staff ranging from two to six feet in length. Running from end to end of this stave is a stretched string, fastened with tension to the stave in various manners. Typically, one end of the string is more permanently held to the stick via a notch or peg carved into the stave itself, while the other end is tied to the stave in a way that makes adjustments of tension possible. This is usually done with a rope or something similar. The material of this string can be of natural materials (e.g. twisted animal hide or hair), or of steel or some other thin metal wire. A gourd is attached to the stave in an impermanent way, i.e. it is removable, not an intrinsic part of the stave.

The berimbau is typically of the longer variety of bow, and uses a single wire string, typically taken from the inner rim of a used car tire.[5] The gourd of a berimbau, referred to as the *cabaça*, a dried squash shell that is painstakingly hollowed out, then usually varnished or painted, is held fast to the instrument by a cord that is looped through two small holes punctured at the closed end of the gourd and loops around both stave and string.[6] This loop becomes a *brace* or a 'tuning noose', as it effectively divides the length of the vibrating string into two parts. The gourd of a berimbau is traditionally positioned toward the bottom of the instrument, about a palm's distance from the bottom of the stave, thereby dividing the wire into two very unequal parts. This is not always the case

[5] During my visit to Salvador in January-February 2004, it was enlightening to see an ingenious method for the removal of excess bits of rubber and oxidation from these wires. At the one-room *capoeira* school, *Fundação International de Capoeira Angola,* run by *Mestre* Valmir Damasceno, there is a 1" hook sunk deeply into the concrete wall at one end of the room. The wire to be cleansed is tied to the hook and stretched across the room over the shoulder of the person doing the cleaning. In this fashion the worker is able to pull taught the wire and easily clean sections as he goes, removing excess rubber and oxidation with steel wool and a knife. Clearly, a great deal of thought goes into the process of instrument construction.

[6] Sometimes the cabaça is replaced by a tin can or a coconut shell. This is not done for musical reasons; rather, it is motivated by availability (or lack thereof) of materials.

with analogous bows from various regions in Africa. Some bows divide the string into lengths that approach a more equal division, while other bows are not braced at all.[7]

Performance technique

The manner of playing gourd-resonated bows is also straightforward. Provided it is a braced instrument like the berimbau, the instrument is held over the little finger of one hand, and a small stick or piece of thatching grass is held in the other hand and used to strike the string. In addition to the pitch of the open string itself, various performance traditions have developed similar manners of stopping the string to achieve a second fundamental, usually about a semi-tone or a whole-tone above the open string. This is done usually with the fingers of the hand holding the instrument, but in some cases another implement is used.

In the case of the berimbau, the hand that holds the instrument holds between thumb and index finger a large brass coin (known as *dobrão)* or a smooth, flat stone. This implement is used as a bridge to shorten the length of the vibrating string and thereby create these secondary pitches. The berimbau is typically, though not always, played with a small wicker rattle held in the same hand that holds the striking stick. This instrument is called *caxixi*, and is unique to berimbau among musical bows. Its function, however, adding a white-noise element to the sound of the instrument, *is* related to various devices found on many African instruments. The *caxixi* fulfills the function of rhythmically driving the 'noisy enterprise' of *capoeira*, where the berimbau finds its traditional context in Brazil.[8] Its origins, however, are not the same as those of the berimbau itself, and their collision in Brazil is indicative of "pan-African technology-sharing".[9] Indeed, the African influences that mixed in Brazil to create the berimbau are

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[7] See discussion on gourd placement in chapter, *Further Experiments*.

[8] Gerhard Kubik, *Angolan Traits in Black Music, Games and Dances of Brazil*, (Lisbon: Junta de Investigações Científicas do Ultramar, 1979) 35. See also my later discussion in chapter, *Capoeira: The Traditional Context of the Berimbau in Brazil*.

[9] Richard P. Graham and N. Scott Robinson, "Berimbau," *Continuum Encyclopedia of Popular Music of the World*, *Volume 2: Performance and Production* . ed. John Shepherd, David Horn, Dave Laing, Paul Oliver, and Peter Wicke. (New York: Continuum, 2003) 348.

numerous, making it "a richly creolized product of the black world with several prototypes on both sides of the Atlantic".[10]

One further technique that needs explanation is the movement of the instrument to and away from the body of the performer. The hollow cabaça has an opening at one end that allows for the sound to escape. This end faces the body of the performer, and its aperture is typically left open while the wire is struck; however, it is usually pressed into the body immediately after a stroke. In a series of rapid strokes, then, the instrument is continually moving toward and away from the chest of the player. The effect is timbral, something akin to a vibrato or a 'wah-wah' pedal for a guitar. The more open the aperture, the louder the sound, but also the more complex. The 2nd-5th partials of the fundamental can be heard with more or less clarity depending on the position of the aperture in relation to the player's body. In certain African traditions, these partials are selectively amplified to produce a secondary melody above the fundamental(s). While this 'wah-wah' effect is certainly a part of the Brazilian berimbau tradition, the selective amplification of harmonics is not. This most likely has to do with the context of the tradition itself. Where Africa hosts a number of traditions where quiet solo playing is characteristic, these quiet overtones may have a chance to be heard. In the noisy context of Brazilian *capoeira*, they are a non-issue.

There are many fine players of the berimbau both inside and outside the tradition of *capoeira*. Outside the tradition, though, players have felt a greater freedom to expand the horizons of the instrument for musical reasons. N. Scott Robinson exhaustively details the ever-expanding possibilities for and interest in the berimbau on a global level. Robinson mentions players in the improvised music scene such as Luis Agudo, Okay Temiz, and Naná Vasconcelos, who have traveled the globe, spreading innovative ideas for the instrument.[11] It was through the recordings of Naná Vasconcelos that I became involved with the berimbau. For this reason, an entire chapter of this thesis is dedicated to his extensive work with the instrument.

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[10] See footnote 2.

[11] Richard P. Graham and N. Scott Robinson, "Berimbau," *Continuum,* 348.

* * *

The journey that I have been on with the berimbau forms a definitive chapter in my life. Over the past five years I have been on a quest for knowledge about the history and roots of the instrument and, with a certain charge from my first real teacher of berimbau, have been concerned about taking it somewhere new artistically. Most recently, it has afforded me the opportunity to spend time in Brazil via a generous Fellowship from the Sacatar Foundation. From January 1st to February 16th, 2004, I was in Itaparica and Salvador, Bahia, gathering information and inspiration for this thesis. I shall refer to this experience in passing throughout the thesis, as it has proven to be an invaluable force that has shaped the present work.

Discovering the Berimbau

When I first entered Lawrence University in the fall of 1991, I was immediately swept up by a passion for Brazilian music, especially samba drumming. One of the most public features of the percussion department, run by Dane Richeson, was the *sambistas*. Essentially everyone in the percussion department plus a few odd stragglers who were in it for the fun would bombastically march around campus, going even into the library to call students out from their studies to come and relax and dance and party. The joy I felt in the very first rehearsal, holding a set of *agogô* bells in my hands, was immediate and overwhelming. In a matter of minutes, and then continuously over the next four years, I was hooked deeper and deeper. I soaked up as much Brazilian music as I possibly could.

Dane would occasionally play berimbau, and there was another student in my class, Brett Lobben, who was also playing. At that time I did not connect specifically with the instrument, although I remember Dane describing berimbau as one of his favorites, that he would sit at home with records late at night and just play along to grooves. It would be many years later, however, when I would do the same, and a number of years after that when I would read books by others reporting that they had done the same. What is it about the berimbau that draws one in so deeply, that calls on individuals to play it? At Lawrence, these were unanswered, scarcely conscious questions; nevertheless, the seeds of a passion for and interest in Brazilian music were sown there.

After graduating from Lawrence and spending another year in Wisconsin freelancing in various contexts, (including playing in a Brazilian/fusion quartet), I picked up and moved to New York City to attend the Manhattan School of Music. Around 1999, I was picking up a few odds and ends in Drummer's World in midtown Manhattan, when suddenly from the back of the shop I heard this amazing sound. Someone was playing a berimbau, and playing it very well. I headed toward the source of the sound and was shocked when I saw what was going on. A 30-something businessman, in typical Wall Street attire, was playing berimbau with amazing musicality and control. I was dumbfounded, but my curiosity led me to start up a conversation. He explained that he was from Boston, in

town on a business meeting. That evening his company was holding a banquet dinner and part of their entertainment that evening would be a sort of 'Talent Show'. At an earlier point in his life, he had taken a liking for the berimbau and had spent a lot of time with the instrument. Now he had come into Drummer's World, looking for an instrument to pick up to play in the show. He was incredibly kind, and kindly informative. Concerning his own inspiration for playing berimbau, he said, "If there is one album you need to pick up in what concerns berimbau, it is *Saudades*[1] by Naná Vasconcelos."

I left Drummer's World with the most inexplicable buzz and immediately headed to Virgin Records next door and found the record. I got home, I put the CD in my stereo, and the rest follows in ensuing chapters.

* * *

Around the same time, I met a Brazilian singer and guitar player, and we began to play parties and shows together as a duo. Although this would not be a lasting relationship, it proved to be a critically important one. After a couple of months playing together, we developed a very amicable camaraderie based upon a mutual love for Brazilian popular music. Oddly enough, though, we never spoke about the berimbau. When January rolled around, he left with his family for a three-week vacation to go to Brazil to visit his relatives. When he returned, he called to say that he had a present for me.

When I went over to his house for another rehearsal, I was dumbfounded. Of all the things he could have brought from Brazil, he had for me a berimbau. He had no idea that I had already started transcribing the first track on *Saudades*. I was so moved by the incredible synchronicity of his gift that I went home late that night and played along (as best I could) with Naná's record.

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[1] Nana Vasconcelos, *Saudades* (ECM 1147 78118-21147-2, 1980).

Now I had an instrument and I had source material. Yet sitting in my apartment with my berimbau and *Saudades*, I quickly realized that there was still a tremendous amount to learn. I could hardly hold the instrument without incurring a great deal of pain. I would soon learn, however, that this is normal. The berimbau is easily one of the most individual among percussion instruments. Before you can work on getting good sounds, you need to learn simply how to hold the instrument firmly in your hand, training your muscles to develop the strength to support its weight resting primarily on the little finger. This would become more and more of a problem the more I became involved with the instrument in years to come. These early days for me were hopeful and excited, yet admittedly frustrating.

Determined to solve these early problems of technique and sound, I eventually got in touch with someone who is now a dear friend, Eldio 'Cabello' Rolim. Cabello, (his nickname referring to his impressive mane of long well-groomed hair), is Brazilian. He is an amazing *capoeirista*[2], dancer and percussionist. I would go to his Lower East Side apartment to take a handful of lessons over the course of that first year of playing.

I used the first lesson as a deadline to complete my transcription of the first (there are three) solo section of *O Berimbau*, the first track on *Saudades*. I thought certainly this would reveal my seriousness about the instrument. I could even play the first couple of phrases. My insulated, educated approach to learning music was taken aback when I realized that Cabello did not read music. So while he was certainly appreciative of the work I had done, it did not mean much to him if I could not play it. He showed me the proper technique of the instrument -- how to hold it, how to get good sounds, how to move the gourd back and forth against the stomach appropriately in coordination with each sound. I left, resolved that the next time I went to see him I would be able to play *O Berimbau*.

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[2] A *capoeirista* is a practicioner of the Brazilian martial art, *capoeira*. Capoeira is unique among martial arts in that it demands musical as well as physical skill. This has much to do with its African origins, where philosophies of life tend to be more wholistic, less compartimental, than other cultures, and also where music plays an important role as accompanist to all of life's activities.

After a month or so went by, I scheduled another lesson with Cabello. I had worked on my technique, I had memorized the transcription, and now I would go and play for my teacher. I did. He smiled. Again he was appreciative of the work, but he offered me this advice:

> You are playing pretty well, and your sounds have improved. But why do you want to become Naná Vasconcelos? You are not Naná, you never will be. Your job with the berimbau, as you are not involved in capoeira, will be to discover what you can do with the instrument that tells who you are, what you are when you play berimbau.

I left this second lesson a little downhearted, but took on his words as a challenge. I had no idea at the time if I could do anything with berimbau that would be unique, and if I had a feeling that somehow I could I had no idea what that thing would be. I did not give up, however, nor did I leave transcribing at the wayside. I already knew how helpful it had been in bringing me this far with the instrument, and knew that there was still more to do.

Transcriptions and Commentary

There is a kind of magic that happens in the act of transcription: one experiences a musical event in ways not possible through passive listening.[1]

Transcription has traditionally played an important role in ethnomusicological study. "Ethnomusicologists often transcribe musical performances and then analyze the notation to get a deeper understanding of what takes place in the musical process."[2] However, this functionality is problematized by the implicit bias transcriptions present, superimposing Western notational standards upon music and musical cultures in which the locus of musical authenticity is in *performance* and not in the written *score*. Unlike a Western music score, a transcription cannot claim to be the definitive work, but rather only a reflection of one performance at one point in time. Western notational practice, if taken unquestioned as a universal language capable of representing all music and sound, "undermines the very notion of cultural relativism that forms the basis of ethnomusicological study."[3]

Keeping in mind the problems that Western notation presents, it nevertheless can be a valuable tool for piercing below the surface of a music to gain perspective. For me, the process of transcribing has always helped me to understand the inner workings of whatever musical subject I am studying. In fact, it is the *process of transcribing* itself that is just as important as the actual transcription. Beyond this process, the further act of analysis of the finished transcription is also fruitful. One very important parallel to the Western score is a transcription's capacity to serve as a "window into the creative mind"[4] of the performer/composer. To

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[1] Rene Lysloff, *Worlding Music Theory*, unpublished paper presented at Society for Ethnomusicology Annual Meeting, 2003.

[2] Ibid.

[3] Ibid.

[4] Ibid.

borrow a term from the 20th-Century Greek composer Iannis Xenakis, a transcription places music "outside of time", thereby allowing for analysis, comprehension and critique on various levels of musical construction.[5] Allowing for direct engagement and subsequent analysis, transcription is an invaluable tool. For performers as well as ethnomusicologists, "music theorizing emerges from the *process of engaging directly with the musical event*…[something that] can happen through performance…or…by transcribing music."[6] Perhaps because of my very real physical engagement with the berimbau, I knew this intuitively. It was natural for me, then, when I first acquired *Saudades* and heard Naná playing *O Berimbau,* to pick up pencil and manuscript paper.

* * *

A few general comments on the transcriptions found in this thesis may prove helpful. By and large the majority of material played on berimbau is played on the pitched string. In almost all cases I have written these pitches where they sound on a pitched clef. The only exceptions to this are in the bulk of transcriptions in the chapter on *capoeira*, where pitch, although it is there, is not a primary concern of the style. Slurs are used to show the use of the coin on or off of the string. The coin is rarely used to strike the wire without the stick striking in conjunction because its percussive attack is negligible. The coin is sometimes used, however, to strike the stave, which broaches the subject of unpitched sounds of the instrument. To notate these, I have generally relied on 'x' noteheads and a short explanation placed in the transcription at the first appearance of such a sound, to indicate its nature. Such sounds include the caxixi, the stick against the cabaça, the stick against the stave, the coin against the stave, etc. There is a sound

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[5] Iannis Xenakis, *Formalized Music,* Bloomington: Indiana University Press, 1971, 22. Xenakis was a Greek-born composer who lived and worked in Paris (1922-2001). His professional background was in engineering and architechture, not in music. As a result, his musical passion yielded an unorthodox voice largely influenced by his architechture. Taking music "outside of time" and fashioning it "inside three-dimensional space," then, was a natural step for his way of thinking.

[6] Rene Lysloff, *Worlding*.

generated on the wire itself that uses the coin like a snare on a snare drum. The coin and wire produce a metallic buzzing sound when the coin is held loosely against the wire, and the wire is struck with the stick. This sound is known as *repique*. Because the coin is used, I always place this 'x' notehead at the pitch level of the secondary note, a second above the open string. Where shown, the *caxixi* is indicated by an 'x' almost always below the pitches of the wire. Typically, the caxixi sounds whenever the stick strikes the wire, as it is held in the same hand as the stick. Therefore, its notation is often redundant. This is not always the case in the playing of Naná, however, as he has developed a technique that allows him to separate the caxixi from the stick to a degree.[7] The gourd and stave 'x' noteheads are typically above the pitches of the wire.

[7] This is a technique whereby the fingers work the stick to play certain strokes on the wire without the caxixi, primarily controlled with larger wrist and arm motions. See the transcription of *Clementina*, below, for an excellent example of this technique.

Naná Vasconcelos

Mestre Domingo, cadê seu chapeu?
Mestre Domingo, cadê seu chapeu?

O meu chapeu 'tá no alto do ceu,
O meu chapeu é o alto do ceu.[1]

Juvenal de Hollanda Vasconcelos (Naná) was born in 1944 in Recife, the capital of the state of Pernambuco, Brazil. He has led a life that has taken him from his home all around the world and back again. His passport for these travels is his incredible musical talent. His ability to soak in influences from his surroundings, combined with a deep sensitivity, has guided him on an uncompromising path of good music making. He reveres nature, balance of energy in relationship to others, and dismisses ego as something completely unnecessary and as a pariah to be avoided.

Naná's career is incredibly vast. He has performed, recorded and toured with hundreds of artists from all corners of the world. He has pursued his own creative projects, recording many albums in his own name. Furthermore, Naná also involves himself in community outreach projects, having created the House of Naná, a residence for homeless children in various states in Brazil that teaches youths about the arts and gives them an alternative to street life.[2] His work with the House of Naná is based on previous experience he had working for a similar project in Paris.

There are excellent sources of biographical information and interviews with Naná that give plenty of insight into his life and his career path. Of particular interest here is his work with berimbau. It is generally recognized that Vasconcelos "has taken this instrument far beyond its traditional uses and is acknowledged as its foremost player."[3]

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[1] Lyrics from "An Afternoon in the North" on the album *Storytelling*, (EMI 3712).

[2] As in the United States, this is a life that is dominated by prostitution, crime, drug abuse. In Brazil, however, the sheer number of these children far exceeds those in the US.

[3] Saudades Tourneen, "Naná Vasconcelos," *European Jazz Network,* 1999. http://www.ejn.it/mus/vasconce.htm (November 9, 1999).

In July 2000, N. Scott Robinson published an interview in *Modern Drummer* that allowed Naná to speak of his initial involvement with the berimbau:

> I started to play the berimbau because I was involved in a play called *Memoria dos Cantadores*. The play was about the northeastern folk music in Brazil. To prepare for the play, I went out into the countryside to learn about the roots of this music. I learned about musical styles like maracatú, choro, baião, bumba meu boi, and then capoeira. To play capoeira you have to play the berimbau.
>
> I kept the berimbau in my house and started to think that it doesn't just have to be played with capoeira. The capoeira only has about four rhythms. I thought I should do different rhythms on berimbau. I started to play it in different ways. It's funny, but at first I was very scared to play that way in front of people, because I thought they were going to say I was damaging the tradition.
>
> Milton's music was not bossa nova, so I wondered if I could incorporate berimbau into it. I tried to understand what his lyrics were about. I started to use music, or percussion sounds, to illustrate Milton's poetry, and the berimbau worked well for this. And around the same time I was also listening to Jimi Hendrix, who was saying that musical instruments have no limitations. That gave me the idea that anything is possible.
>
> The berimbau was very important for the way I developed as a musician. I discovered that everything was there for me musically in the berimbau. At that point I lived in an apartment in Rio de Janeiro, so it was impossible for me to practice my drumset because of the neighbors. So I practiced on the berimbau, playing rhythms in seven, six, five – all these rhythms I had in my mind transposed to the berimbau. I also realized that the hand position I had on the berimbau was similar to traditional grip, the grip I used to play drumset. The left hand is the snare and the right hand is the cymbal.[4]
>
> Everything I do stems from the berimbau. Sometimes I ask myself, "Why me? Why was I given the berimbau and why do I play it the way I do?" The berimbau is the main thing that influences all of my percussion playing.[5]

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[4] N. Scott Robinson, "Naná Vasconcelos: The Nature of Naná," *Modern Drummer* 24, no. 7 (July 2000): 100.

[5] Ibid, 108. The first time I read this last set of questions, I somehow knew exactly what Naná meant. This sense, first conveyed to me by my undergraduate percussion professor, was now something I felt, too, and realized that many others share this sense.

"Tema de Tostão"[6] / "O Homem da Sucursal" from the album *Milton*, 1970

Naná was playing berimbau long before he recorded *Saudades*. The 'Milton' Naná refers to in the interview quoted above is Milton Nascimento, one of Brazil's finest popular music stars. Nascimento's most important work took place in the late 60's and 70's, during an intense period of social/political unrest in Brazil.[7] When Naná moved to Rio de Janeiro from Recife, playing with Milton was his first important project. Albums such as *Milton* and *Milagre dos Peixes* are representative of Naná's work with Nascimento.

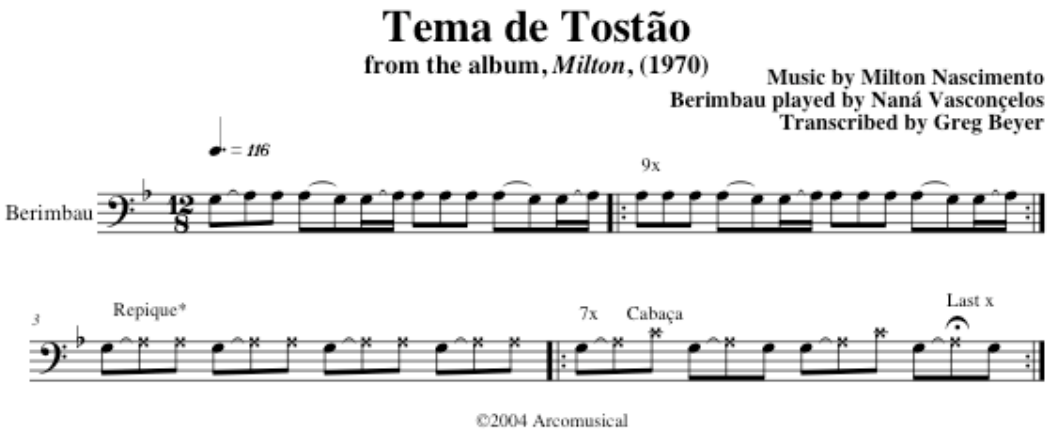
"Tema de Tostão" and "O Homem da Sucursal" are actually bonus tracks only available on the 1994 remastered version of *Milton.* It is interesting to note that the original album contained no berimbau elsewhere.[8] Fortunately, to corroborate Vasconcelos's words, we have these two examples from the same album, back to back. That one follows the other also makes it startlingly clear that Naná used the same tuning on both tracks, open string G and the coin hitting an A-flat. "Tema de Tostão" is an instrumental tune with a 12/8 rhythmic pulse.

There is something about the berimbau that draws the player in, something magical that commands attention and commitment.

[6] Lit. "Tostão Theme". A *tostão* is an old Brazilian coin no longer in use.

[7] Brazil in those years was under a military dictatorship that was extremely harsh towards artists expressing populist sentiments. Other musical artists at this time such as Caetano Veloso and Gilberto Gil were forced into exile. Fortunately, things have gotten better. Ironically, Gil has recently been appointed the new Minister of Culture under the presidency of Lula da Silva.

[8] Berimbau does figure prominently on other albums from the time, (e.g. *Milagre dos Peixes* (1973)).



Typical of much of Naná's work in the context of popular tunes, the berimbau sets a pattern that remains largely unchanged. This track begins with the berimbau prominent in the mix, making clear the ternary feel. By the second full measure, Naná has established the one-bar pattern that will characterize the initial 'riff' of the composition. The pattern, sticking predominantly to the raised A-flat achieved with the coin or stone, has an almost military-feel to it, as if he were playing a marching snare drum. The tuning of the berimbau in this track is jarring, because the opening music is in D Major. Playing the 4th and lowered 5th scale degrees is grating harmonically, but perhaps in this case it reinforces the idea of the berimbau as ersatz snare drum, performing an interruptive and rhythmic function rather than a supportive harmonic one.[9] When the music changes at the 11th measure, Naná correspondingly changes his pattern, making great use of the open tone of the berimbau to contrast with the first pattern. At least here, the musical phrase begins in G, and so the open pitch G makes sense on the berimbau. But the occasional A-flat is still unnerving. Again, by the

[9] Or perhaps this example is from a point early enough in Naná's work with berimbau that the very idea of tuning the instrument to function harmonically had not yet occurred to him, as his knowledge of the instrument was still very close to the *capoeira* tradition. While the pitch of the instrument is very present and clear, the tradition of the berimbau in *capoeira* does not often pay this aspect as much attention. In later recordings, Naná is very conscious of the berimbau pitch.

second measure (m. 12) the pattern sets itself for constant repetition. This pattern features the snapping of the stick against the gourd, on the last triple division of beats 1 and 3.

The entire middle section of the piece leaves the berimbau behind. At one point, Naná can be heard clapping on the first two triple divisions of each beat.[10] The music is an endless repetition of the same musical idea. The berimbau comes back in toward the end playing essentially the same patterns that are heard at the beginning, but again escapes before the end of the track.

* * *

"O Homem do Sucursal" (Man of the Branch Office) relates the mundane wishes of a typical office worker and his rather resigned and existential contemplation of life. In a very effective word play, Nascimento allows us to feel the heaviness of this man's dead-end job.

Saio do trabalh-ei	**I leave 'work-ed'**
Volto para cas-ei	**I return 'home-ed' (marr-ied)**
Queria ver um filme de amor	**I wanted to see a romance film**
E se eu morrer, véu	**And if I die, (cover me with a) veil**
E se eu viver, réu	**And if I live, (I'll be a) defendant**
Me lembro de um tempo melhor	**I remember a better time**

The first line of the Portuguese 'should' read, *Saio do trabalho*, 'I leave from work'. Milton instead uses *trabalhei*, literally the first-person-simple-past tense of the verb *trabalhar*, 'to work'. The next line would read, *Volto para casa*, 'I return home', but instead substitutes *casei*, the first-person-simple-past tense for

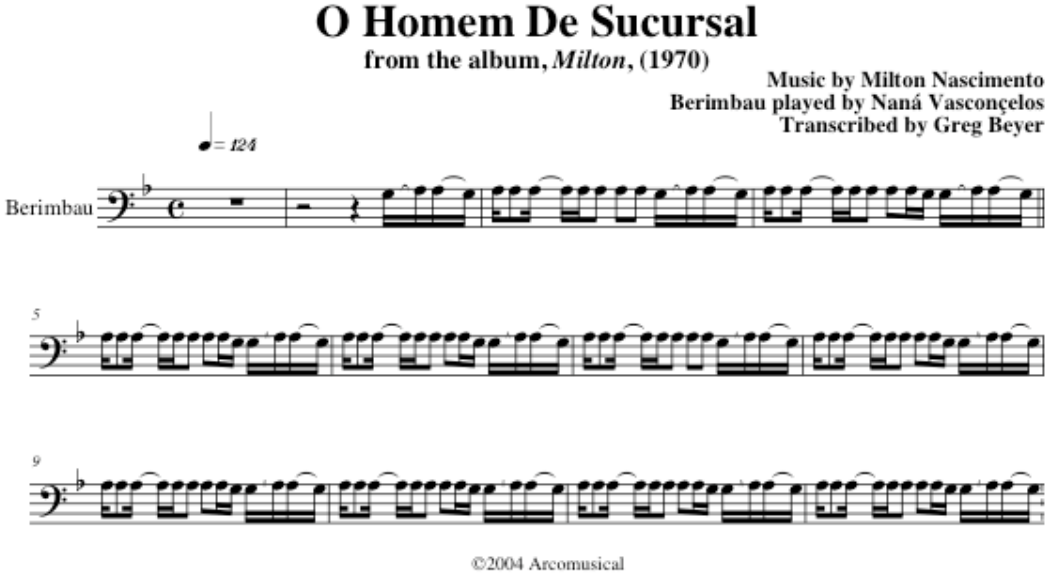
[10] Clapping is a Naná trademark, and can be heard in many places in his recorded work. Typically he will multi-track two or more lines of clapping, performing syncopated rhythms that are almost the same but not quite. The effect is a sort of polyphonic, hocketed stream of near-constant hand claps reminiscent of Iberian gypsy music, Flamenco, etc.

Casar, 'to marry'. The meaning becomes clear: 'exhausting dead-end job, loveless marriage, looking for escape'.

If the berimbau represents anything beyond itself it represents the African cultural conscience in Brazil, a cultural element with a troubled history in the county. So perhaps it is not surprising that, in this song, its presence is an irritation and a friction, clashing with the tonality. The song begins strongly in A minor, while the berimbau continues to sing G and A-flat. Naná's concern here is with the timbre, not the tune.

Clearly this man feels a slave to his work and to his life and is looking for an escape that he successfully finds in the movies.[11] The underlying berimbau accompaniment, strident and heroic, suggests his inner desire for freedom. Vasconcelos mentioned paying attention to Nascimento's lyrics in order to color them appropriately, and this is a poignant example. Although not indicated, Naná is using caxixi on this track.

[11] This very same tune was recorded three years later without words, under the title, *Os Escravos de Jó*, (The Slaves of Jó) on the album *Milagre dos Peixes* Berimbau is featured in that recorded version, too, but not nearly as prominently. In fact *most* of this later album is recorded without words. Apparently, Nascimento was forbidden by the authoritarian government from releasing a recording with words that were considered subversive. Is the berimbau's comparative obscurity in the musical mix related to the slave's (Nascimento's) inability to speak publicly?

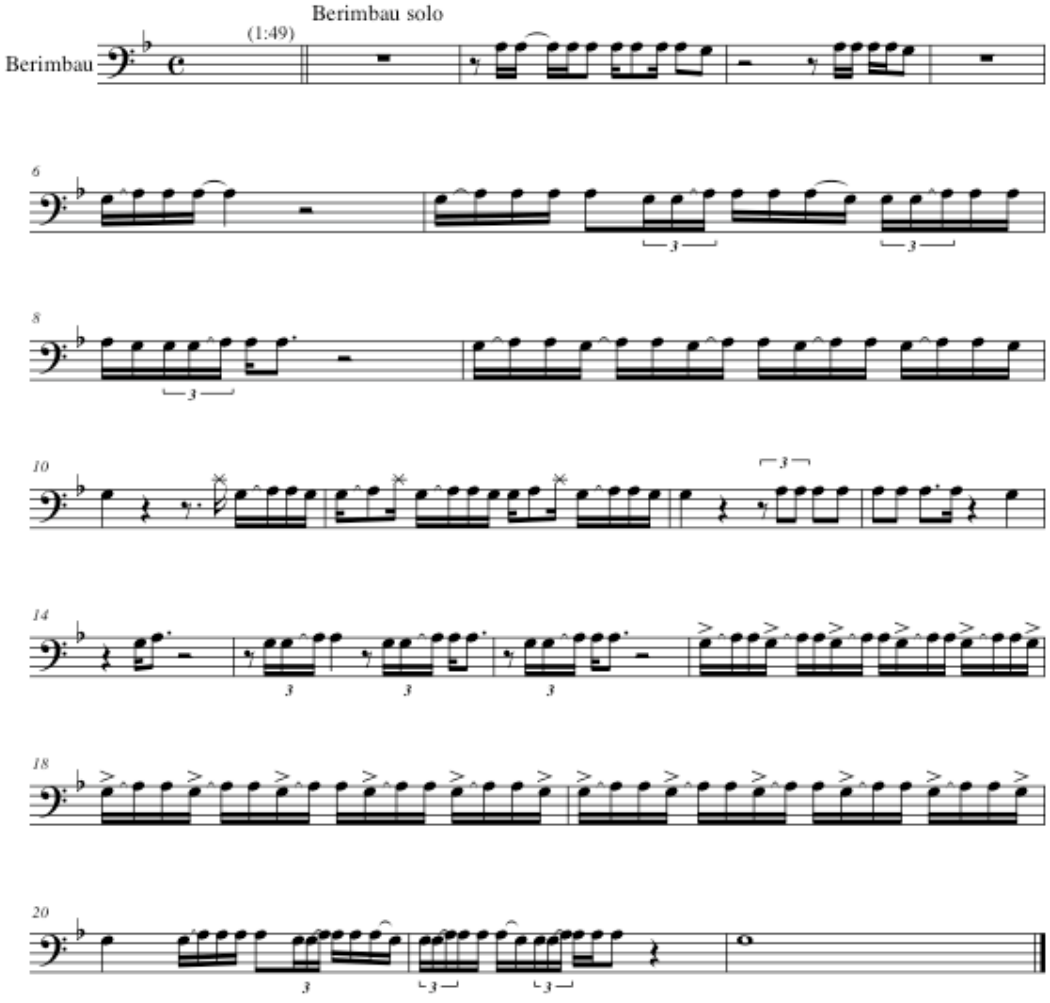


Not unlike the 'Tema de Tostão', the berimbau leaves the texture after the first two verses have been sung. When the instrument reenters after 1 min. 49 sec., it becomes the composition's focal point, soloing over a one-measure bass and guitar riff. Does the solo represent the man's new-gotten freedom? Or rather, is it symbolic of the 'better time' in the man's past?

O Homem De Sucursal

from the album, *Milton*, (1970)

Music by Milton Nascimento
Berimbau played by Naná Vasconçelos
Transcribed by Greg Beyer



'O Berimbau' from the album *Saudades*, (1980)

This was my first transcription of music for a musical bow. It is still by far the most ambitious. 'O Berimbau' is a nearly 19-minute long concerto for berimbau with string orchestra. The form is roughly A-B-A^1-B^1-A^2, where A represents berimbau solo passages, and B represents string orchestra interludes. The two never really mix; Naná only colors the orchestral passages with the unpitched sounds of stick rubbing against gourd, vocal effects and the like. My transcription, then, is in three parts, dealing only with the solo passages for berimbau.

Part One

Vasconcelos begins the work with a strong statement of 12/8, establishing a very clear ternary division of the pulse. In m. 3 and 4, this ternary feeling is subtly maintained by the use of the wa-wa effect -- the rapid motion of the gourd moving toward and away from the chest. The first four bars repeat themselves and seem to repeat a third time, but then in mm. 7-8 a steady stream of eighth-notes replaces the long tones of the open wire. It is interesting to note that Naná lingers an extra beat in m. 8, creating the 15/8 bar. This would seem like just a whim, were it not for the fact that he repeats this idea later, as the 'composition' continues.[12]

From this point on, the ternary feel of essentially 12/8 becomes ambiguous. Naná begins inserting groupings of four into the flow of the music. Measure 9 is a perfect example of the ambiguity. Is the meter still in 12/8 or is it 3/2? The music is phrased in three groupings of four notes. Because the pulse has been so strongly established as four beats to the bar, our first inclination is most likely to hear the music as being phrased over those beats. In m. 10, however, the music suddenly begins to float 'in-and-around' 12/8, rather than being consistent.

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[12] Because these thoughtful patterns of repetition occur consistently, I am inclined to think that Naná premeditated these elements. However, people I have spoken to who know him are convinced that this was simply an improvisation. I think the matter is open for debate.

Listening closely to the agogic pulses of the bar, Naná suggests a compound bar of 3+4, 4+3, yielding a bar of 14/8. Measures 11-14 are repeated, and here we receive a new bit of musical information – the lowered 2nd scale degree found in the second half of m. 13.[13] This is immediately followed by the return of the 15/8 bar that we first heard in m. 8. There is no need to belabor this point by continuing to analyze every measure. What began as music clearly in 12/8 now becomes playfully ambiguous, a series of additive rhythmic figures that bounce back and forth between triple and duple feels.[14]

Through repetition Naná provides emphasis to certain figures. For example, m. 20 marks a strong arrival in 4/4 time. This figure comes back again and again as far as m. 41, and acts as convincing polarity against what had been predominately a ternary feel.

The recurring 12/8 motive of m. 13 is heard for the last time in m. 32. Perhaps because of its placement in measure thirteen immediately before the 15/8 bar, a figure that had been set-up as a kind of resolution or 'tonic' in the very opening of the piece, m. 32 certainly feels like a cadence. It is not surprising then, in m. 33, that we receive another new bit of musical information, as if it were the start of a new musical phrase. The repeated three 16th-note pattern at the end of the bar (m. 33) becomes more and more prominent over the next fifteen measures, (m. 37, 39,

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[13] This is not a standard technique associated with the tradition of *capoeira*. I went crazy when I first heard it, and immediately tried to figure out how it works. It is a relatively simple matter of dropping the angle of the coin against the wire so that the coin stops the wire at a lower point than normal. N. Scott Robinson attributes this technique to Naná. Because this recording was my first real serious study of berimbau, this technique would become part of my normal way of thinking about the instrument, and would have important ramifications for the development of my own compositional efforts for berimbau.

[14] This is another hallmark of Naná's style. When I met with him in February 2004, he demonstrated various exercises he has developed to convert patterns from one time signature seamlessly into another, by adding or dropping a note or two as required. He would play something in 6/8, for instance, then suddenly it would become 7/8, and then he would move back and forth between the two, all the while sporting a clever grin.

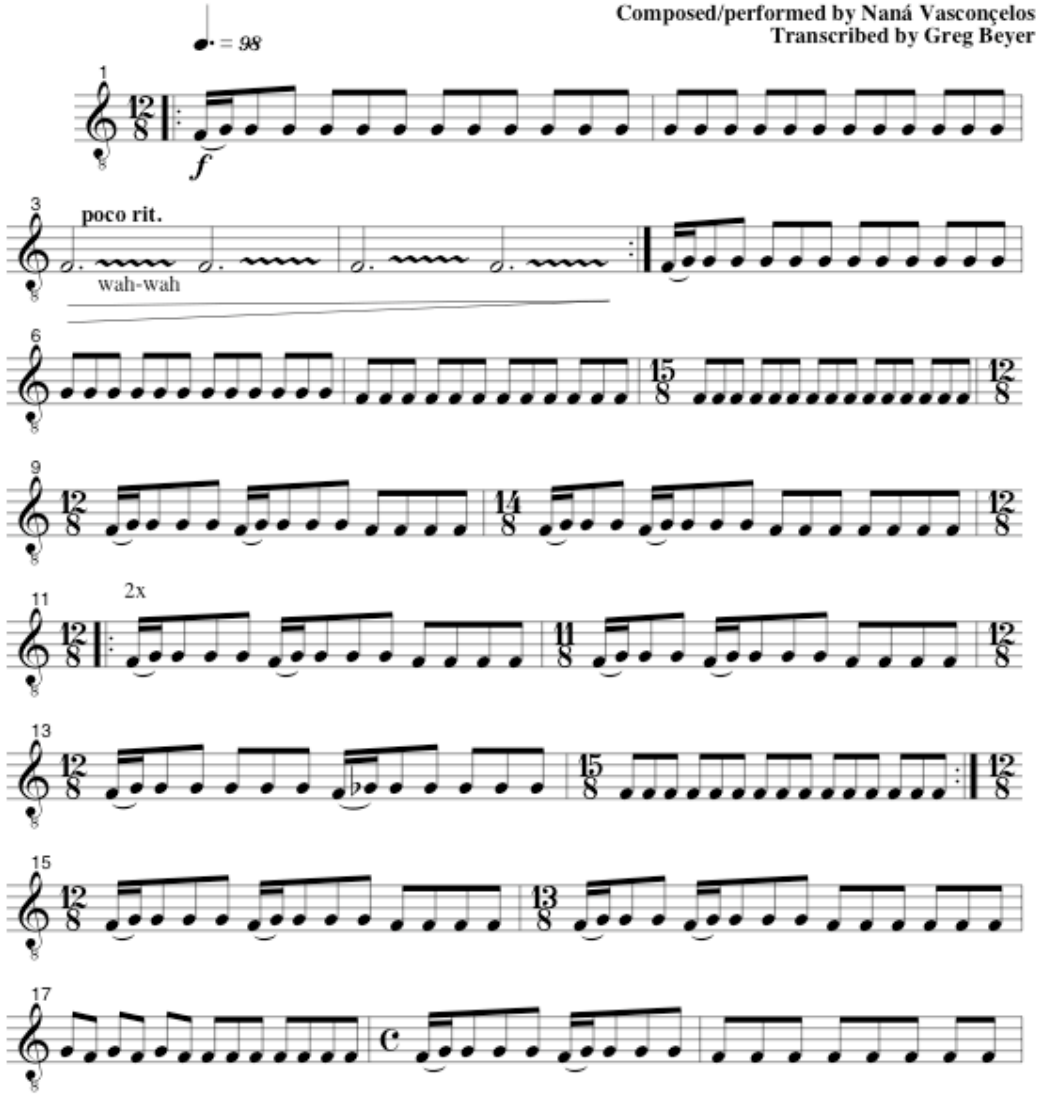
42, 44, 46) creating a forward momentum and a clear indication that things are about to change.

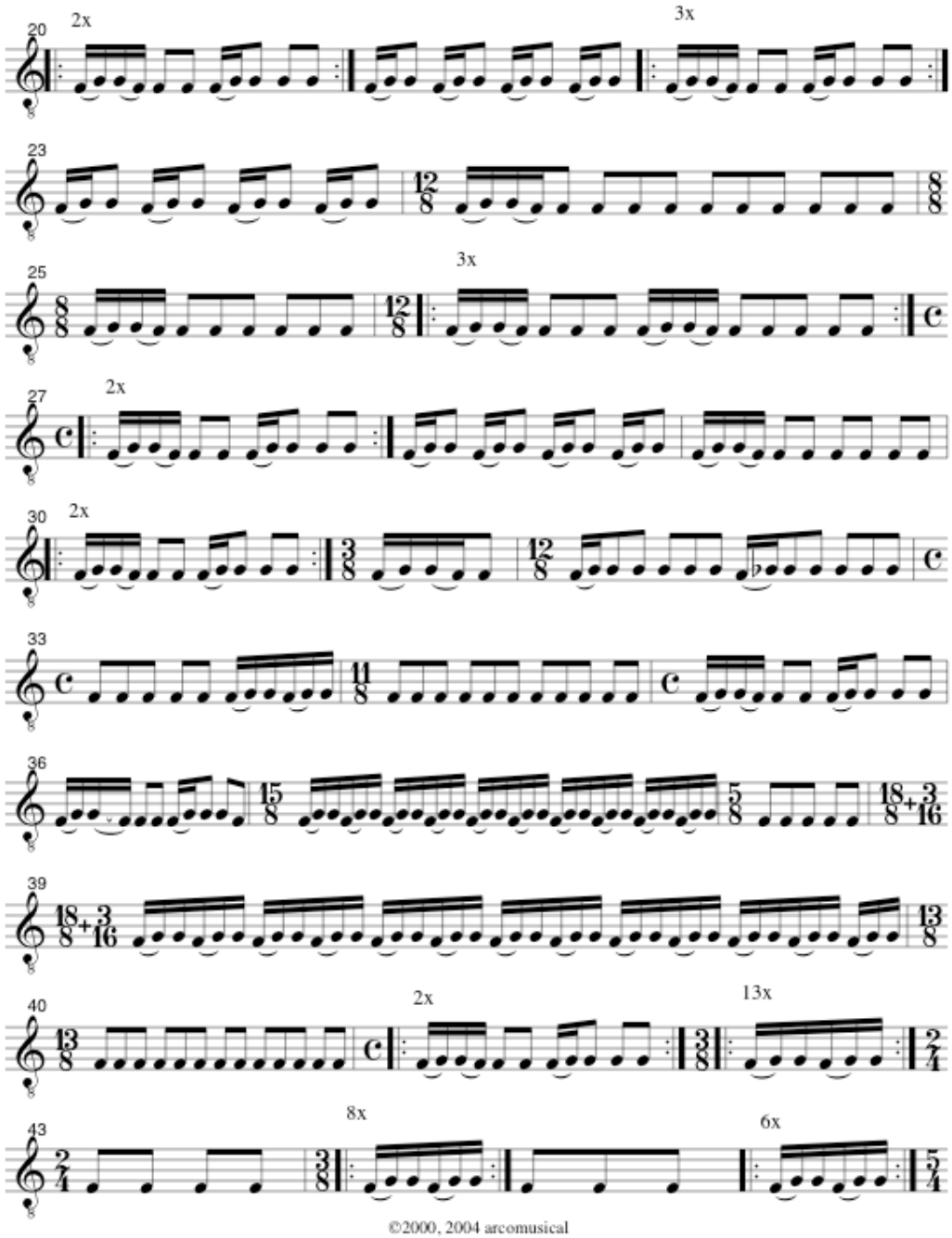
This change comes like a bolt of lightning in m. 47. Naná uses the technique of a one-handed tremolo between the wood and the wire. From a performance perspective, notable here is the rapid speed of his execution. He is essentially beating out 16th-notes with one hand at a tempo of 124 bpm. The opening tempo of the work had been around 100 bpm to the dotted quarter, and m. 47 suddenly ushers in this new tempo. Naná with one hand manages to sustain this consistent stream of 16th-note motion up to m. 58. From this point until m. 79, Naná uses a technique that presses the stick tightly against the wire from the inside of the instrument. Pressing in different points on the wire effectively stops the wire at various lengths, and different notes occur. The notation attempts only to portray the general shape of melodic line. During the course of this passage, Naná travels up and down the wire a total of three times (the third of these taking place entirely in m. 78). Measure 80 introduces the sound of the stick against the wood only, and from m. 85 to the end of this section of the piece, Naná creatively incorporates his voice into the sound of the instrument itself. This technique of creating a vocal-instrumental 'meta-instrument' is something for which he is well known.

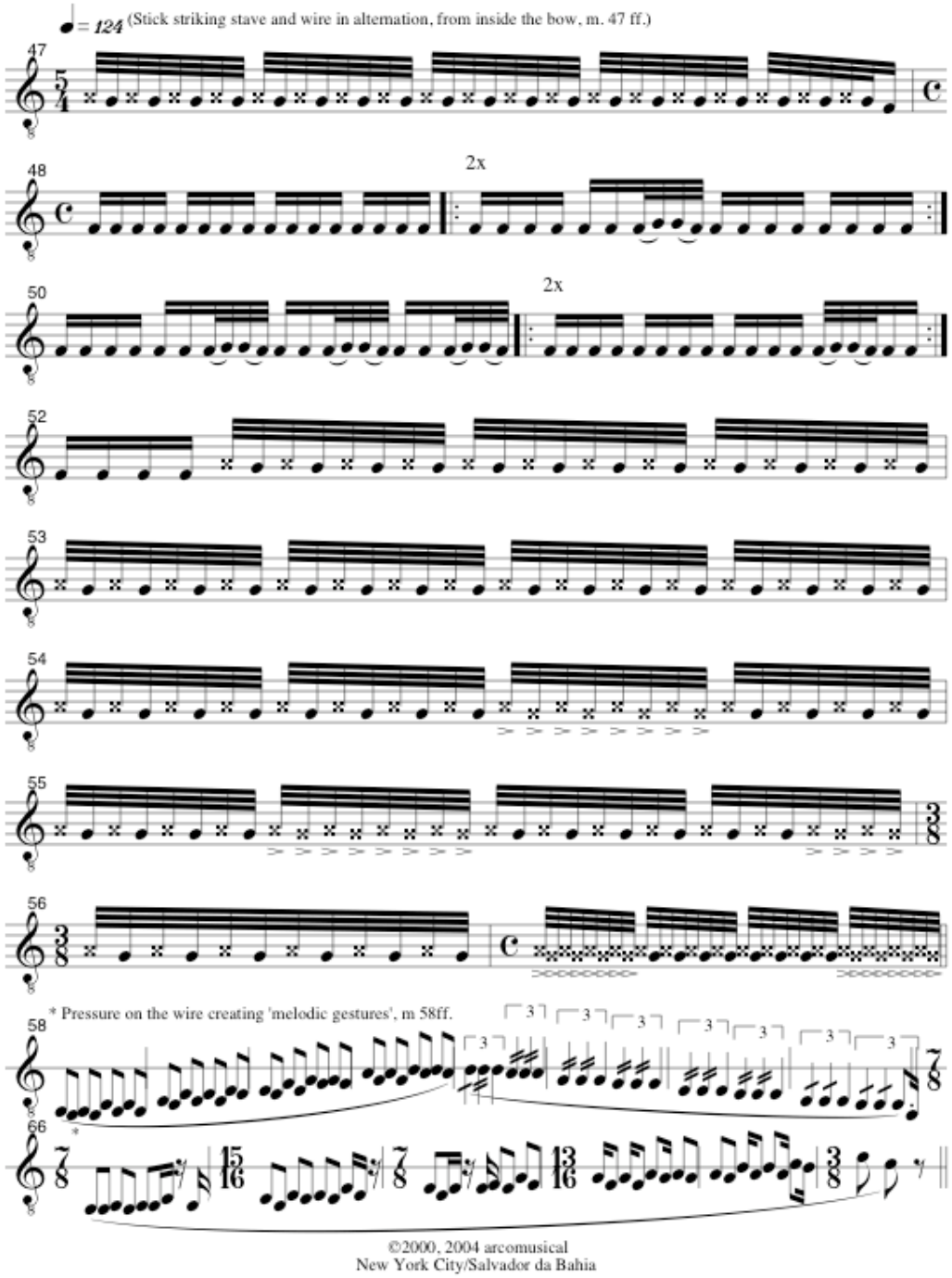
O Berimbau, pt. 1

from the album, *Saudades*, (1980)

Composed/performed by Naná Vasconçelos
Transcribed by Greg Beyer






♩ = 124 (Stick striking stave and wire in alternation, from inside the bow, m. 47 ff.)
47
48
2x
50
2x
52
53
54
55
56
* Pressure on the wire creating 'melodic gestures', m 58ff.
58
66
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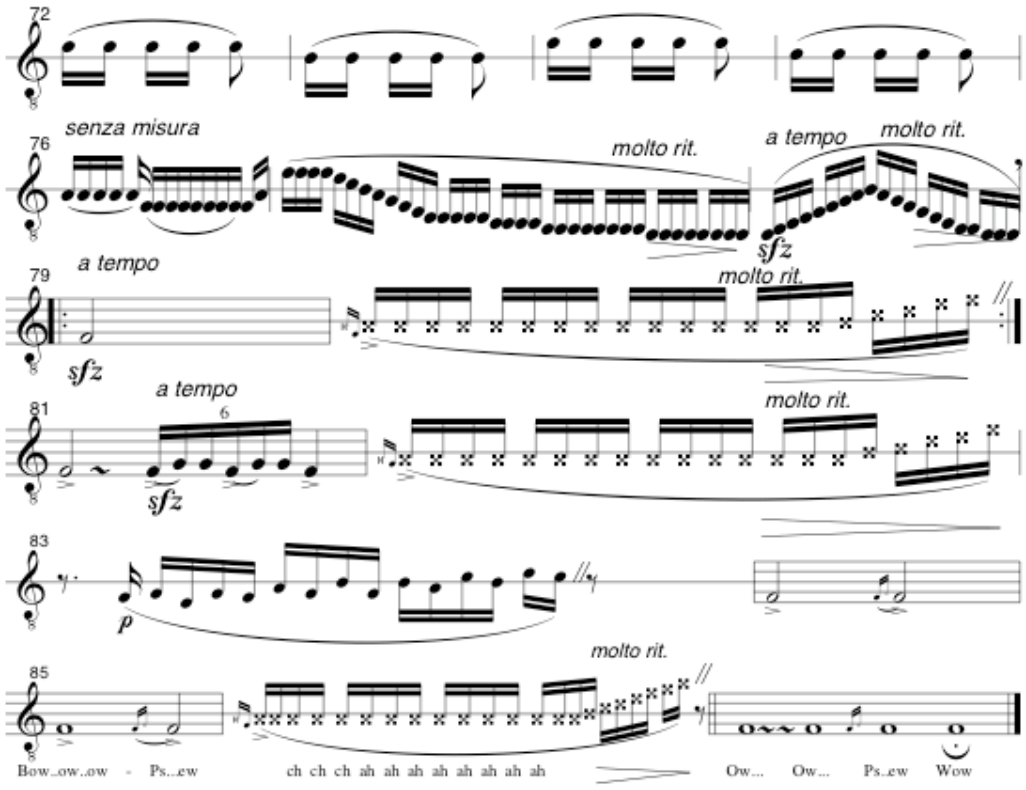

Part 2 (8:19)

This bit of playing commences after the first string orchestra interlude, offering a complete contrast to the pastoral and dreamlike atmosphere that the orchestra has established over the past four minutes. At some point during the interlude Naná picked up his caxixi, and will use it throughout the rest of the piece. Naná enters, in more or less the same tempo he left off in the first part, imitating a military cadence of a snare drum. By using the *repique* technique, (i.e. loosely holding the coin just slightly against the wire), Naná makes the coin function in much the same way that snares function on a drum. Set in 6/8, this theme remains undeveloped, only a humorous gesture as re-entrance. The dotted-quarter soon becomes the quarter note and Naná launches into a groove evoking perhaps a

samba or a Nordeste *frevo*. His military snare becomes the *caixa* while the open tones of the wire imitate a *surdo*, accenting the second beat of each measure.[15]

At m. 8, the tempo suddenly drops back to the original tempo of part one, although the subdivision picks up, reminding us of the sextuplet material that acted as bridge material in the first part of the piece. Here, m. 13 is the bridge and quotes m. 8 from part one. Just as mm. 11-15 of part one repeat, here mm. 16-19 do the same. Measure 19, interestingly remains in 15/8 like the original, but here Naná's accents on the cabaça strongly suggest a return to duple divisions of the pulse. The second ending of this passage is a truncated version, and by m. 21, the rhythm has clearly modulated to a duple feel. The eighth-note remains constant, and the music sets off at a brisk pace of about 160 bpm. Over the course of the next fifty measures or so, Naná will slow this down some 30 bpms, due to the growing density of the music.

This more dense section recalls the material that Naná set in part one, m. 20 ff. It soon moves beyond recollection, however, beginning in m. 25 to insert aspects of the three sixteenth-note motif. Of interest here are the first and second endings. Although the first ending is a measure of 5/4, it consists of two near-identical patterns of 5/8. This motif will reoccur in mm. 53-4. The 7/8 time signature of the second ending foreshadows part three – music yet to come. The 19/16 bar in m. 31 is unique. It is a by-product of Naná's improvised internal repetition of the pitch G in the rhythmic figure: sixteenth-eighth-eighth-eighth. After that point, the music settles comfortably into a 4/4 metric framework.

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[15] *Samba* and *frevo* are popular musics from Brazil. Samba is associated with Rio de Janeiro, but is extremely popular throughout the country. Frevo is a kind of party music from Recife, Naná's hometown, characterized by quick tempos in 2/4 rhythms based on military band music that was common at the end of the 19th Century. *Caixa* and *surdo* are names of drums used in these popular musics. The *caixa* functions much like a snare drum, the *surdo* like a bass drum.

From measure 42, this section of the piece is defined almost entirely by a single 2/4 pattern that is based on the 3 sixteenth-note pattern. This pattern occurs over and over, interrupted by only a handful of either one or two-measure cells. These interruptions are as follows:

1. The 5/8 pattern from m. 27, as mentioned above
2. A 2/4 pattern starting in m. 51 and recurring in mm. 55, 97
3. Cells of the 3/16 pattern that repeat either four or eight times (mm. 60, 67, 69)
4. A 2/4 *samba/frevo* pattern, recalling the opening music (mm. 64, 68, 92)
5. A very interesting berimbau adaptation of another traditional Afro-Brazilian rhythm from Pernambuco, *maracatú*[16] (mm. 75-6, 78-79, 93-4)
6. A pitched variation of this *maracatú*, (mm. 80-81, 95-6)
7. A syncopated pattern featuring a cabaça stroke[17] (mm. 77, 89)

The final moments of this part of the piece are sensational. I am continually in awe of Vasconcelos' speed and agility with one hand. Measure 101 presents twelve repetitions of constant 16-notes broken up between the stave and the wire. The stave marks a typical *baião* ostinato, and the wire fills in the rest of the sixteenths.[18] These wire strokes are of the pressed variety, however, similar to part one, m. 58 ff. The last four measures of this section present a steady stream of sixteenths pressed against the wire that somehow seem to move even faster

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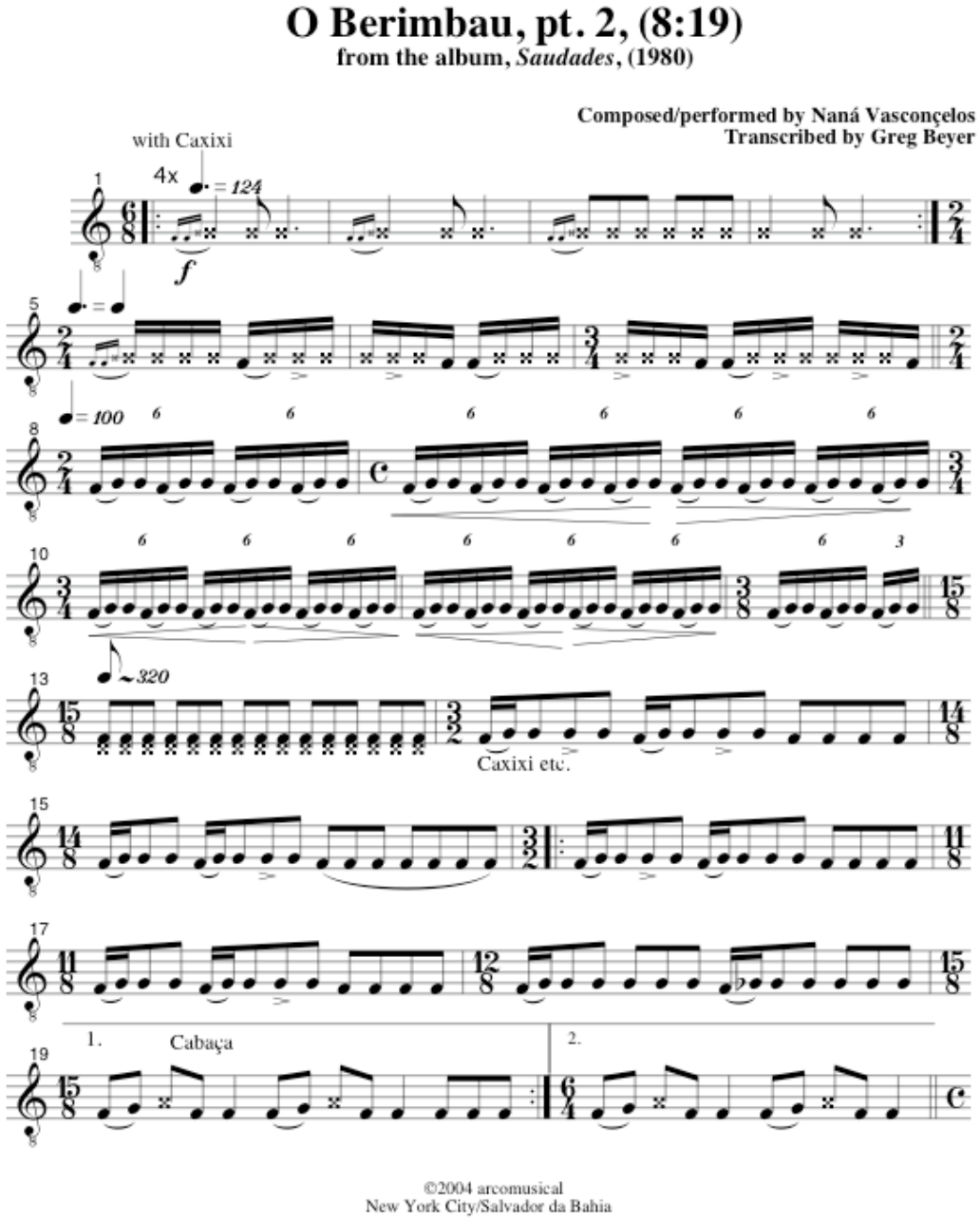
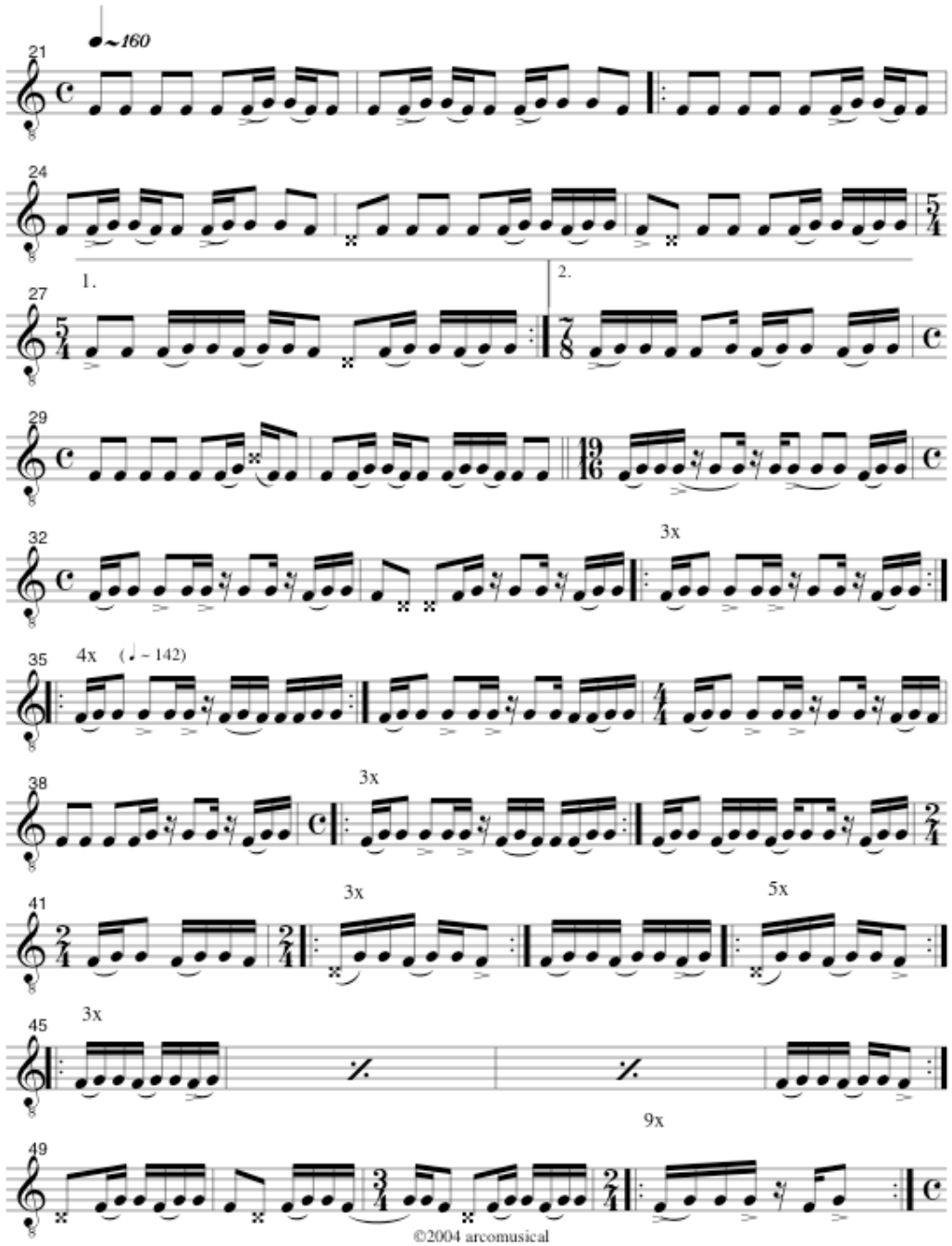
[16] Once again a music from Naná's hometown. More than just a musical style, *Maracatú* has religious implications as well, stemming from ancient Angolan practices. Large processions of musicians, singers and dancers called *nações* ("nations") are commonly seen at Carnaval time in Recife, performing this music.

[17] This pattern is identical to the one encountered in *Homem do Sucursal*

[18] *Baião* is another popular rhythm from the northeast of Brazil. Before the creation of *bossa nova*, it was a largest influential rhythm from Brazil known in the rest of the world. In an oversimplification that works for the purpose of this thesis, it is typified by the following 2/4 ostinato: dotted-eighth, dotted-eighth, eighth.

than the music before it. This final agitation is reflected in the music in the strings, as they pick up the final note and hold the tension, agitatedly bowing the note F with a substantial vibrato.




~160
1.
2.
3x
4x (♩ = 142)
3x
3x
5x
3x
9x
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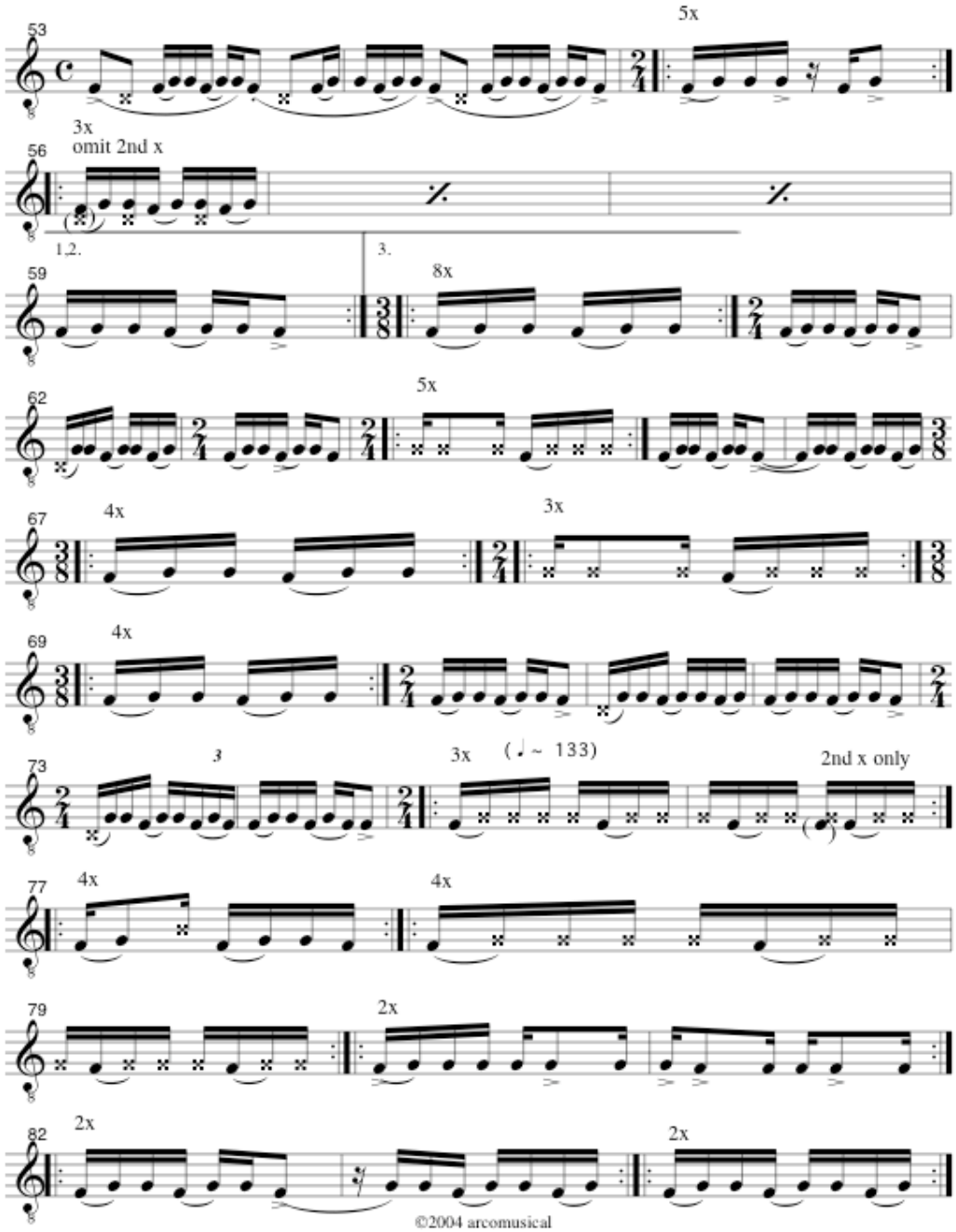
53
5x
3x
omit 2nd x
56
1.2.
3.
59
8x
62
5x
67
4x
3x
69
4x
73
3
3x
(♩ ~ 133)
2nd x only
77
4x
4x
79
2x
82
2x
2x
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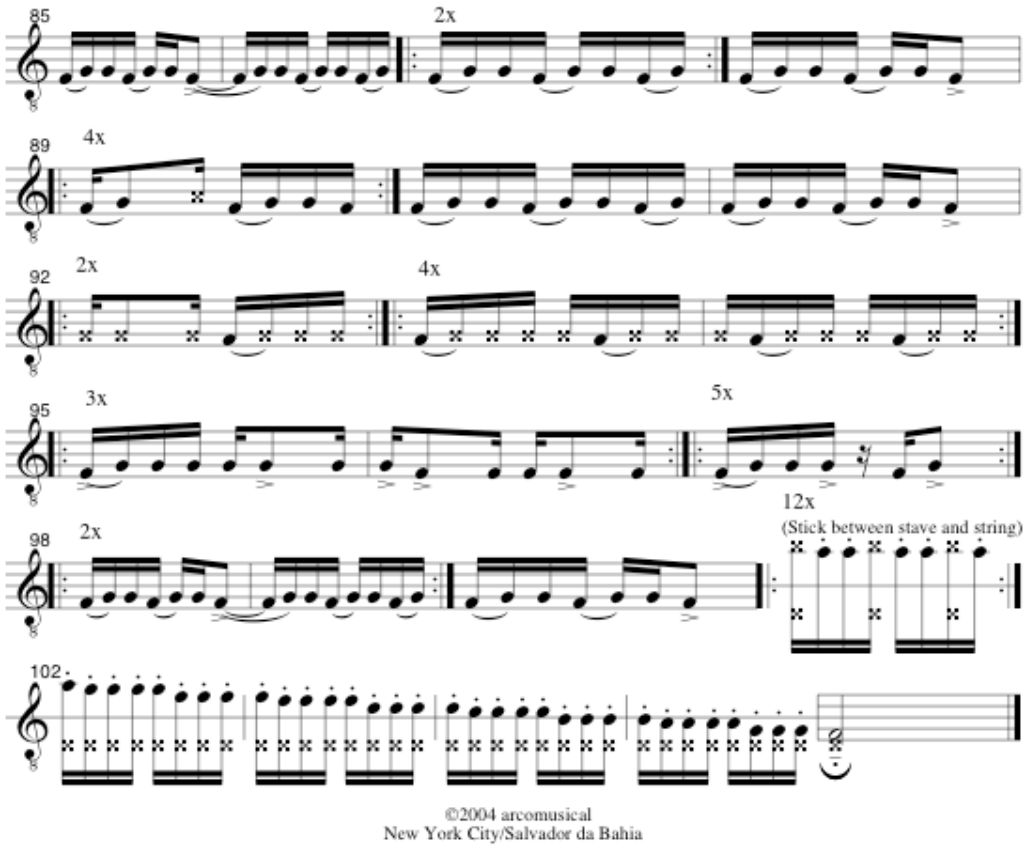


Part 3

Perhaps because of the rhythmic play between 3 and 4 in the first two sections, perhaps because of those bars of 14/8 so clearly divided into two groups of 7, this final section of playing is entirely in a rapid-fire 7/8. The tempo Naná maintains throughout is roughly 164 bpm. At the beginning, over a constant stream of caxixi eighth notes he clearly delineates the 2+2+3 internal divisions of 7/8 with pitches on the wire. This division is not constant throughout, but this pattern returns again and again motivically in the first half. The caxixi is given unprecedented importance, articulating a steady stream of eighth notes that act as the timeline for the notes on the wire. The section is simply a stream of repeated cells that reoccur with varying frequency. Of particular interest here are cells that bear some relation to the music of the first two sections. These are outlined below:

1. The cell that first appears in m. 22 and returns in mm. 27, 31 and 34, is virtually identical to the only 7/8 bar found in part 2, m. 30.
2. The pattern heard in m. 3, a rejoinder to the initial idea, bears a certain resemblance to the opening of the entire work.
3. Measure 14 is clearly derived from the pattern in part 2, m. 52 ff. This pattern recurs frequently (mm. 23, 25, 36-7)
4. Perhaps most significant is the pattern found first in m. 20. This pattern is a pitched version[19] of the 'maracatú' pattern first heard in part two, simply dropping the last eighth note to make it fit inside a measure of 7/8. This pattern will go on to close the movement, *molto ritardando*, to the closing moments of the work.

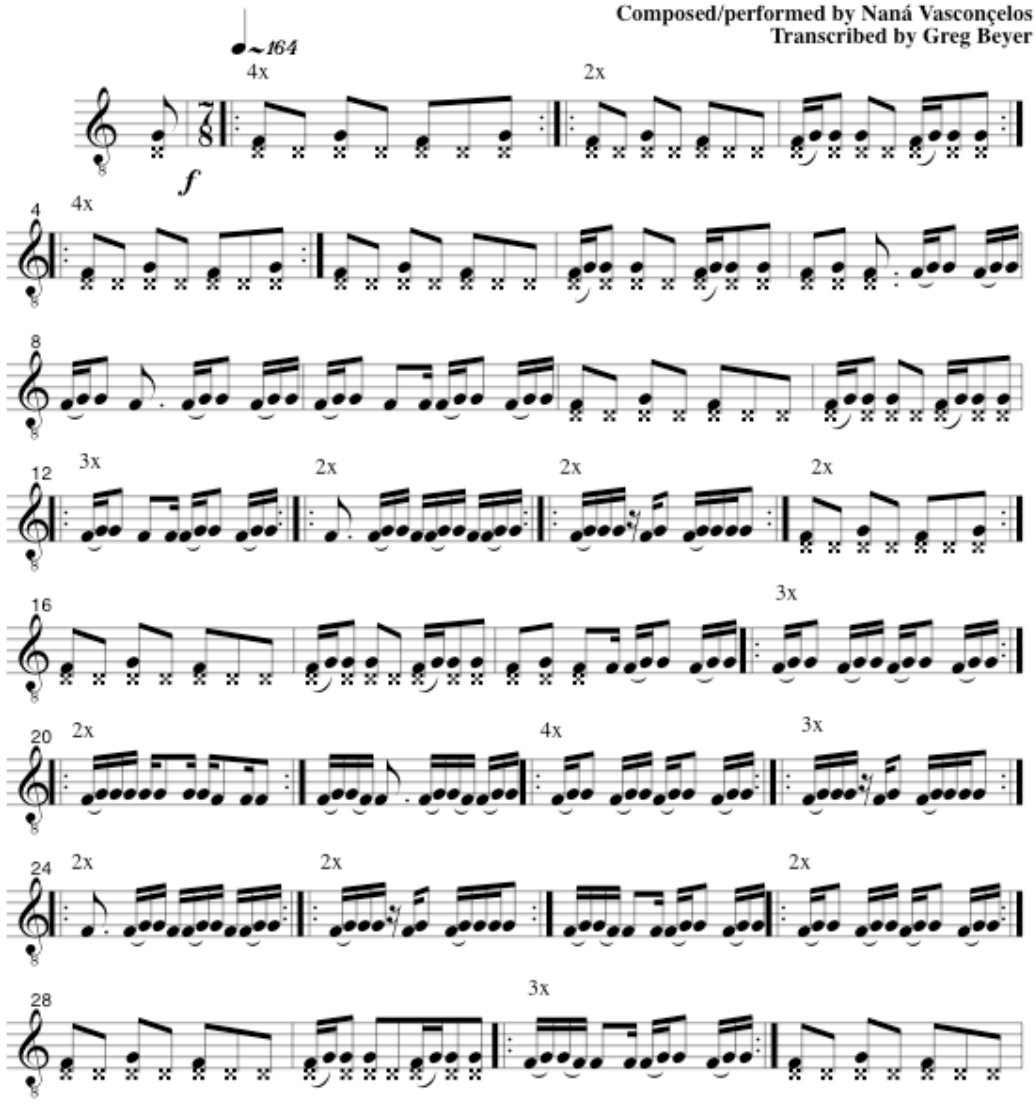
Naná finishes the work by having the orchestra occasionally imitate his open tone. He plucks out two sets of harmonics above the open F, then gives a final sounding of the fundamental, played softly with only the pluck of his finger.

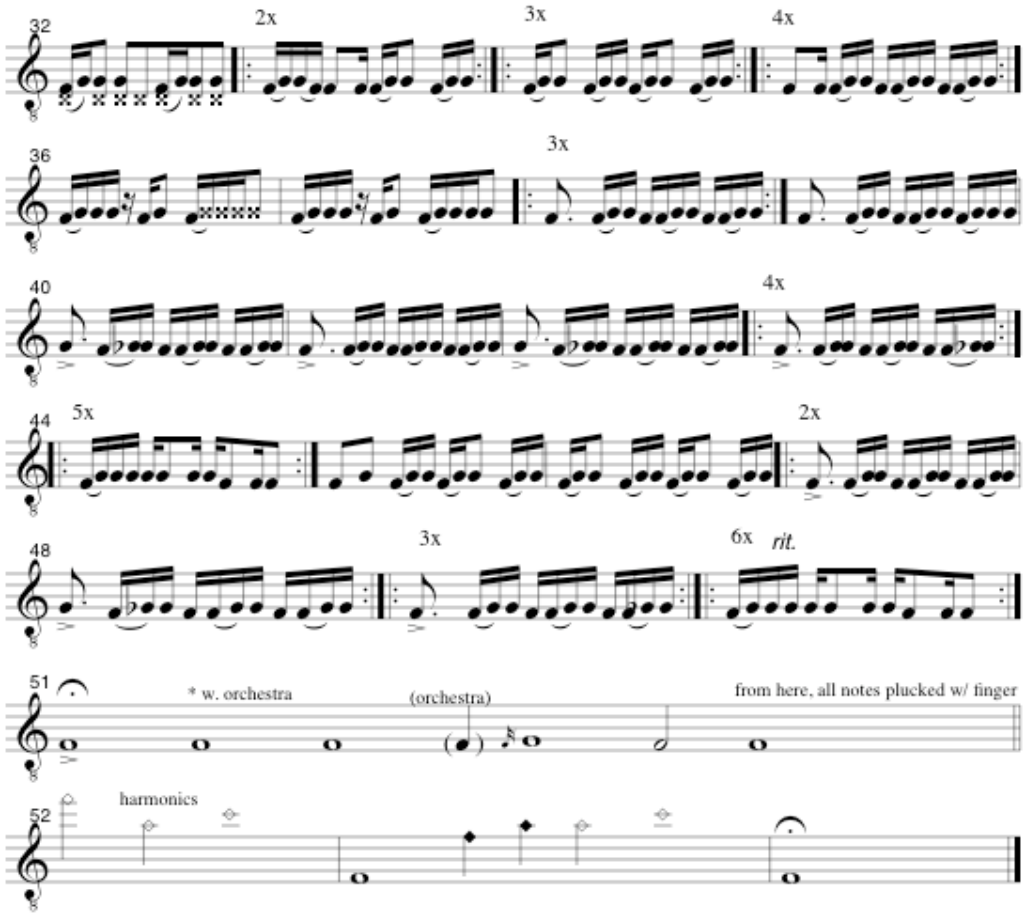
[19] Naná substitutes very clear G's for the notes that had previously been *repique*.

O Berimbau, pt. 3 (15:49)

from the album, *Saudades*, (1980)

Composed/performed by Naná Vasconçelos
Transcribed by Greg Beyer





"Clementina" and "Tu Nem Quer Saber" from *Cantando Historias* (1995)

Toward the end of her life, Clementina de Jesus became something of a *samba* celebrity. Her charismatic, subtly powerful presence and voice were qualities that landed her a contract to record four albums in her last years. Naná was one of the fortunate musicians who collaborated with her in these recordings.[20] Naná's

[20] Clementina de Jesus and Naná were certainly already in similar circles in the 1970's; the two recorded (albeit not together) on an album of Milton Nascimento from 1976, *Geraes*. Her 'special presence' on that record was for another typical *samba* entitled, "Circo Marimbondo".

original composition, “Clementina”, is a salute to this woman, a *samba* that captures her spirit and style.

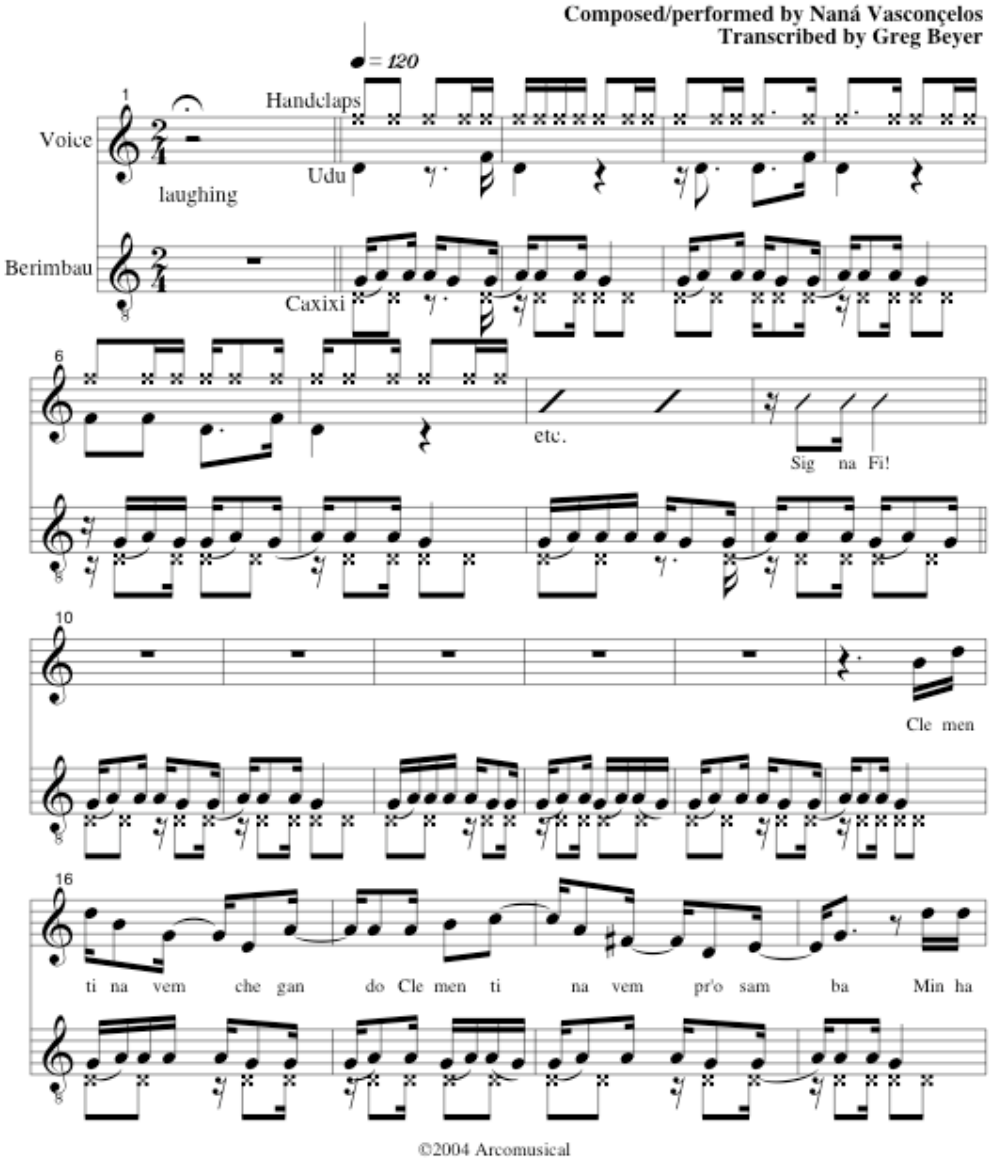
In the recording studio, Naná has a special ability to create dense textures through the process of multi-track recording. This album, *Cantando Historias,* (Storytelling), is full of wonderful examples. In ‘Clementina’, Naná recreates the joyful and playful atmostphere of a samba, using udu drum (ceramic percussion instrument with African roots), clapping hands (‘bate palma’) and berimbau to set the music in motion, along with a guest artist performing cavaquinho (4-string miniature of the guitar family) for rhythmic and harmonic support.

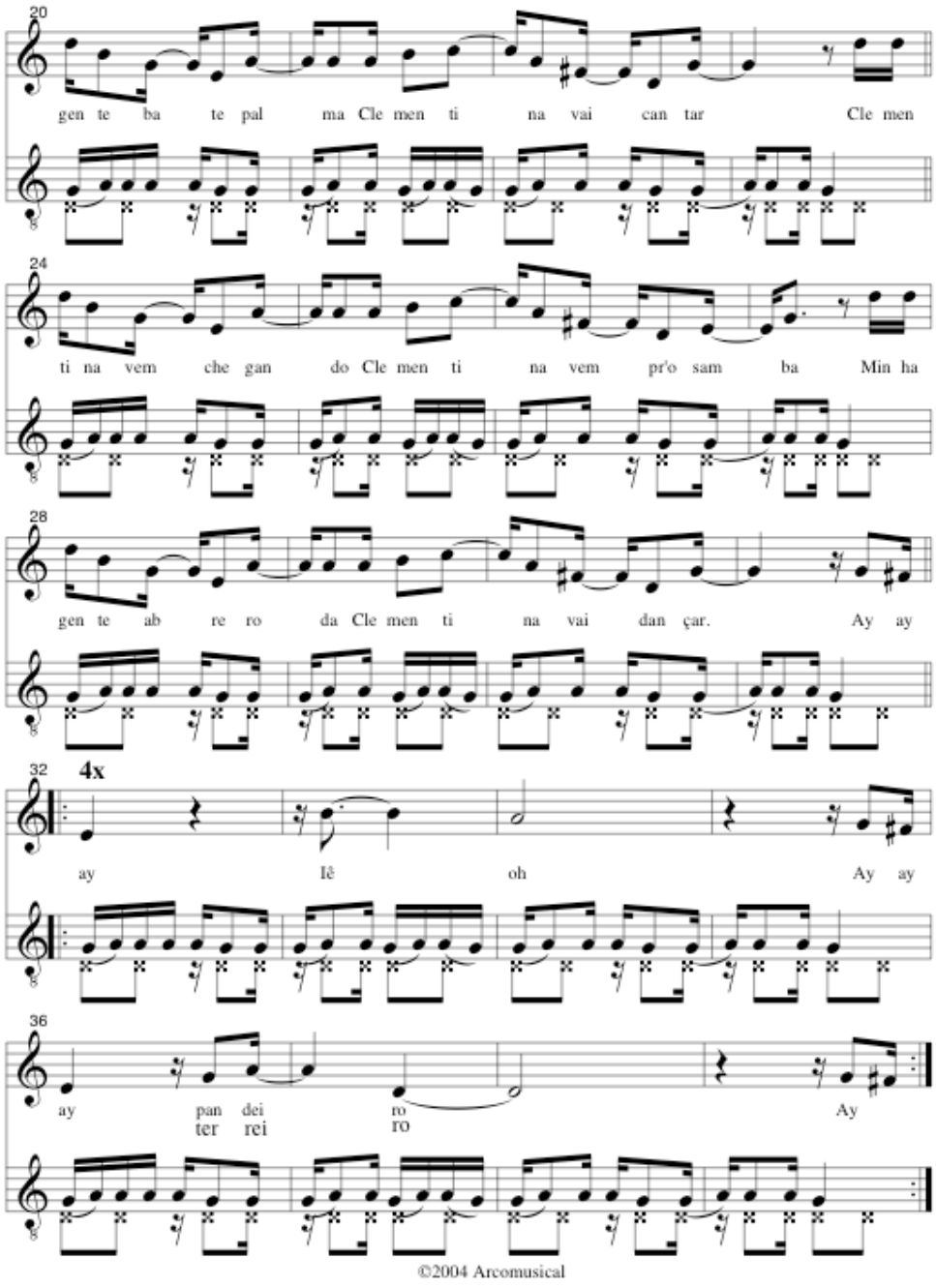
He sings the tune twice, i.e. recorded twice and layered together, panned slightly left and right. When we first encounter the textless interlude, Naná very tastefully adds a surdo (samba bass drum) on beat two of the first bar and every other bar afterward. A second pass through the melody without text introduces a metallic crasher on all upbeats, (possibly a ribbon crasher, or perhaps a china cymbal played lightly and choked soon after being struck). All elements are now in place, and the song continues to the end, each consecutive pass at the melody gathering momentum through the build up and breakdown of a number of vocal tracks that seem to cascade over and into each other like the delightful dance party that we imagine is being invoked. At about three minutes into the recording, the texture opens up only briefly and the berimbau, which has been chugging along virtually unchanged since the opening, takes center stage.

Clementina

from the album, *Cantando Historias*, (1995)

Composed/performed by Naná Vasconçelos
Transcribed by Greg Beyer




20
gen te ba te pal ma Cle men ti na vai can tar Cle men
24
ti na vem che gan do Cle men ti na vem pr'o sam ba Min ha
28
gen te ab re ro da Cle men ti na vai dan çar. Ay ay
32
4x
ay Iê oh Ay ay
36
ay pan dei ro Ay
ter rei ro
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"Tu Nem Quer Saber" provides a closer, simpler look at the berimbau, and Vasconcelos's creative use of multi-track recording. This piece is only for berimbau, handclaps, and vocal lines. All three of these elements are recorded twice and panned to create a sort of surround effect. The slight inconsistencies from take to take also create interesting, unpredictable counterpoints.

The opening of the work begins with a two-bar berimbau phrase repeated four times. This opening allows us to hear the berimbau phrase clearly, as well as the effect of panning two takes of the same pattern. The human inconsistencies make the part(s) swing and groove. After the fourth repetition, Naná begins singing. This melody is also doubled and panned. The rejoinders 'tanto essa dor' and 'fala desse amor' are placed closer to the center, as if to suggest a different voice in a call-and-response relationship.

The lyrics are simple. On the surface it is a love song, but there can easily be other interpretations, (e.g. the Afro-Brazilian struggle for recognition and equality).

Já que tu não quer saber de mim	**Since that you don't care about me**
Tanto essa dor	**So much is this pain**
É que tu não quer saber de tu	**It is that you don't care about yourself**
Fala desse amor	**Talk of this love**

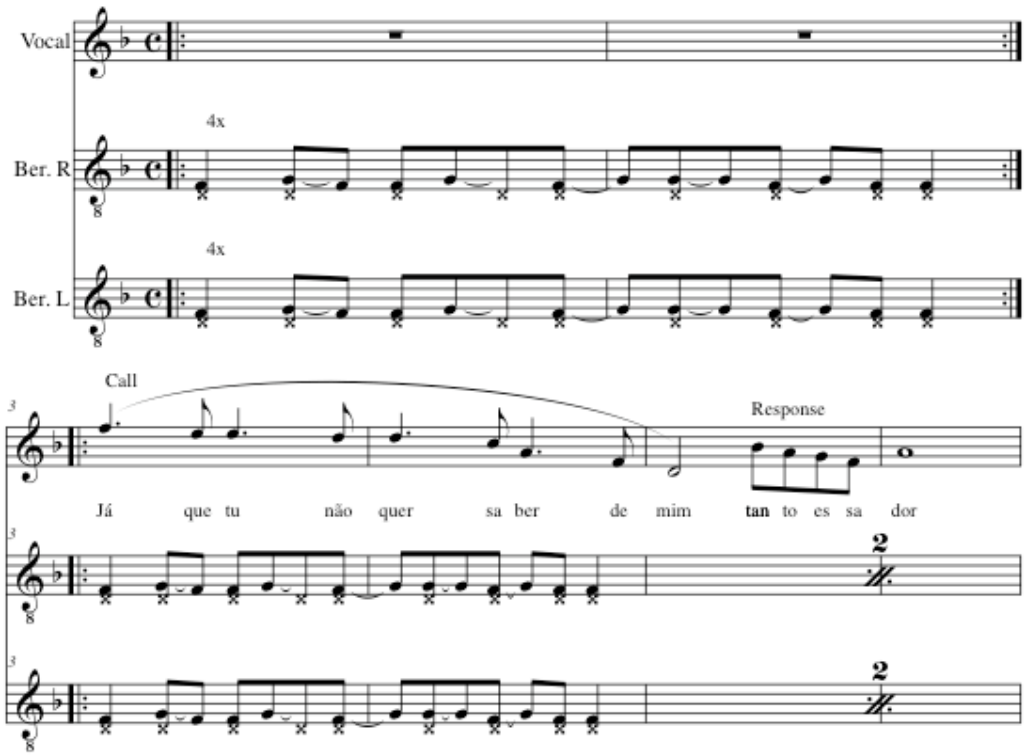
After singing these lyrics twice, Naná repeats the melody without words. It is at this point that the right channel berimbau breaks away from the pattern, playing a more constant stream of eighth notes that provides a very interesting counterpoint to the left channel which retains the original phrase throughout the track.

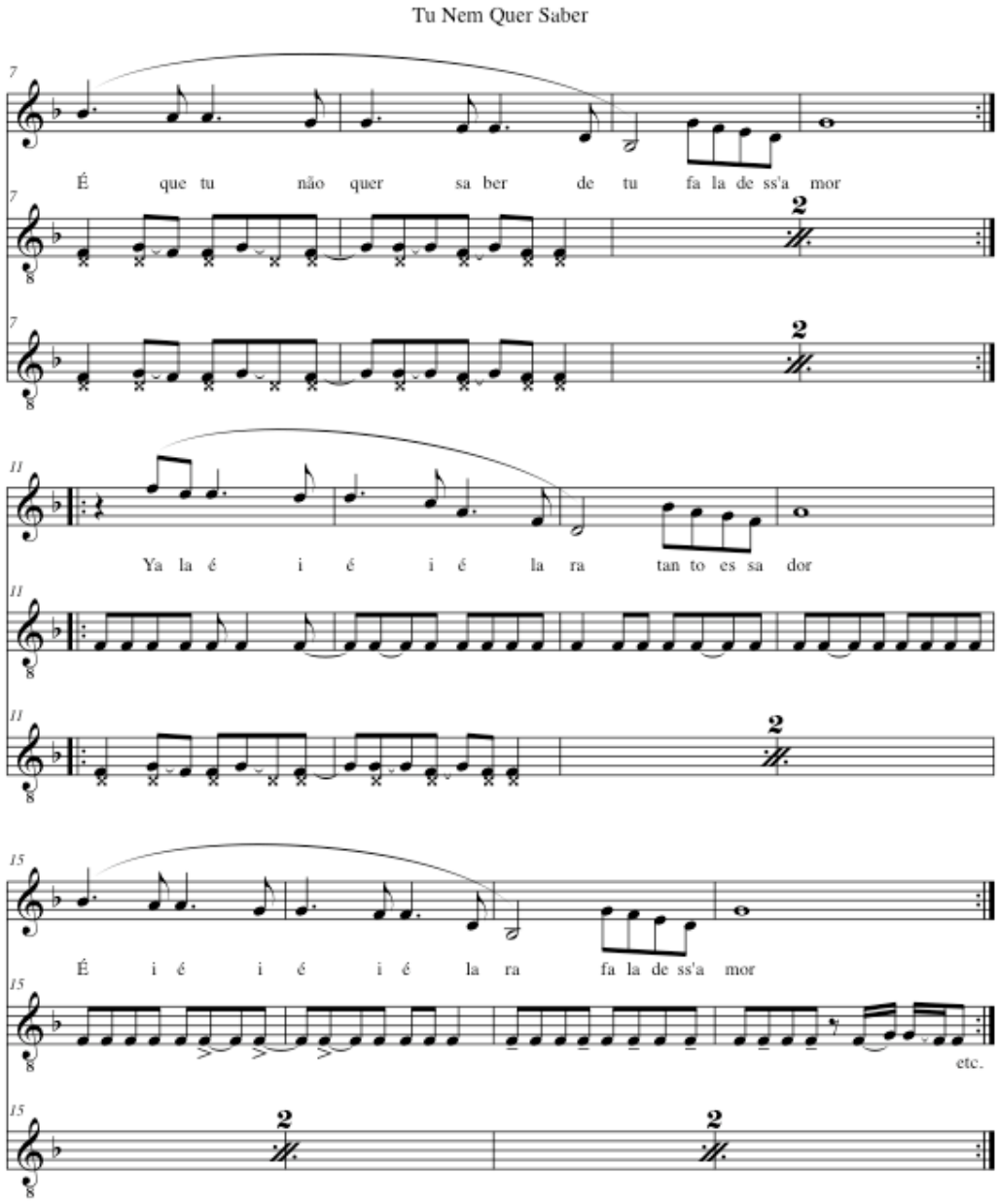
An opening sketch of the piece looks something like this:

Tu Nem Quer Saber

from the album, *Cantando Historias*, (1995)

Composed/performed by Naná Vasconçelos
Transcribed by Greg Beyer




Tu Nem Quer Saber
É que tu não quer sa ber de tu fa la de ss'a mor
Ya la é i é i é la ra tan to es sa dor
É i é i é i é la ra fa la de ss'a mor
etc.
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'Dado' from the album *Saudades* (1980)

This track is an improvisation that closes the album. On one of my last days in Brazil in February of 2004, I was able to spend a couple of hours with Naná, one on one, to show him these transcriptions, to do a bit of playing together, and to show him my creative work with the instrument. It was on that morning that he revealed to me the story of this particular piece.

Listening to it and transcribing it, I had always thought Naná had recorded two different tracks of berimbau, one tuned very low at D, almost a full octave below middle C, and the other tuned at A, a perfect fifth above. I did wonder, however, how he was able to double himself so seamlessly performing such intricate rhythmic passages.

In fact, Naná mentioned that the wonderful performer/composer Egberto Gismonti, his musical partner for this and many other ECM albums of the same vintage, had been given a special instrument in São Paulo, days before the recording session. It was a berimbau with two strings, and the nickname of the instrument's maker was Dado. Dado asked Gismonti to take it with him to Germany to give to Naná for the recording. Naná said he enjoyed playing with the instrument, but found it frustrating to keep in tune. Each string was looped around a separate tuning peg like a violoncello. These pegs ran through the stave at the upper end of the instrument. Apparently it was capable of holding a perfect fifth, but thirds and other intervals were impossible to achieve. Whenever Naná went to tune one string, the other would come undone or simply slip out of tune. He mentioned that he made this recording with the instrument, played it live afterward for a show or two, then just put it away and never used it again. Sad story perhaps, but the result of this improvisation on *Saudades* is a unique bit of work for the berimbau.

Worth noting is the very first measure. After the second bar sets the tempo of eighth-notes, it becomes clear in hindsight that the 'wa-wa' effect of the gourd

moving to-and-from the chest had *already set the tempo* from the first instant of the piece.

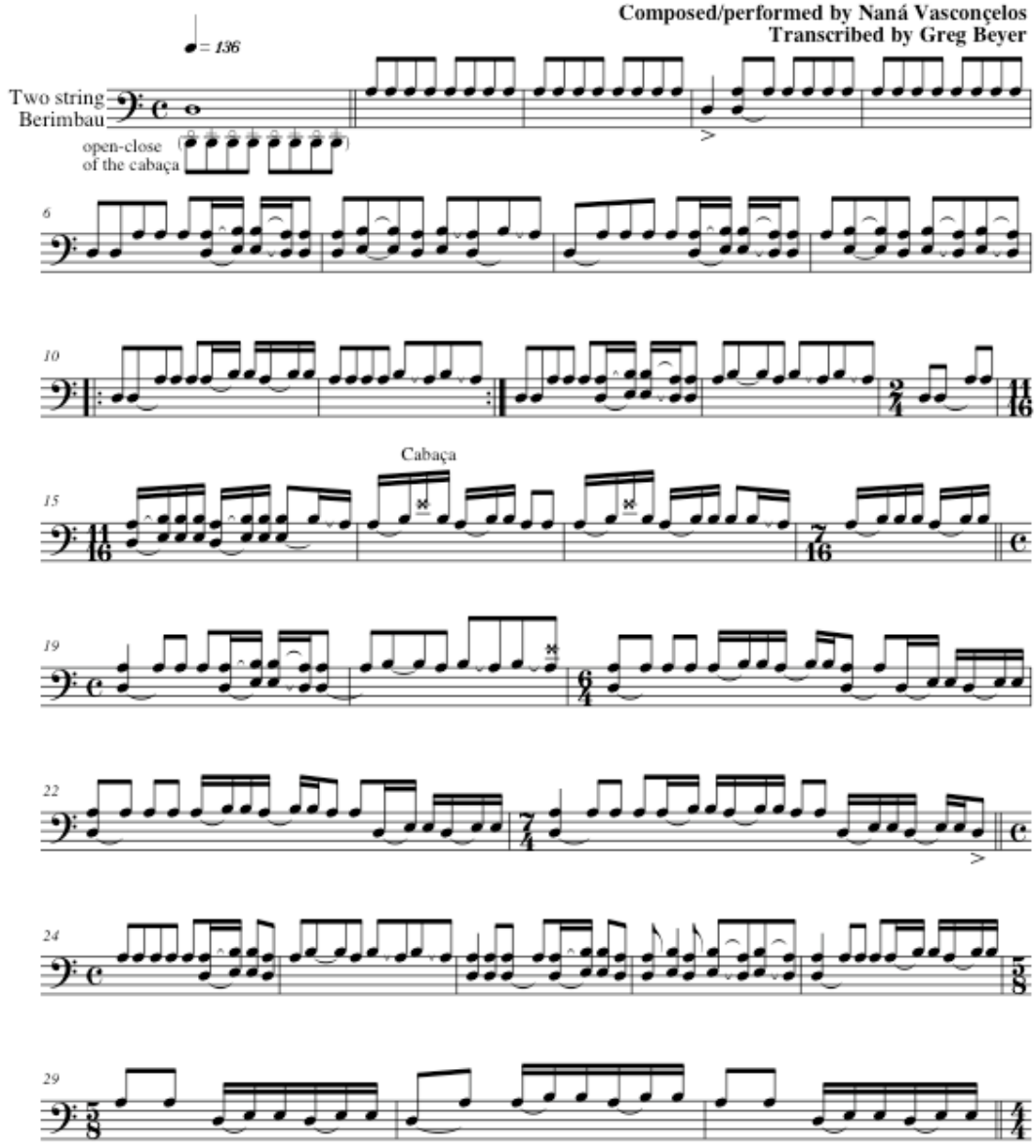
There is a two-measure melody heard for the first time in mm. 6-7 that is repeated and returned to with frequency throughout the piece. The form of these 3 and 1/2 minutes takes on a sort of stream-of-consciousness weaving in and out of this singular melodic idea. Points of divergence away from this line borrow heavily from patterns we have already seen in parts two and three of *O Berimbau*. For example, mm. 59-60 come from part two, mm. 43ff., and mm. 91-2 come from stock patterns in 7/8 from part three. More likely than quotation is the use of standard patterns or 'licks' that Naná has developed on the instrument.

It was perhaps this piece, (given the harmonic result of playing an instrument so beautifully constructed and tuned), that planted the seeds for my own compositional endeavors with the berimbau. It certainly turned my thoughts to the idea of tuning multiple instruments to achieve harmonic results.

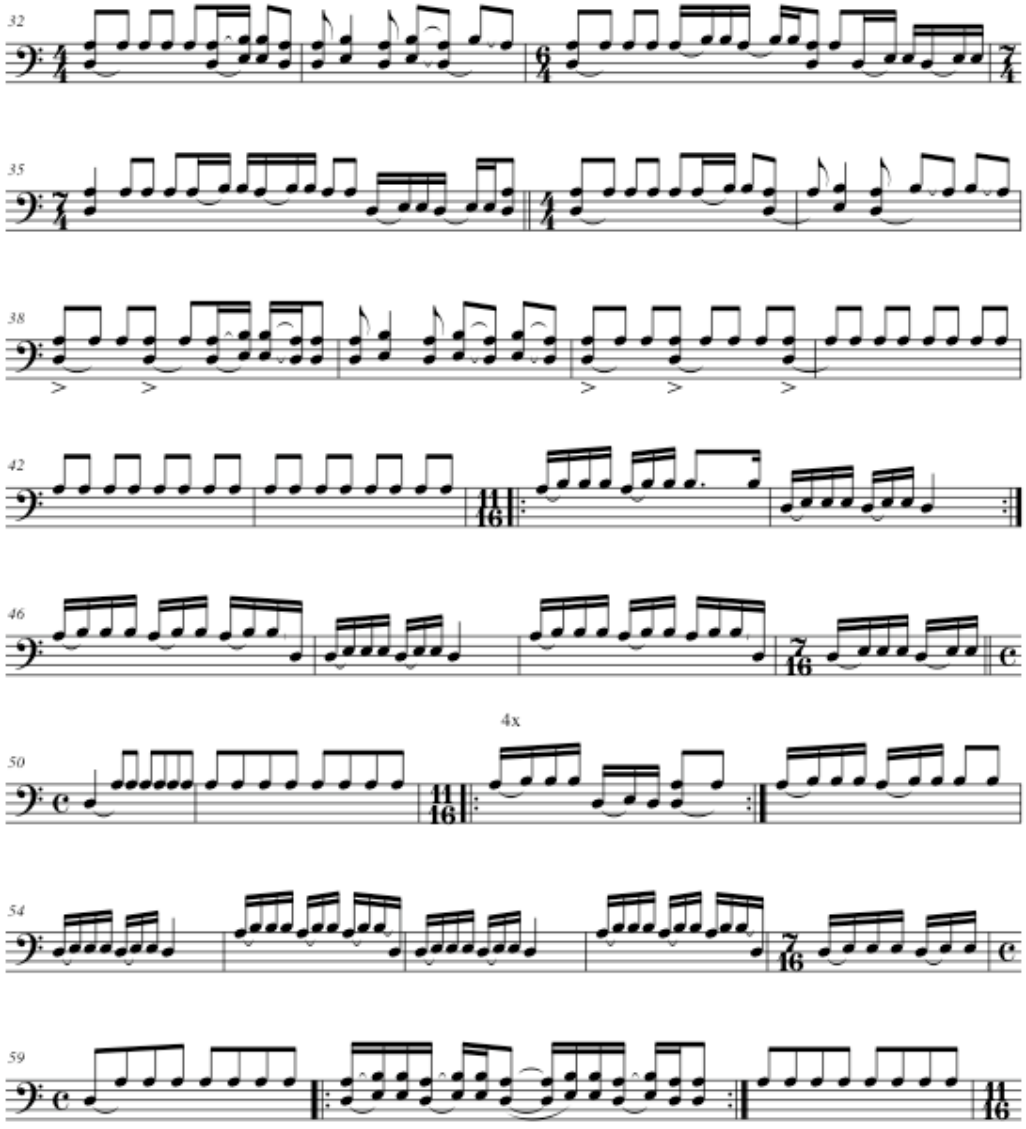
Dado

from the album, *Saudades*, (1980)

Composed/performed by Naná Vasconçelos
Transcribed by Greg Beyer



Dado, cont'd.



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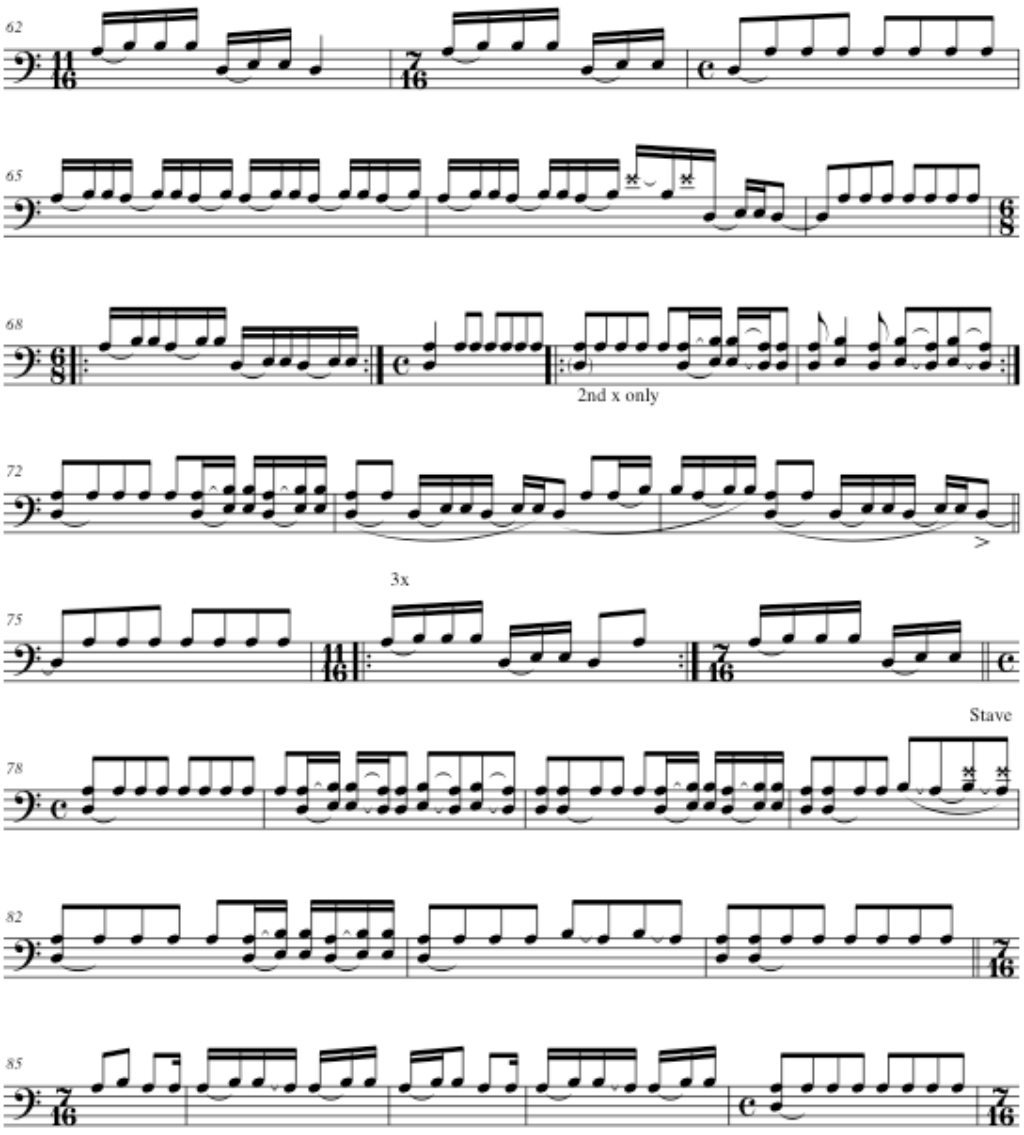
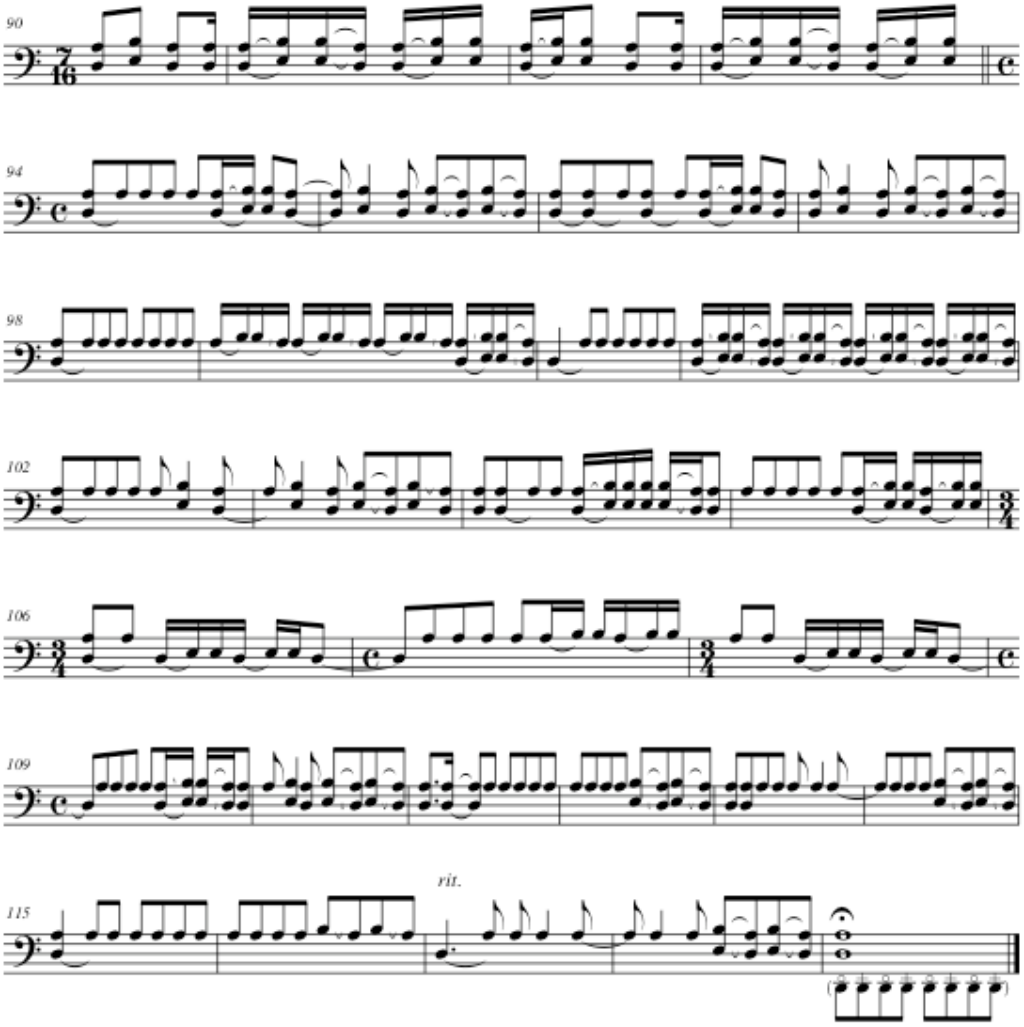


Dado, cont'd.



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> To play capoeira you have to play the berimbau. I kept the berimbau in my house and started to think that it doesn't just have to be played with capoeira. The capoeira only has about four rhythms. I thought I should do different rhythms on berimbau. I started to play it in different ways. It's funny, but at first I was very scared to play that way in front of people, because I thought they were going to say I was damaging the tradition.[21]

While it is true that Naná has pushed the berimbau well beyond the scope of its role in *capoeira*, it is a slight exaggeration to state that *capoeira* only uses about four rhythms. The tradition of *capoeira* has interesting inter-cultural roots that give its story a great depth and breadth of expression. In the next chapter, then, we shall explore what *capoeira* has to offer and to tell about the musical bow that it has adopted as its own.

[21] As per above. See footnote 2.

Capoeira – The Traditional Context of the Brazilian Berimbau

"Capoeira is a way of living that has given me a better perspective on the game of life."[1]

Capoeira has become a worldwide phenomenon. Readily available are books, recordings and websites concerned specifically with its history, philosophy and practice.[2] Perhaps given *capoeira*'s 'oral tradition', what I often find lacking in these resources is detailed and extensive musicological work in the name of transcription and analysis. It is the intent of this chapter, therefore, to fill that gap. In what follows I shall frame the berimbau within this cultural context, provide transcriptions of individual '*toque*s' (traditional rhythms) of the berimbau and subsequent variations to give a sense of actual performance practice, analyze the interplay between the three berimbaus that form the core of the musical ensemble in a *roda de capoeira Angola*[3], and venture some thoughts on typical song texts. The words of the traditional songs in *capoeira* are, in the end, far more varied than the music. They typically touch on themes of religion, of skill in the game, and of Afro-Brazilian cultural identity. These themes form the philosophical basis

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[1] Bira Almeida, *Capoeira, a Brazilian Art Form: History, Philosophy, and Practice*, (Berkeley, CA: North Atlantic Books, 1986), 36-37.

[2] It is not the purpose of this chapter to repeat the wealth of information already available. For a well-organized introduction to this world, the reader would do well to explore the website of the International *Capoeira* Angola Foundation, ICAF. http://www.*capoeira*-angola.org. Regarding the worldwide spread of its practice, a very interesting interactive map is on a page that can be linked to from the first site, http://www.icafphilly.org/*capoeira*_angola_links.htm.

[3] *Roda* means, literally, 'circle'. Any organized game of *capoeira* takes place inside a circle or ring of participants. The ring is comprised of onlookers and instrumentalists, all of whom join in singing songs that relate to the game in the moment. The game itself is played between two people who attempt simply to demonstrate to the other (as well as to everyone else in the *roda*) that they have outstripped them with intelligent and cunning dexterity by placing their opponent into a compromised position. They play in an infinitely varied manner, using all manner of movements of the body; however, great emphasis is placed on movements of the lower body. Such movements stem from Bantu aesthetics. *Capoeira Angola* is the most traditional form of the game and as such is separates itself from a more common practice of the game known as *capoeira Regional*.

of *capoeira*, and as such provide the berimbau with its strong cultural identity. In light of this, it will be helpful to briefly describe *capoeira* within the larger context of the history of slavery in Brazil.

Capoeira is frequently defined by a variety of terms -- a martial art, a dance, a game, a sport, a competition, a philosophy and a way of life. Because at any given time it is any one if not many of these things, it has never been simple to define. The practitioners of *capoeira,* known as *capoeiristas*, insist that without 'living *capoeira*' there can be no understanding from the outside, a sentiment similar to Louis Armstrong's famous quote about jazz…*"Man, if you have to ask…"*

The History of *Capoeira* in Brazil

There are various theories concerning the origin of *capoeira* in Brazil. What is never in question is its clear connection with African cultural elements brought to Brazil. More specifically, Kubik points to "strong Angolan heritage."[4] Perhaps the most consistent and relevant explanation among *capoeiristas* is based on a link to a variety of martial art or dance traditions of southern Angola. McGowen and Pessanha suggest links to Angolan martial arts such as *njinga, basula,* and *gabetula.*[5] Other sources state that the Mucupe people have traditionally practiced a dance in imitation of the fight between two male zebras at rutting season. This dance is called *n'golo* and is danced by boys at the age when they are ready to marry. It is performed during *efundula*, the celebration of the puberty of young girls, when they pass onto the role of women, ready for marriage and childrearing. The boy who wins the *n'golo* is entitled to choose his wife without paying the traditional dowry. This *n'golo* is practiced as a fight primarily using the feet, and as such is extremely similar to *capoeira*. Some say they are equivalent. Among the schools of *capoeira Angola* in Salvador, this imagery is part of the fabric of history and myth associated with the philosophy of the modern game. I, myself, own a school shirt from the *Capoeira Angola* School of *Mestre* João Grande in New York that is adorned with the

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[4] Gerhard Kubik, *Angolan traits in black music, games and dances of Brazil*, (Lisbon: Junta da Investigações do Ultramar, 1979), 27.

[5] Chris McGowan and R. Pessanha, *The Brazilian Sound*, (Philadelphia: Temple University Press, 1998), 119.

imagery of zebras among fighting *capoeiristas*. The close connection to African identity is an integral part of the pride that practitioners take in the sport, its philosophies and its rituals.

African culture was introduced in Brazil via the incredible number of Africans who were transplanted during the Atlantic Slave Trade. This was a practice that forced millions of people into despicable situations over the course of nearly 400 years. From an African perspective, the consequence of such activity was devastating. Kubik mentions that some oral traditions in southern Angola report a severe depopulation due to related raiding in that region.[6]

Africans brought to Brazil came from three major cultural/linguistic groups within the African continent: the Sudanese, comprising primarily of the Yoruba and Dahomian peoples; the Mohammedanized Guinea-Sudanese, consisting of the Malesian and Hausa peoples; and various "Bantu" groups, Kongos, Kumbundas, Kasanjes, etc. from Angola, Congo and Mozambique. The *n'golo* comes from this third group. Once in Brazil, these groups were not allowed to remain in solidarity, but rather were all thrown together on sugar cane plantations. Without a common tongue, organized insurrection was made difficult. While individual escapes to freedom were much more common, organized revolts nevertheless did take place.

Runaway slaves wasted no time in adapting and organizing their own proper societies. The geographical terrain of Northeastern Brazil was somehow familiar to the slaves, who were able to find shelter in the dense palm forests in the interior of the country.[7] They gathered there in numbers and created *quilombos*, organized villages of runaway slaves. While these were of varying sizes and degrees of organization, there were at least ten

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[6] Gerhard Kubik, "Musical Bows in South-Western Angola, 1965," *African Music* 5(4): 98-104, 1975.

[7] I made a visit to the *Casa Angola* in Salvador in February 2004, a kind of cultural embassy run by the government of Angola. I started up a lengthy conversation with my very kind elder tour guide who informed me that many of the slaves never understood they had left Africa, for the geography was so similar.

major *quilombos* with internal socio-economic organization and commercial relationships with neighboring cities. The most famous of these was the "Republic of Palmares." With a population that reached some twenty thousand runaway slaves and given its keen and strategic internal organization, it flourished for many decades before the Portuguese destroyed it in an organized military attack in 1695. Its second leader was a charismatic political hardliner named Zumbi, and because of his fierce and relentless resistance to the Portuguese, he has become a mythological icon for the Afro-Brazilian consciousness. His name is proudly taken and used by various peoples, groups, and events when they want to affiliate themselves with an Afro-Brazilian cause or concern. Many of the songs of *capoeira* praise him as an icon of African resistance and a source of pride for modern day Afro-Brazilians. "Zumbi dos Palmares symbolizes the struggle for equal rights, already due to the Afro-Brazilian people, for their contribution to the construction of Brazil."[8] Because there has historically been so little development in the interior of Brazil, especially in the Northeast, to this day there exist small towns and villages whose populations consist entirely of the descendents of *quilombolas* (former residents of *quilombos).*

Historical documents written in Brazil first mention *capoeira* around 1770. It was undoubtedly practiced before this, however, as many contend that it was developed as one means of weaponry and self-defense inside the *quilombos.* Because of the skill the *capoeiristas* had with their bodies, the practice came to be seen by the Brazilian government as a threat and a scourge, something to be controlled and systematically removed from society. Despite this there were moments of glory for *capoeira* during these approximately two centuries of history. The military powers-that-be, recognizing its strength and strategic advantage, actually employed *capoeiristas* as frontline combat soldiers in wartime. The imperial government also established the 'Guarda Negra'. This armed force was established as a salute to Princess Isabel, and her signing of the 'Lei Aurea' ('Golden Law') that officially abolished slavery on May 13th, 1888. These soldiers were devoted to the princess, and used their fighting skills to defend the

[8] *Mestre* Moraes. "Zumbi Lives", in liner notes to *Capoeira Angola*, Smithsonian/Folkways: Washington, DC, 1996.

Monarchy against the growing threat of the Republic that eventually rose to power at the end of the 19th century.[9]

In fact, the Republic came into power within a year after the signing of the *Lei Aurea*. Due to this ascent, the next 130 years would see the darkest of times for the story of *capoeira* and more generally for all Africans in Brazil. Although Africans were 'free' after 1888, there were absolutely no provisions made to help this segment of society. The government agencies in all the major cities across Brazil sought ways to discriminate against the poor. The elite class of Brazil through the Republican government kept a tight grip on its power. Up until 1930, due to essentially economic and racist conceits, *capoeira* along with other forms of African cultural vestiges like *candomblé*[10] were outlawed and actively destroyed by military and police forces.

It wasn't until the military revolution put the 'populist' dictator Getúlio Vargas in power in 1930 that *capoeira* began to be regarded by society as a valuable cultural institution. Aiming to bolster popular support, Vargas eased up on the repression of African cultural expressions. It was around this same time that Manoel dos Reis Machado, '*Mestre* Bimba' (1899-1979) would open up his school of *capoeira*. It would take a decade of persistence for his school to be recognized by the government through the Office of Education and Public Assistance. Bimba's school was indeed the first to take *capoeira* off the streets and institutionalize and begin to codify an approach to teaching, turning it from a street fight and pastime into an art form. *Mestre* Bimba, whose instruction emphasized the fighting aspect of the game, would become the founder of *Capoeira*

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[9] Bira Almeida, *Capoeira,* 28.

[10] *Candomblé* is the syncretized religion practiced by many Afro-Brazilians, although there is a growing number of white Brazilians who currently practice. Like *Santeria* of Cuba, it is the melding of a Yoruban pantheon of deities with Catholic saints. The reasons for such a blend are complex, but essentially have to do with the African will to hold onto their own religion in secret, under the 'accepted' guise of practicing Catholicism.

Regional.[11] Thanks to this effort of institutionalization, by 1953, Vargas was calling *capoeira* "the only true national sport." The other major teacher of Bimba's time was Vincente Ferreira Pastinha, '*Mestre* Pastinha' (1898-1981). His teaching advocated a more traditional form called *Capoeira Angola*, placing its emphasis on the ritualistic, philosophical and stylistic aspects of the game.

Today, the legacies of these two important teachers and their corresponding philosophies of the game live on. Important students of Bimba and Pastinha are now nearing retirement age themselves. They have established schools throughout Salvador da Bahia and throughout the country of Brazil. Furthermore, they have taken their teachings abroad and have opened schools in various locations elsewhere in the world. There are important schools of *Capoeira Angola* and *Regional* in New York City, in Washington D.C., in San Francisco, and elsewhere in the United States. Similar schools have taken root throughout Europe. *Capoeira* as a way of life is indeed taking hold throughout the world and, as a result, so is the berimbau.

Berimbau in *Capoeira*

No one knows precisely when the berimbau became a common feature of *capoeira*. Historical sightings of both *capoeira* and berimbau from around 1835 do not mention them in tandem. In fact, throughout much of the 19th century, the berimbau was associated with wandering salesmen, used to attract the attention of potential customers.[12] One of the earliest mentions of berimbau in Brazil actually uses the name, *urucungo*. In fact there are some 15 names for this instrument recorded in the literature of Brazilian history, most of which have clear Congo/Angolan cultural connections.[13] Names such as *urucungo* are still known by contemporary *capoeiristas*, but are no longer in frequent use.

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[11] *Capoeira Regional* is a style of *capoeira* that is typically described as stronger, higher, faster, and more attack oriented than *capoeira's* more traditional form, *Capoeira Angola*.

[12] This is still a common practice today, not with berimbau but with the triangle. Wherever you hear a triangle beating out a rudimentary samba pattern, it is most likely being played by a young boy or girl selling *taboca*, thin cylindrical cookies made of flour, sugar, vanilla and cinammon.

[13] Kubik, *Angolan Traits,* 34.

Urucungo does, however, reveal strong linguistic ties to its Angolan ancestors, the *hungo* and, to a lesser extent, the *mbulumbumba*. Traditionally in Angola, these instruments are typically played solo as a pastime by pastoral people. This association is common all over sub-Saharan Africa.[14] Berimbau, as a name, was finally adopted by the Afro-Brazilians themselves from the Portuguese, who saw in the instrument similarities of tone-production to their own guimbarde or mouth-harp. Their instrument became 'berimbau de boca' ('berimbau of the mouth') and the African instrument became 'berimbau de barriga' ('berimbau of the belly'). "This is a familiar pattern of reinterpretation, the same that made Colonial Europeans in Black Africa call the African lamellophones "hand-pianos", "thumb-pianos"…and the like."[15]

With similar roots to those of *capoeira* (i.e. *n'golo*), however, it is little wonder that they would eventually find each other. One common belief is that the berimbau was introduced into *capoeira* to disguise its fighting aspects under the guise of music and dance. Kubik mentions that it most likely became a part of the game around the same time as the abolishment of slavery, when it lost its social meaning as a weapon of war and became more stylized, an acrobatic wrestling dance game.[16] It is probably thanks to the growing popularity of *capoeira* that the berimbau fortunately escaped its own trivialization and near extinction. Indeed, the berimbau is not found in many places in Brazil where *capoeira* is not a part of the cultural fabric.

The particular blend of Yoruba and Bantu culture in Bahia at the turn of the century is very likely responsible for the particular patterning of musical accompaniment to *capoeira*. In a traditional *roda de capoeira Angola*, the music is provided by three berimbaus, two *pandeiros*, *agogô*, *reco-reco*, and *atabaque*.[17] The inter-relationship of the three berimbaus is something akin to a family, very similar to the way that *batá*

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[14] Jair Moura, "*Capoeira*gem – Arte & Malandragem," *Cadernos de Cultura* 2, (1980), 15.

[15] Kubik, *Angolan Traits,* 33.

[16] *Ibid*, 31.

[17] *Pandeiro* is a style of tambourine with a single row of jingles; *agogô* is a double set of iron bells; *reco-reco* is a bamboo scraper; *atabaque* is a single-headed drum similar in shape to a conga.

drums of Cuba[18] function together. Batá are also traditionally played in a family of three. Kubik suggests a cultural compromise to explain the make-up of this ensemble.[19] Just when *capoeira* was losing its original *raison d'être*, therefore faced with the considerable possibility of extinction, to survive it co-opted Yoruban musical traits. Not too eager to lose all 'Bantu-ness', *capoeira* held onto the idea of retaining the musical bow as a specifically Angolan trait. Nowhere in Africa are musical bows played in groups of three; this is a distinctive Brazilian phenomenon that shows clear cross-cultural influence.

Concerning this 'family relation' of the three berimbaus, although the length of the bow does not vary considerably, the thickness of the bow and the size of the corresponding cabaça do change from instrument to instrument. The thickness of the bow determines its resistance to tension, and therefore the range of possible pitches to which the wire is capable of being tuned. The size of the gourd has more to do with the quality of timbre. The thinnest berimbau has the biggest gourd, and is therefore capable of producing the lowest pitch with the deepest tone. This instrument is called *gunga*, or less commonly *berra boi*. This instrument is the 'mother' of the family, the base for the others and the instrument that dictates the rules of the game in any given moment. The *gunga* is normally played by the *mestre* of the *roda*. The middle instrument is logically named, *médio*, and acts as the father of the family. Typically the *médio* melodically inverts the *toque* of the *gunga*, thereby creating a very nice 'yin-yang' relationship between the two instruments. The thickest instrument with the smallest cabaça is called *viola*, the capricious child of the family. While the parents are at work keeping the *toque* in balance, *viola* typically improvises freely above them, doubling their pace, interweaving melodic-rhythmic counterpoint, constantly playing with the equilibrium of the relationship between the *gunga* and *médio*. The melodic relationship is almost always lowest to highest, *gunga* to *viola.*

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[18] Or any other example of Yoruban drumming culture. In Brazilian Candomblé, the essential equivalent to Santeria in Cuba, there exists also a family of three drums, *rum, ilyé, rumpi*.

[19] Kubik, *Angolan Traits,* 31.

Photo of a *roda da Capoeira Angola*, taken in FICA in Brazil.. Mestre Valmir Damasceno is presiding over the game, as he sits in the middle of the three berimbau players. His instrument is the *gunga*, the 'mother' of the berimbau family that controls the pace of the music and therefore the game. Note the two players kneeling at the foot of the berimbau. This is the entrance point and beginning of all proper games of *capoeira Angola*. Photo taken from http://www.icafphilly.org/photo_gallery.htm#. ©2004 FICAPHILA.

Common Berimbau Patterns in *Capoeira "Toques"*

This is not an easy subject to broach, because the teaching of *capoeira* is still largely an oral tradition. Accordingly, each *mestre* and his/her school has personalized ways of interpreting and performing *toques*[20] that go by the same names (e.g. one person's *São Bento Grande* may not be at all like another's). Nevertheless there is a growing consensus concerning these *toques* and more and more information available in print, making comparison between traditions possible. However, these printed materials can often be problematic in themselves, reflecting the manner in which they are taught orally. Common problems include rhythmic inaccuracy and various interpretations of 'beat one'.[21]

[20] *Toques* are berimbau rhythms of *capoeira* that correspond to specific moments or that maintain specific functions within a *roda*.

[21] The idea of 'beat one' is itself problematic and culturally loaded. Naturally, as various sources attempt to textualize this oral tradition, 'translations' will differ.

The majority of these various *toques* bear strong resemblances to each other, thereby lending a possible explanation for Naná Vasconcelos's misleading statement that *capoeira* only has four rhythms. The most common rhythm is generally felt as a simple duple meter (i.e. 2/4, divided into eighths and sixteenths) and beat 2 and the 'and of 2' are typically accented. These accents are easily mistaken for beat 1, a fact that also explains in part many of the problems encountered in written examples of these patterns. One must look to the relationship between the voice and the music to ascertain the correct feeling for the rhythm.

The names of many of these *toque*s come from place names in Africa (Benguela, Angola), or relate to the names of a group or nation of Africans (Gegy). They may also derive from the names of Catholic Saints (Santa Maria, São Bento). Some are still commonly played in *capoeira* today while others are rarer, yet all are prized remnants of a history of oppression.

All of the following examples are my own transcriptions taken from various recordings and live performances. The majority come from a particular book and recording by Brazilian percussionist, Deó Lemba, entitled, *Meu Berimbau Instrumento Genial*.[22] His playing of the toques typifies the general approach of *capoeiristas* practicing *Capoeira Angola*. To aid understanding of the transcriptions of these *toques*, it should be noted that the first line is always the essential pattern. Below it are a number of variations that generally, though not always, are of the same length. In performance, the first pattern is established clearly. After that, variations are freely introduced but playing always resolves back to the first pattern.

[22] This is an excellent resource for berimbau information written from the perspective of a creative musician and *capoeirista*. Although not transcribed here, of particular interest are his own compositions that comprise the second section of his recording. While some have more musical merit than others, clearly Lemba is attempting to create new contexts for the berimbau. His compositions seem inspired by the work of another creative *capoeirista* who unfortunately died very young, Silvio Acarajé.

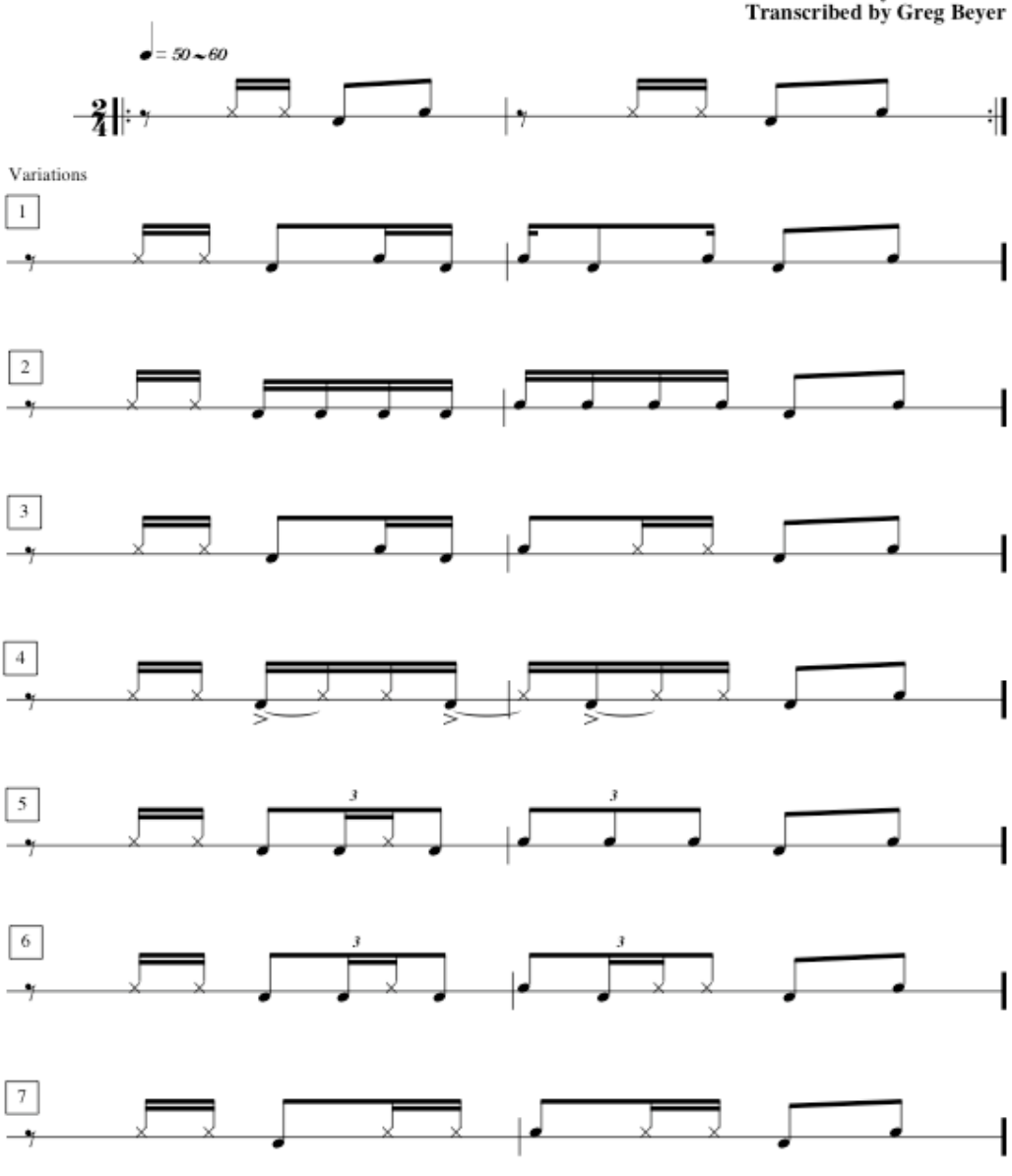
Angola

This *toque* begins all *rodas de Capoeira Angola*. It is typically used to accompany the major vocal texts of the game, i.e. *ladainhas, chulas,* and *corridos*.[23] Its rhythm is performed on the *gunga* and therefore usually by the *mestre*. At the beginning of each *roda*, the instruments enter one at a time, *gunga*, *médio*, *viola*. After these three have entered, the other percussion instruments enter, typically in the order: pandeiros, agogô, reco-reco, atabaque.

[23] *Ladainha*, 'litany', is a solo song of praise for an elder, for a city, for God, and almost always containing some code of *capoeira* ethics or philosophy. It is typically, though not always, sung by the *mestre*. *Chulas* are call-and-response type songs that flow naturally out of the *ladainha*. The call is led by the *ladainha* soloist. Responses here typically repeat verbatim the calls. *Corridos* follow the *chula*, and it is at this point only when the game inside the *roda* can truly begin. During the *ladainha* and *chula*, the two opponents kneel patiently at the 'foot of the berimbau', in front of the *mestre*. *Corridos* are also call-and-response songs, but their forms are many and varied, and responses typically do not repeat calls, but respond to them in singular fashion. There are many many *corridos* and typically each has its own appropriate response. Experienced *capoeiristas* are often expected to improvise or compose new songs, and in this way the 'oral tradition' is kept alive and well.

Toque: Angola

Performed by Deó Lembá
Transcribed by Greg Beyer



São Bento Pequeno

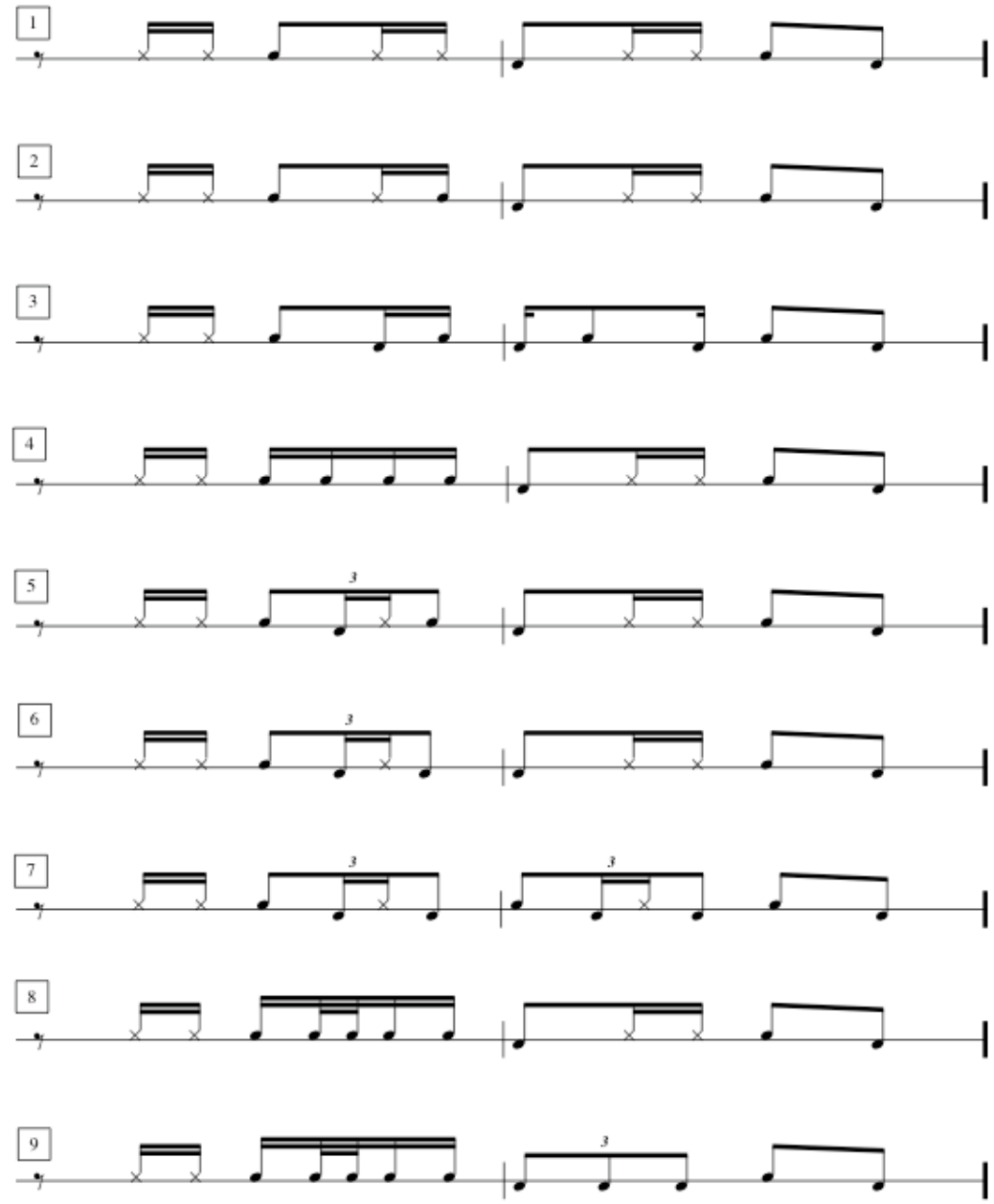
This *toque* is typically played by *médio* in response to Angola played on the *gunga.* The rhythm is identical, only the pitches change. What was low-high (DOM-DIM) is now high-low (DIM-DOM). When both *Angola* and *São Bento Pequeno* are played together, their melodic inversion creates a stable *ying-yang* effect. The player of the *viola* then is allowed to improvise rhythmic figures over the top of this stable foundation.

São Bento Pequento is sometimes played by *gunga* in special cases when the *mestre* feels that the game needs to reverse its momentum, to slow the game down.

Toque: São Bento Pequeno de Angola

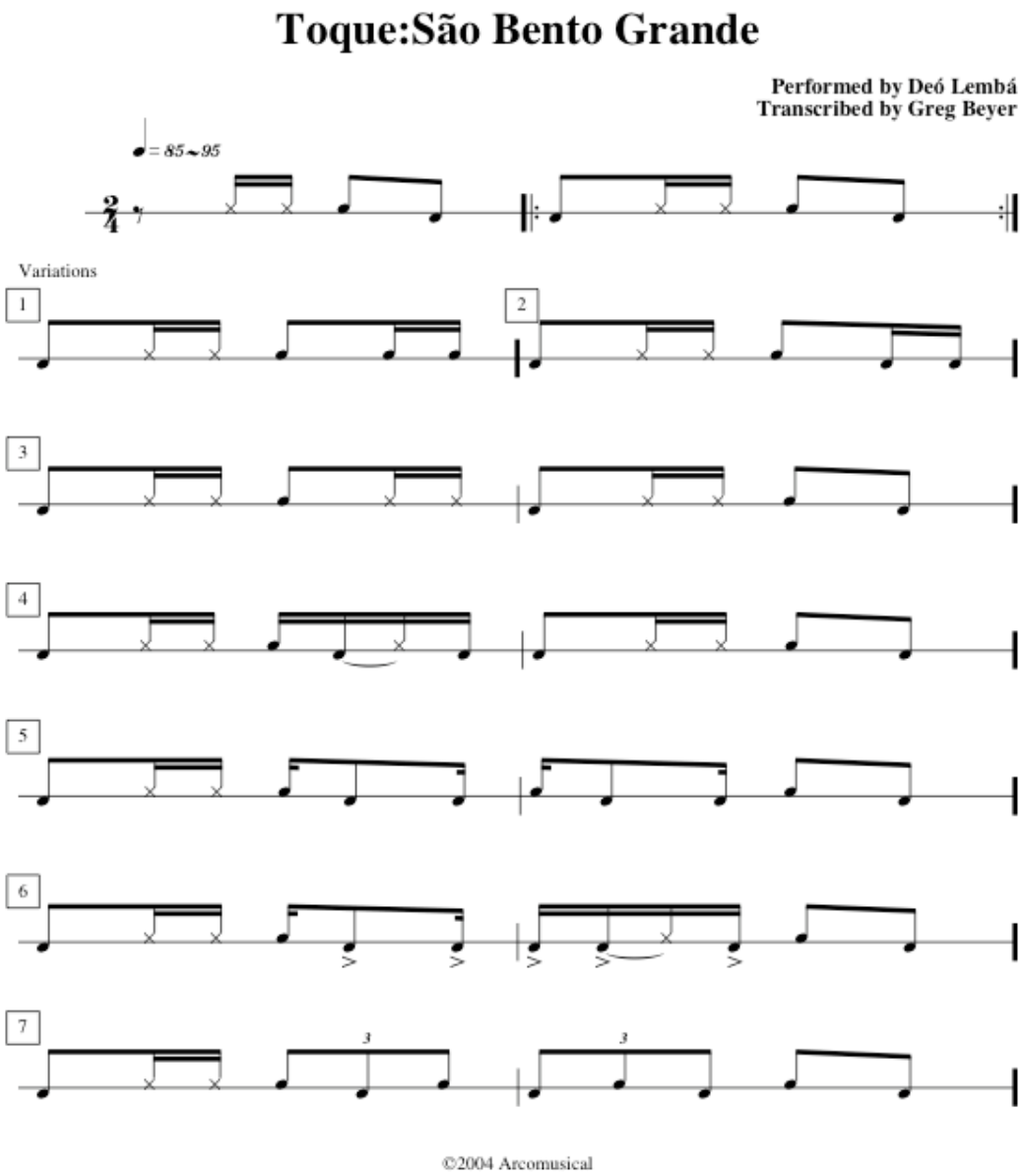
Performed by Deó Lembá
Transcribed by Greg Beyer

Variations



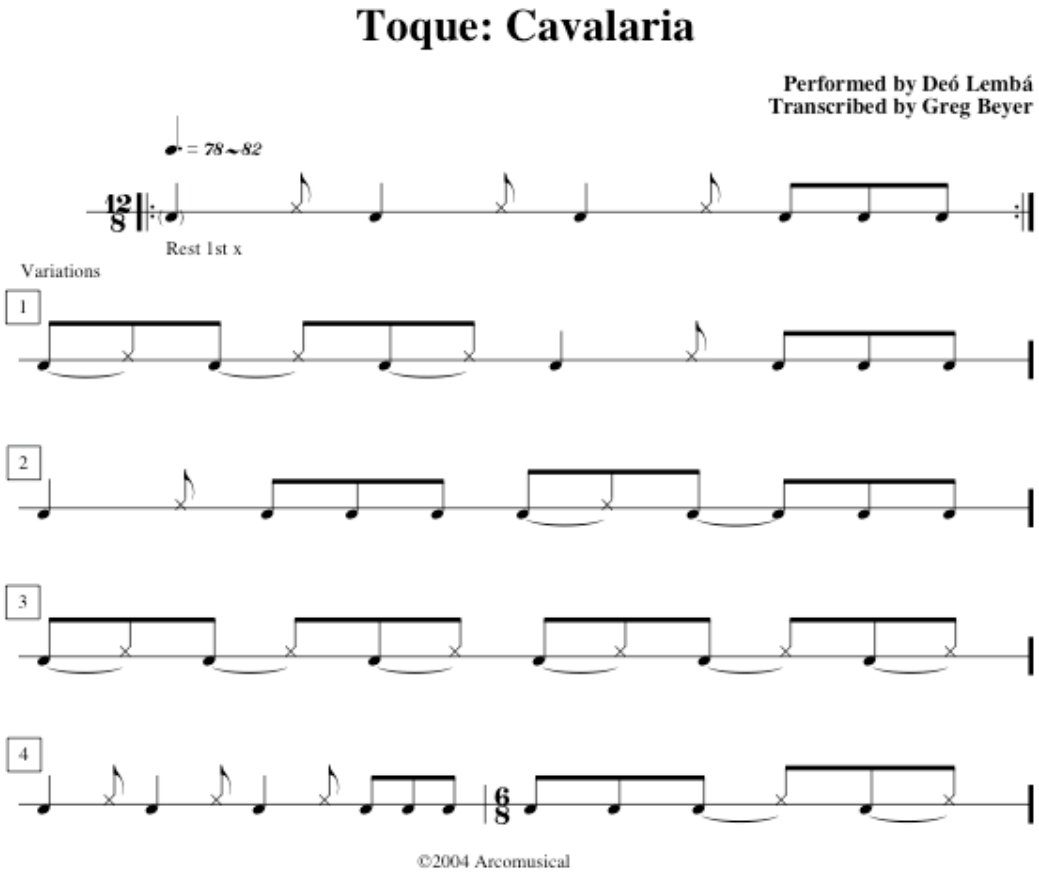
São Bento Grande de Angola

Traditionally, *toques* are differentiated by tempo as well as by rhythm. If Angola is typically played at 60 bpm, this *toque* hits its comfort zone at 90 bpm. Its basic rhythm is almost identical to *São Bento Pequeno*, but adds an additional low note on beat one. *São Bento Grande* is typically thought of as an aggressive rhythm that indicates to the players that the ensuing game will be quick and hard. It is typically introduced into a *roda* at a moment when the *mestre* wishes to pick up the pace of the game. This typically happens at the beginning of the *corridos*, when the opponents really begin to play.



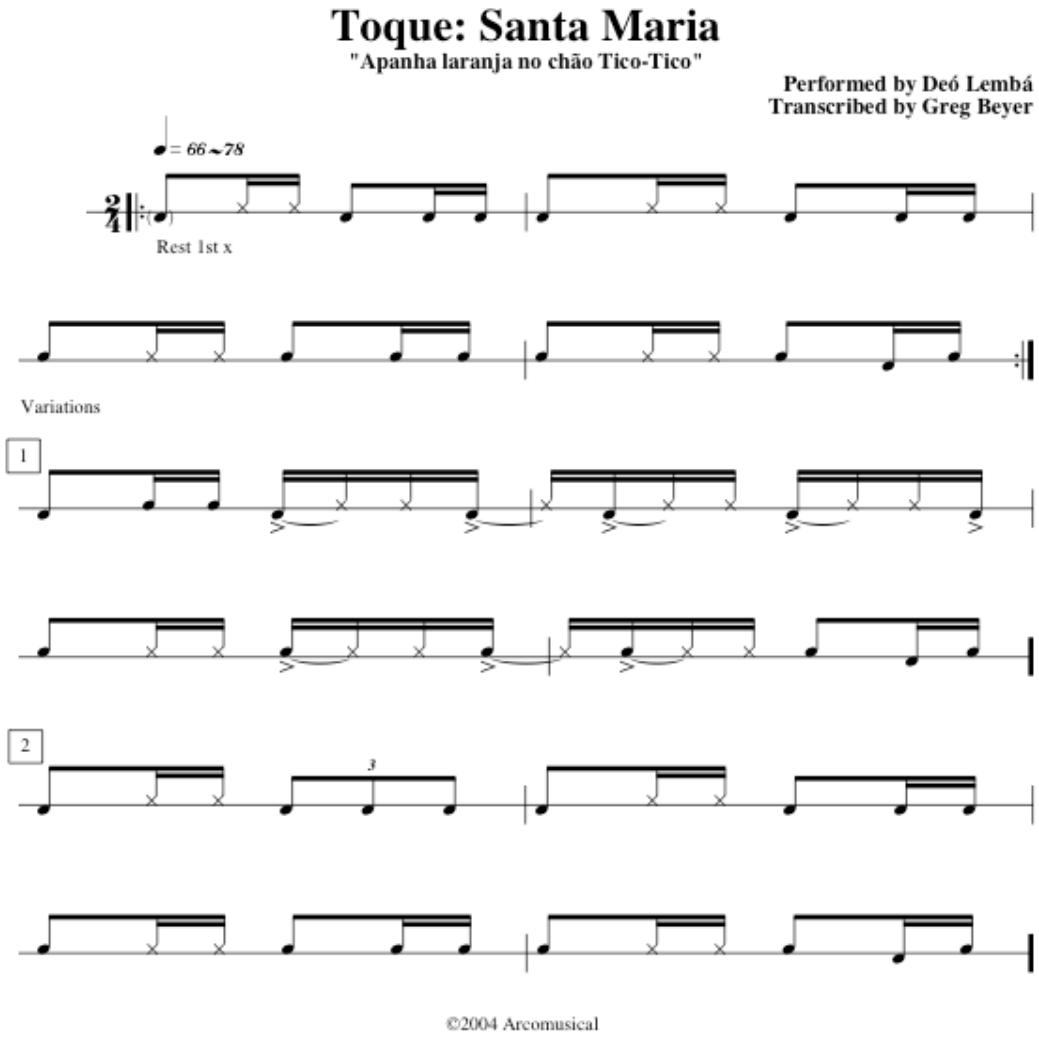
Cavalaria

This is a *toque* that comes from the era when *capoeira* was outlawed and suppressed by the police. In Salvador in the 1920's, there was a vary famous police chief named Pedro de Azevedo Gordilho, who was responsible for terrorizing *capoeiristas* with his squadron of police on horse back, i.e. his cavalry. This *toque*, in a triple feel, imitates the sound of horses galloping, and was used by *capoeiristas* as a warning signal to the other players to break up the game, whenever the cavalry would come nearby. Nowadays, especially in *capoeira Regional*, this *toque* is played in a quick tempo, and players respond with acrobatic movements. It can also be used to call everybody participating in the *roda* to attention.



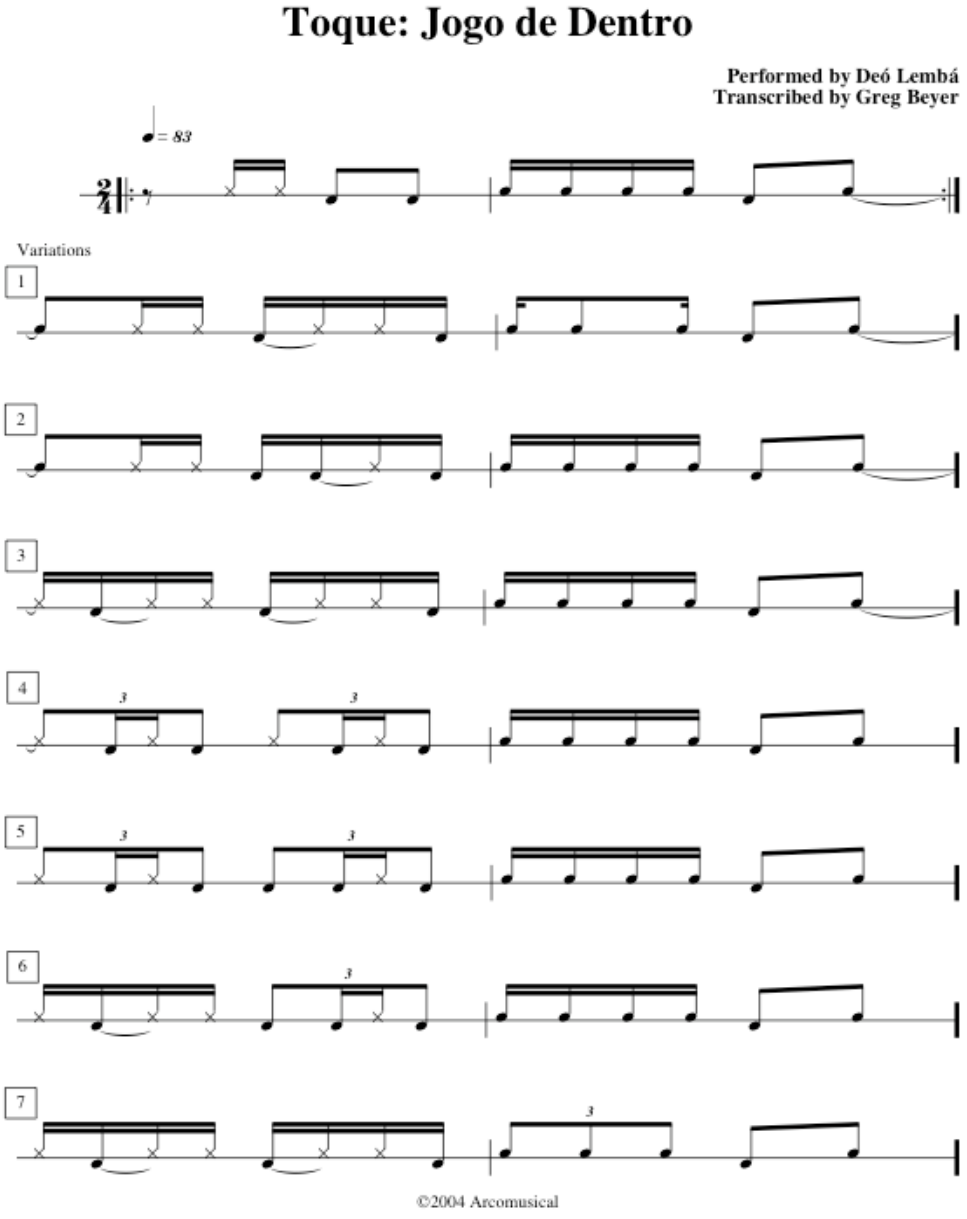
Santa Maria (or 'Apanha Laranja no Chão Tico-Tico)

This *toque* has two names, because its melody is identical to those of two *corridos* (typical songs with call-and-response patterning) in *capoeira*. This was performed frequently during the festival of Santa Barbara, and inside the *roda* a sort of game was played as a diversion from the seriousness of the *capoeira*. A monetary note would be placed in the middle of the *roda*, and whichever player could grab the money first would be the winner. In connection with this story, the second title literally means 'Catch the orange on the ground, little birdie'.



Jogo de Dentro (lit. the "inside game")

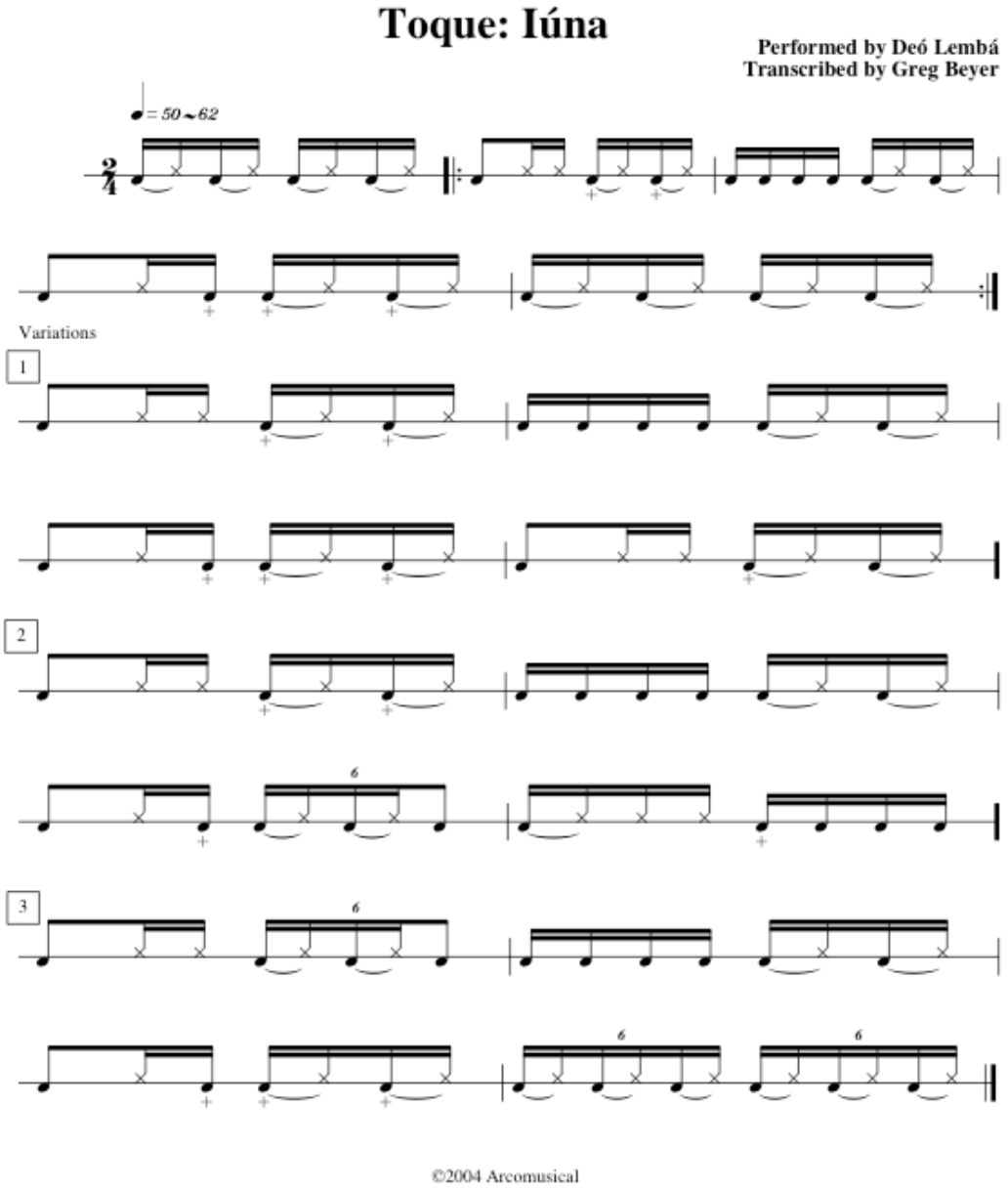
This *toque* calls the players to pay close attention to the body movements of the other player. Normally there is no singing while this *toque* is being played. It is one of the "fastest and most beautiful rhythms in *Capoeira Angola"*. Reserved usually for the end of a game, it is during this *toque* when "*capoeiristas* demonstrate their best game, playing as low to the ground and as close to each other as possible."[24]



[24] Greg Downey. Liner notes to *Capoeira Angola from Salvador Brazil,* (Smithsonian/Folkways, SF 40465, 1996) 34.

Iúna

According to the old *mestres*, this *toque* takes its name from a bird found only in the interior of Brazil. The rhythm and melody imitate the bird's call. Its use is typically reserved for jogos when the *mestre* participates in the *roda*. According to Bira Almeida, *Mestre* Bimba used this *toque* as a tool to develop his student's abilities to play beautifully and creatively.[25] The plus marks indicate strokes that are played while the mouth of the cabaça is held tightly against the chest of the player.



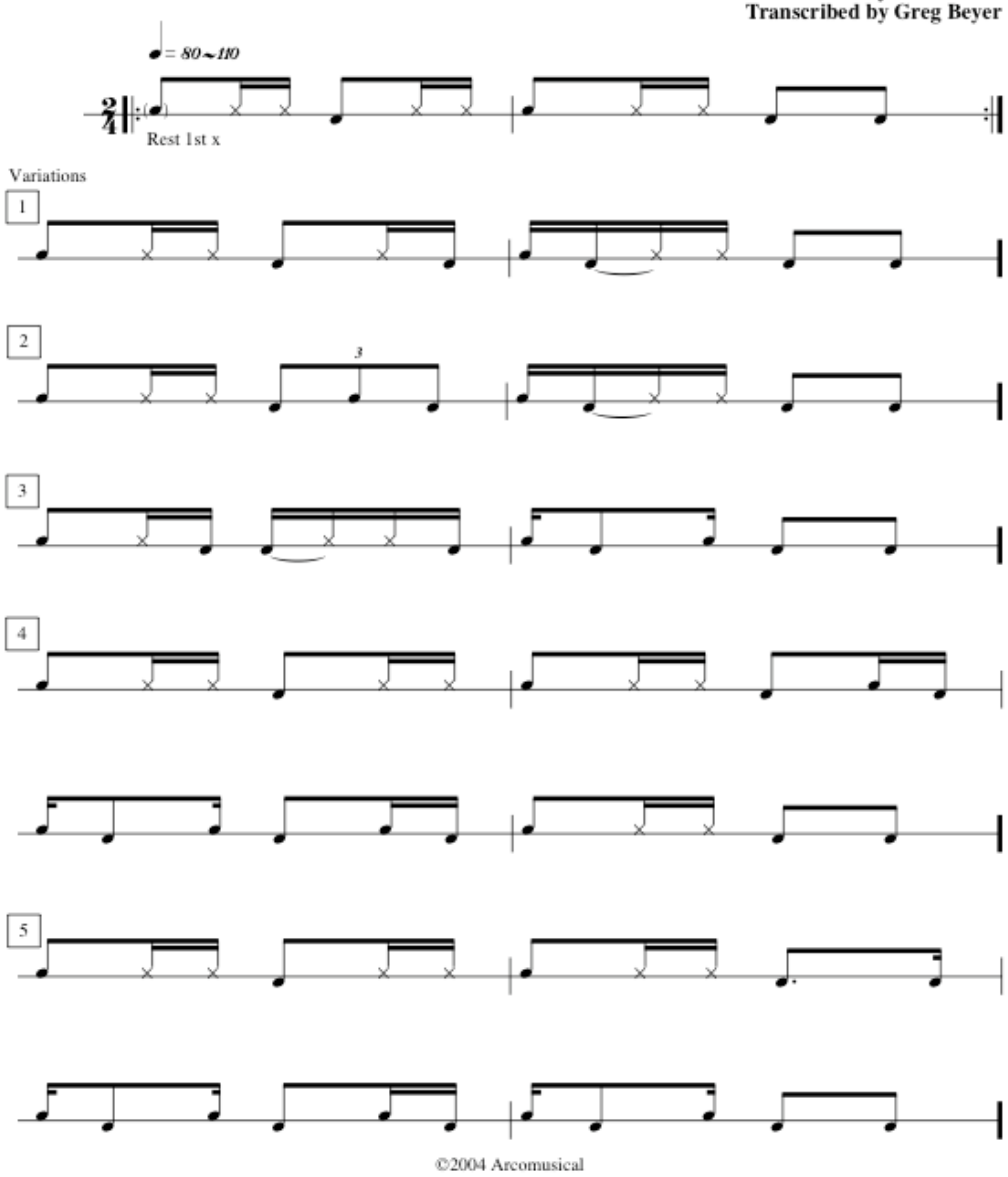
[25] Bira Almeida, *Capoeira*, 118.

São Bento Grande de *Regional*

This is obviously a *toque* used in the *roda*s of *Capoeira Regional*. According to Mestre Bimba, it is used for a game played rapidly with many movements high in the air. It is very similar to São Bento Grande de Angola, but its melody is reversed, and it is typically played even faster. Unlike *Capoeira Angola*, there is normally only one berimbau played in these *rodas*.

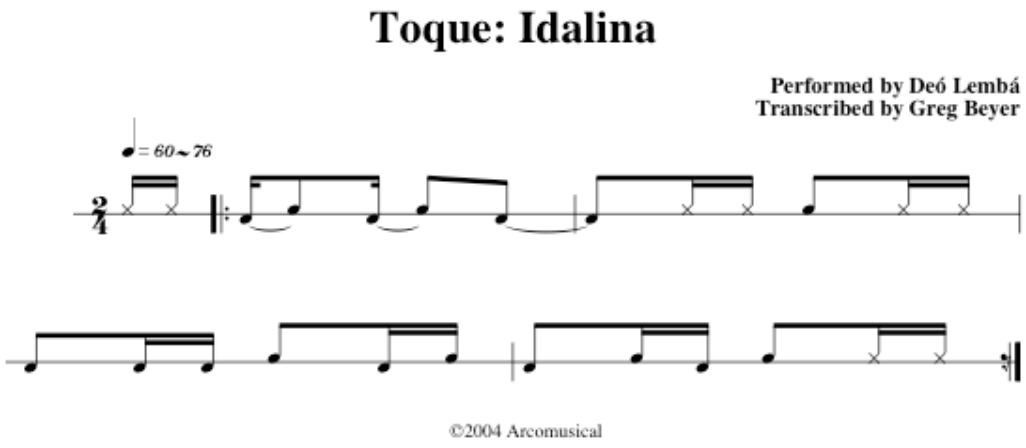
Toque: São Bento Grande de Regional

Performed by Deó Lembá
Transcribed by Greg Beyer



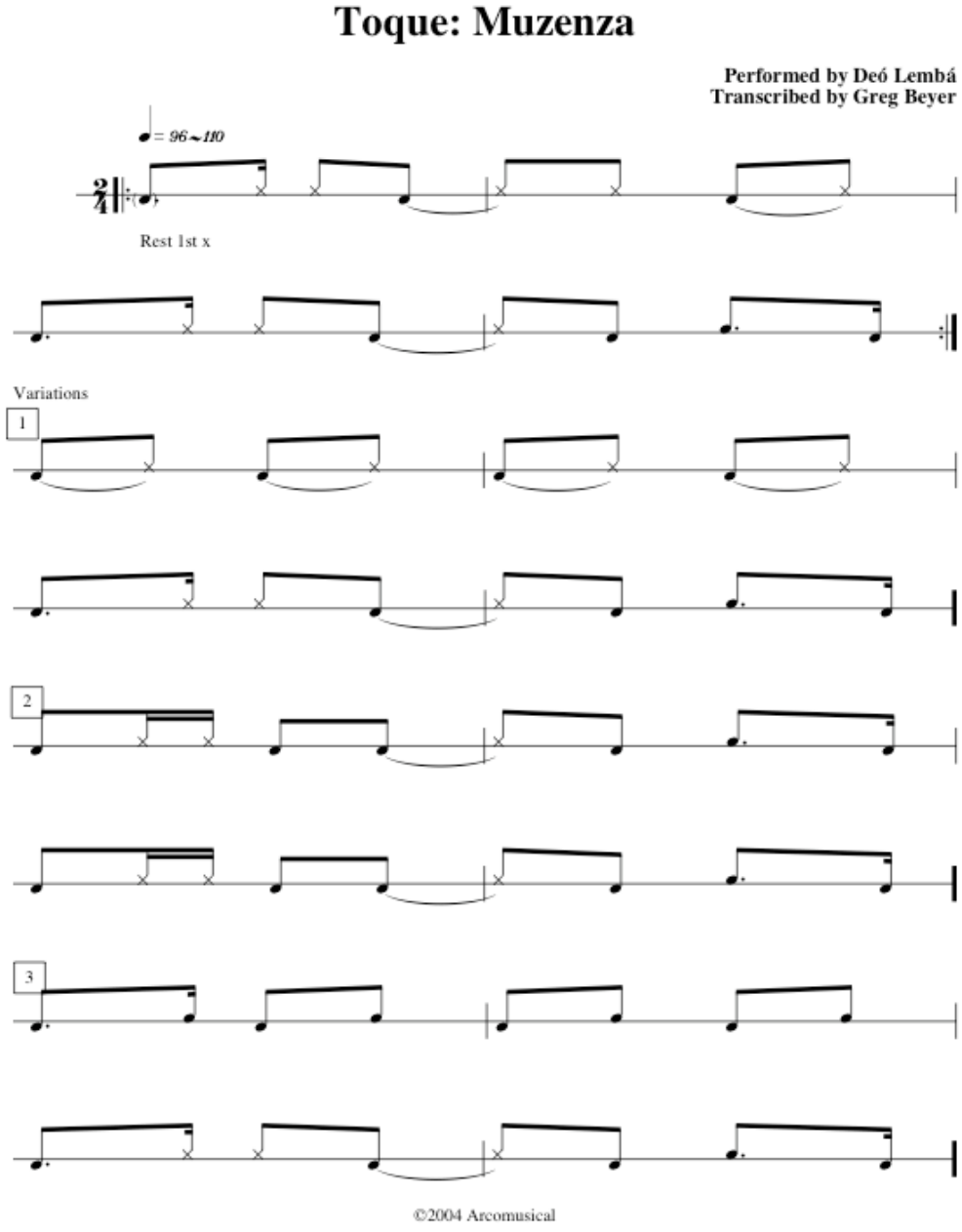
Idalina

This *toque*, like São Bento Grande de *Regional*, is for games played with quick and high movements. It was traditionally used in presentations of *capoeira* for outsiders, played by more advanced *capoeiristas* who were capable of using knives, blades, and other knife-like weapons.



Muzenza

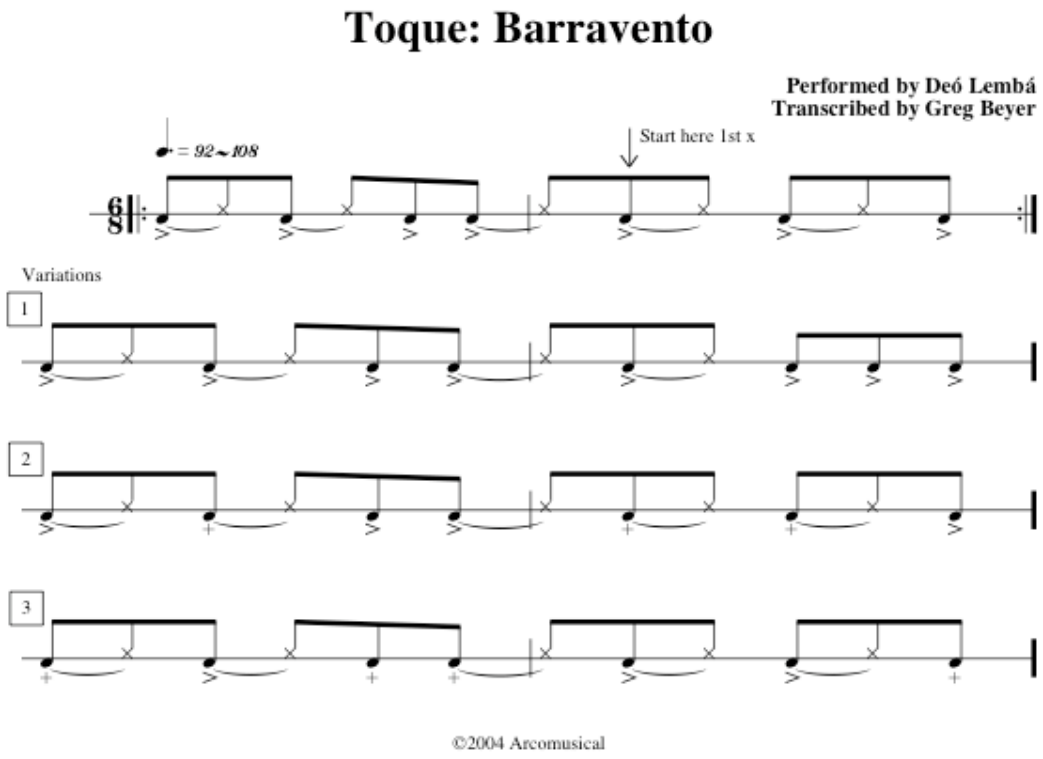
This name is given to new devotees in the *terreiros de Candomblé de Angola.* [26] As described above, *Candomblé* is the name given to the syncretized religious form in Brazil based upon the melding of Catholic and Yoruban practices. That this *toque* name stems from this tradition is yet another pointer to the Pan-African cultural information that influences *capoeira*.



[26] *Candomblé* is typically practiced in houses of worship known as *terreiros*.

Barravento

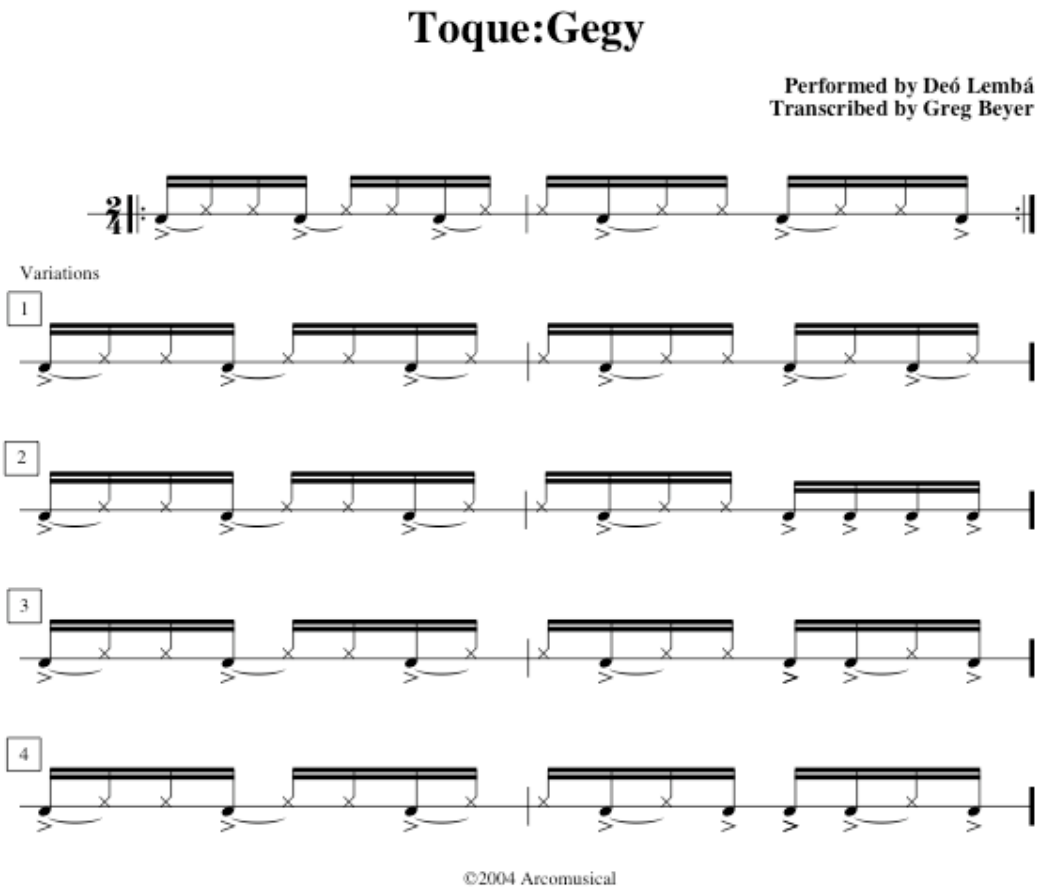
This is an interesting *toque* that was originally a rhythm of *Candomblé*, stylized for *capoeira* and berimbau. It is unlike most other *toque*s because of its ternary rhythmic feel. It essentially takes the "ubiquitous seven-stroke, 12-pulse standard [bell] pattern, prominent in West Africa"[27] and transposes this to open string of the berimbau, filling in the remaining 'triplets' with coin-only buzzes on the wire. Inside *capoeira*, this *toque* creates an atmosphere of a quick dance. As above, '+' marks below a pitch indicate the cabaça is held against the chest.



[27] Gerhard Kubik, "Angola," *New Grove,* I, 678.

Gegy

"According to the old masters, this *toque* comes from a liturgical rhythm of the *orixá* Oxumaré, developed by the Gegy (Ewe) people from Ghana in Western Africa."[28]



[28] Deó Lemba, *Meu Berimbau, Instrumento Genial,* (Salvador, Bahia: Independent Publication, 2002). An *orixá* is a west-African deity.

The Interaction of Three Berimbaus in a Typical *Roda* de *Capoeira* Angola

To give a more accurate notion of how the three berimbaus in a *roda* of *Capoeira* Angola function in relation to each other, I have included the following transcription that demonstrates some of the typical 'improvisations' of the *viola* inside and around the more basic patterns established by the *gunga* and *médio*.[29] Once these basic patterns are in place, however, the two lower instruments also begin to improvise. Especially 'outspoken' is the *gunga* from m. 29 to m. 33. This transcription is taken from track 22 of the CD, *Capoeira Angola from Salvador Brazil*, performed by the Grupo de *Capoeira* Angola Pelourinho, available on the Smithsonian/Folkways label. The liner notes of this recording speak of the abilities of excellent *capoeirista* musicians:

> A musician playing the berimbau must be able to vary the cycle, improvising other rhythmic phrases that do not break the integrity of the toque. An excellent musician will respond to the other instruments, creating complex patterns and unexpected relations between them, and will, at the same time, respond to the game, even going so far as to convey to a player who is extremely sensitive to the music when and how to move.[30]

Clearly, musical excellence is on display in the following example.

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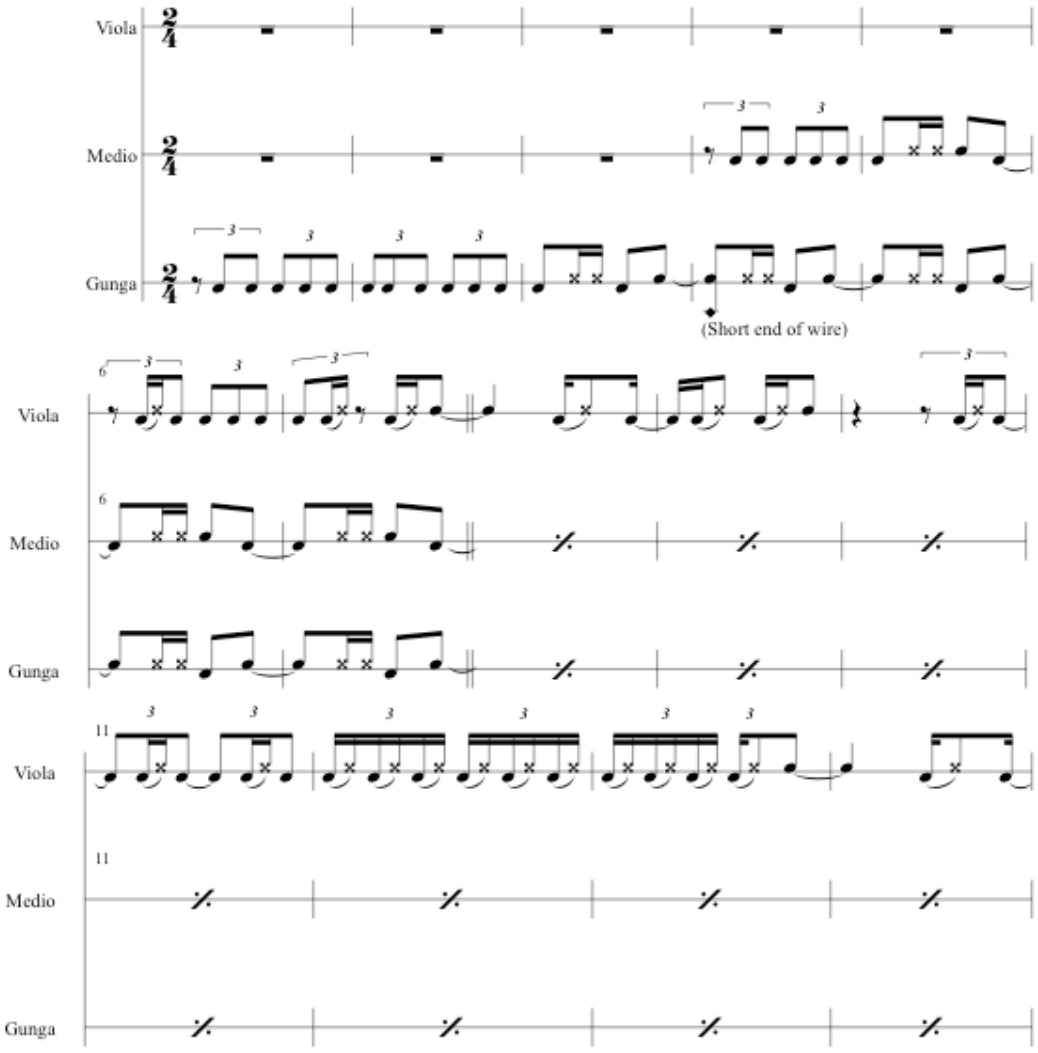
[29] These basic patterns are gunga playing *Angola* and médio playing *São Bento Pequeno*.

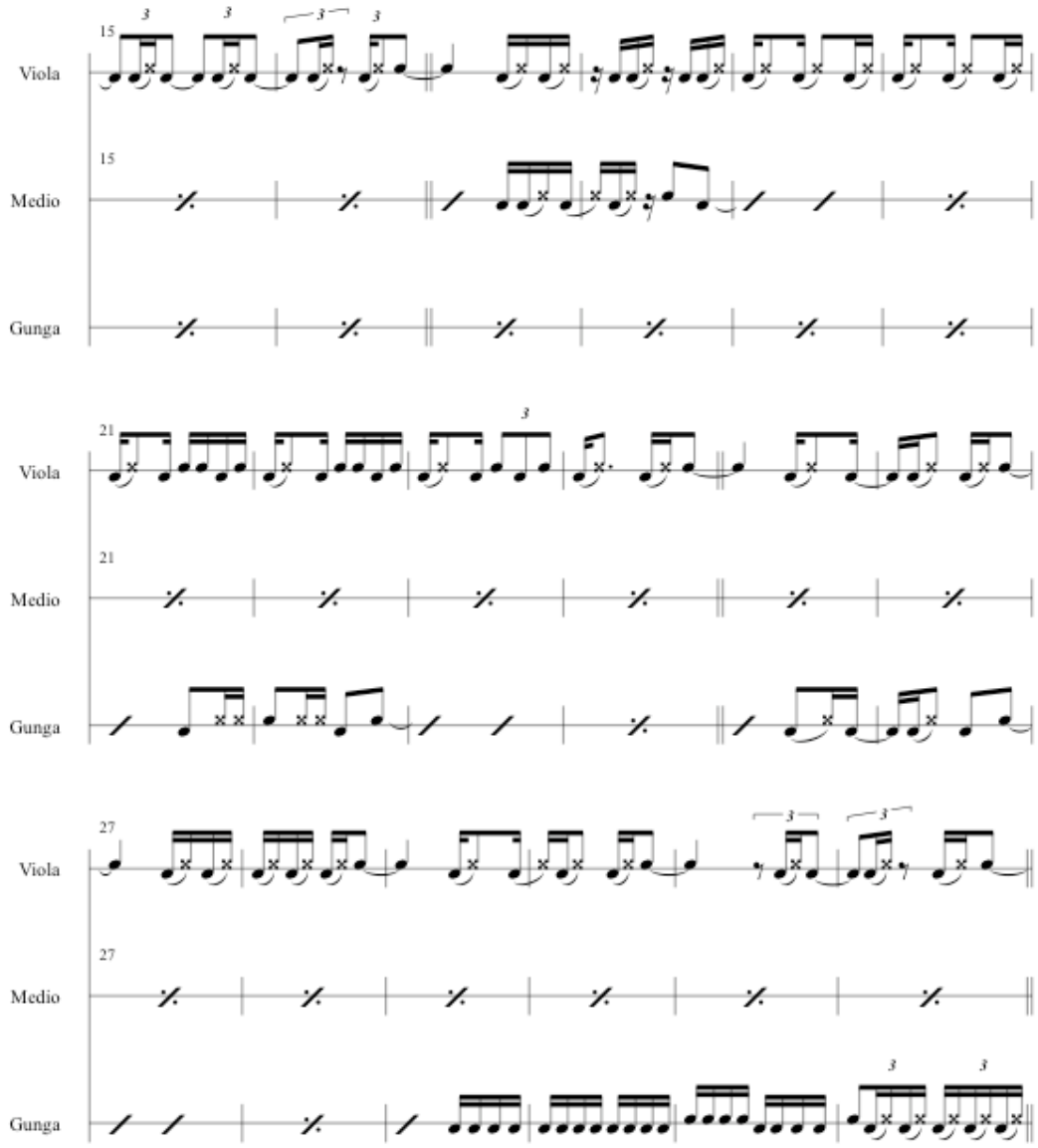
[30] Greg Downey, *Capoeira Angola*, 32.

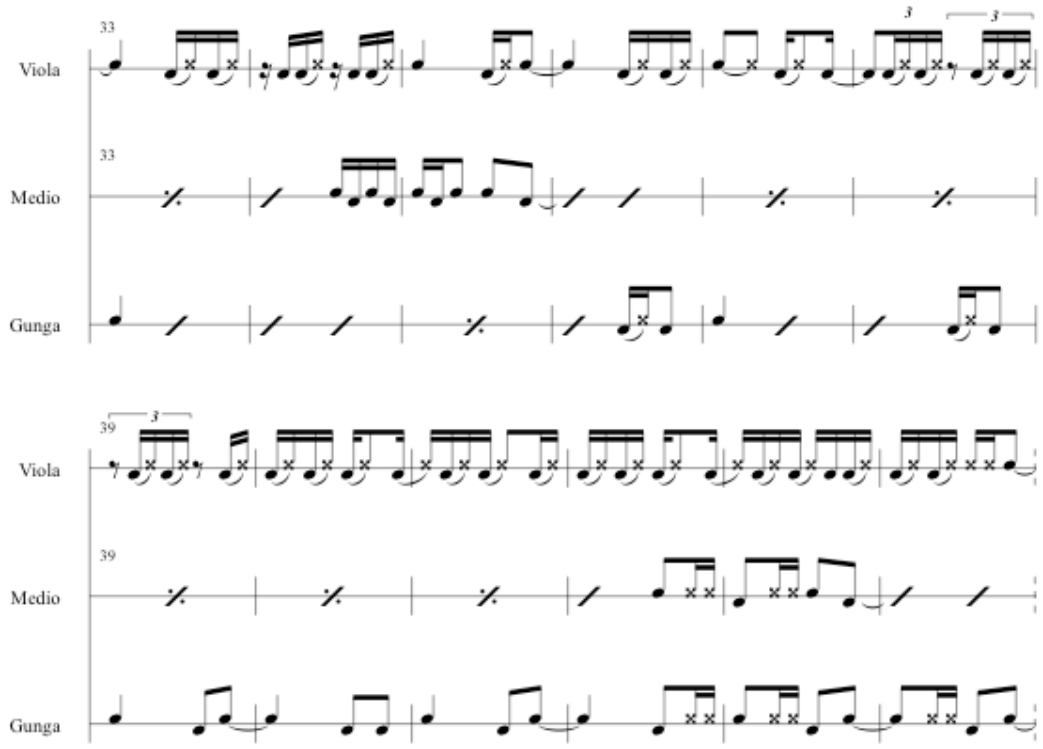
Toque: Angola, Three Berimbau Interaction

Track 22 on *Capoeira Angola*, Smithsonian/Folkways CD 40465

Performed by Mestre Moraes et al.
Transcribed by Greg Beyer







Translation/Analysis of lyrics to a *Capoeira* Ladainha, 'Zumbi, O Rei dos Palmares'

To give some sense for the capacity of the lyrics of *Capoeira* songs to convey a sense of tradition and of history from the point of view of the Afro-Brazilian, I have included the following translation and commentary on a *ladainha*, (litany) from the repertoire of *Capoeira* songs. A *ladainha* is typically a solo song intoned by the *mestre* at the opening of a *roda*. The game inside the *roda* has not yet begun, and everyone is listening attentively to the words of the *ladainha*, paying attention to their stories and teachings.

Ladainha: **"Rei Zumbi dos Palmares"**	**Litany: King Zumbi of Palmares**
A história nos engana	**History deceives us**
Diz tudo pelo contrário	**Says everything to the contrary**
Até diz que a abolição	**Even says that abolition**
Aconteceu no mês de maio	**Took place in the month of May**
A prova dessa mentira	**The proof of this lie**
É que da miséria eu não saio	**Is that from misery I do not escape**

Viva 20 de novembro	**Long live November 20th**
Momento para se lembrar	**A moment to be remembered**
Não vejo em 13 de maio	**I don't believe in May 13th**
Nada para comemorar	**Nothing to commemorate**
Muitos tempos se passaram	**Much time has passed**
E o Negro sempre a lutar	**And the Negro always struggles**
Zumbi é nosso herói (bis)	**Zumbi is our hero (2x)**
Colega velho	**Old friend**
Do Palmares foi senhor	**He was the leader of Palmares**
Pela causa do homem Negro	**For the cause of the black man**
Foi ele quem mais lutou	**It was he who fought the most**
Apesar de toda luta, colega velho	**Despite all the fighting, my friend**
O Negro não se libertou,	**The Negro did not free himself,**
Camará	**Comrade**

May 13, 1888, was the day that Princess Isabel in the days of the Brazilian Empire signed the *Lei Aurea* that put an official end to slavery. While there is no questioning this historical fact, what was largely untold in Brazilian history, especially during the days of the military regime in the second half of the 20th century, was that nothing was done to enable these newly 'free' members of society to empower themselves socially or financially. To this day, from the perspective of the Afro-Brazilian, forms of slavery continue in various guises that continue to perpetrate social inequalities.

November 20, 1695, was the day that the infamous *bandeirante* from São Paulo, Domingos Jorge Velho, led a military expedition enabled by the Portuguese authority that finally overpowered the largest *quilombo* in Brazil, Palmares. There had been many prior attempts to dismantle Palmares, but resistance from the quilombo itself was too well organized to be defeated. This cruel day saw Palmares's destruction, its inhabitants slaughtered, and its cities left in ashes. No one was left alive, including the king, Zumbi.[31]

[31] Anonymous, "The War against Palmares," in *The Brazil Reader – History, Culture, Politics,* ed. R.M. Levine and J.J. Crocitti, (Durham, NC: Duke University Press, 1999), 125-30.

Zumbi lives on as a symbol of the continual Afro-Brazilian struggle for equal rights. *Capoeiristas* embrace his image as a symbol of direct African lineage. At the *capoeira* school of *Mestre* Valmir Damasceno in Salvador, *Fundação International de Capoeira Angola* (FICA), posters on the wall commemorate past important events. One of these bore the title, *From Zumbi to Pastinha*.

* * *

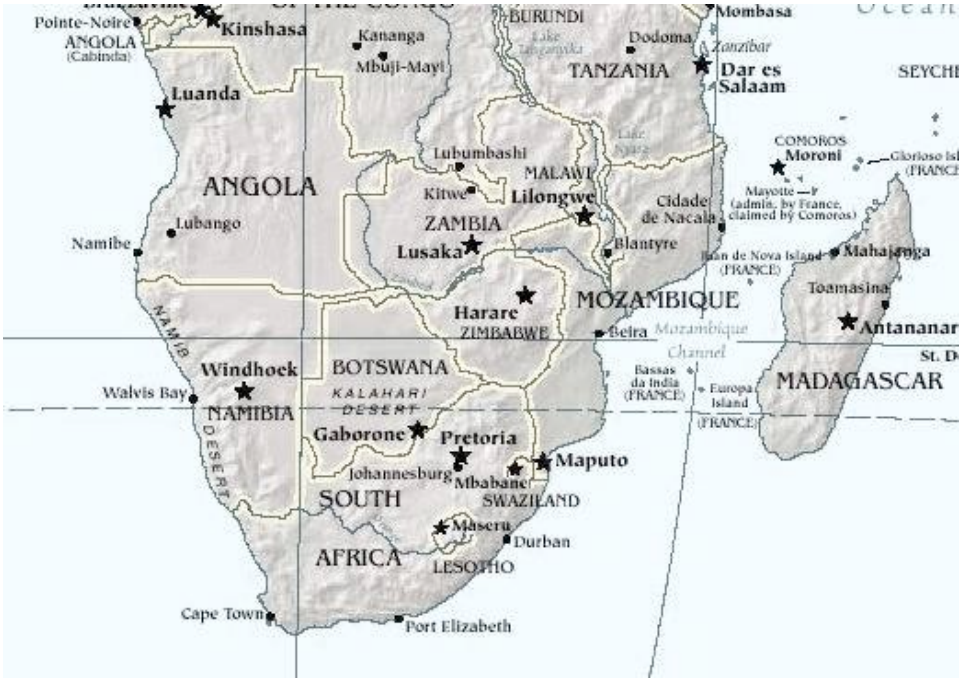
Fascinated though I was with this incredible tradition, songs from *capoeira* itself kept me thinking there must be more history to uncover. Many songs speak of a desire to return to Africa, specifically to Angola. Equally intriguing are Gerhard Kubik's writings concerning Trans-Atlantic cultural pathways. His mention that even during the era of the slave trade people and their cultural information were crossing the ocean *in both directions* sends the mind reeling with the reminder that living cultures are in constant flux.[32] Nevertheless, the cultural connection seemed obvious. I needed to find an in-road to the study of musical bows in Africa, and Angola seemed a more-than-likely place to begin.

[32] Gerhard Kubik, *Angolan Traits* 11.

Africa…Southern Africa

One feature distinguishing southern Africa is that the musical bow is the major chordophone.[1]

My discovery of the above quotation was enough to ignite a flurry of research activity related to musical bows in southern Africa. A map of the region became my point of reference. A constant source of navigation and of inspiration, the map allowed me to fill in the blanks, pinpointing the locations of the field work of ethnomusicologists over the course of the past century.



Regional map of Southern Africa. http://www.warmafrica.com/index/geo/cat/1/a/g

While not the first to write on the subject of the African musical bow, Henry Balfour may have been the earliest researcher to publish an entire book dedicated to the subject. *The*

[1] John E. Kaemmer, "Southern Africa: An Introduction," *The Garland Encyclopedia of World Music,* ed. Ruth M. Stone, 4 vols. (New York: Garland, 1998), I: 702.

Natural History of the Musical Bow, published in 1899, is a fascinating although dated resource. Its pages are filled with journal-like entries for each and every specimen that had come to Balfour's attention via his work as Curator of the Pitt-Rivers Museum at the University of Oxford. Many of these bows had been sent to Balfour from travelers, not necessarily researchers in the area, and so information on any given bow is often scant. Furthermore, he organizes the bows along 'evolutionary' lines according to their organology, their physical make-up. From the perspective of performance techniques there would seem to be flaws in this way of organizing this family of instruments, as some of the 'lesser' instruments require virtuosic skill. This, in addition to the fact that many of the names of people and places are no longer in current use, makes the book of limited value for a researcher today. However, it is remarkable that many of the bows and their traditions studied by later researchers are mentioned, even if in passing, in Balfour's work.

In the 1960's, Austrian-born ethnomusicologist Gerhard Kubik initiated what has now become forty years of field-research on African music. Kubik's invigorating writings and recordings are only reflections of his equally invigorating personality, intellect and approach to fieldwork. His trips in the field, times he happily refers to as 'endless foot slogs'[2] are occasionally marked by close-calls with serious illness, physical danger, and local officials of the law. Putting everything at stake in the name of research, how can his output not convey his sense of passion? Kubik's extensive work on musical bows in southeastern Angola in the mid 1960's literally placed that region on the ethnomusicological map. His work garnered a large place on my own 'map' of southern Africa, and receives all the attention it deserves in the following chapter on Angola.

In the 1970's, David K. Rycroft published a piece of research that is so complete and so passionately written that one can nearly imagine the sound of the *ugubhu* bow coming off the pages of his thorough transcriptions. "The Zulu Bow Songs of Princess Magogo" documents the life and musical style of this member of Zulu royalty, Constance Magogo

[2] Gerhard Kubik, *Angolan Traits in Black Music, Games and Dances of Brazil,* (Lisbon: Junta de Investigações Científicas do Ultramar, 1979), 13.

kaDinuzulu (1900-1984). Rycroft made his transcriptions using the incredibly clear field recordings of another master and pioneering ethnomusicologist who worked all over southern Africa, Hugh Tracey. Rycroft's thorough documentation of Magogo's life, his vivid descriptions of the bows, his complete analyses of her song texts, his excellent translations of Zulu song texts and his musically accurate transcriptions add up to a piece of research that is truly inspiring. In my discussion of his article, I felt no need to offer further musical transcriptions. It is all in the original.

Also in the 1970's, Thomas F. Johnston was working in southern Mozambique among the Shangana-Tsonga. His publication of a string of articles related to these people and their musical practices shed a positive light on the subject, and his mention of the *xitende* gourd-resonated musical bow is relevant to my discussion here. His article on a musical bow of the mouth-resonated variety, *xizambi*, is a detailed piece of work, approaching to some degree the above-mentioned work of Rycroft.[3] That said, his writings are often cryptic, assuming the reader has almost as much knowledge of the subject as the writer. Although he mentions performers by name, he provides no indication of their background, assuming once again that the reader understands, even knows personally, those to whom he is referring. Nonetheless, his work provides another point of reference for other studies on the same subject.

In the mid-90's, Lucas J. Mucavele, João A. Vilanculo and Erasmo Treglia curated a recording of some of these same instruments from southern Mozambique. *Arcos, cordas, flautas* is the 8th of a series of *FOLKlore* recordings on the Italian based SUDNORD record label. This collection provides excellent examples of the sounds and performance styles on various musical bows as well as other stringed instruments and woodwinds. Of

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[3] Thomas Johnston, "Xizambi Friction-Bow Music of the Shangana-Tsonga," *African Music* IV(4, 1970), 81-95. The *xizambi* is an interesting specimen. It is mouth-resonated, i.e. the mouth becomes the sound box for the instrument by straddling the string (in this case a thin strip of dried cane) with the lips. Selected partials are resonated due to subtle reshaping of the mouth cavity. What actually makes the bow sound, however, is the rubbing of a stick against the stave. On one side of the stave, grooves have been cut over which the stick is quickly rubbed back and forth. In this way, the instrument is something of an amalgam between musical bow and percussive scraper.

particular interest to this discussion are the recordings of *xitende* -- the gourd-resonated bow discussed by Johnston, similar to bows found further south along the eastern coast of South Africa and, of course, similar to the berimbau.

Kubik, Tracey and many others have recorded musical bows from across the region of southern Africa in virtually all its countries. In the course of research, I have managed to collect recordings from Angola, Namibia, South Africa, Mozambique, Malawi, and Rwanda. While all these recordings are fascinating and worthy of study, I have chosen three countries in which to focus attention. From Angola I shall look closely at the *mbulumbumba* and the *hungo*, the two instruments that have the closest demonstrated connections to the berimbau in Brazil. From Mozambique I shall look at the *xitende*, an instrument with only slight differences to the berimbau, maintaining an active and lively performance style. From South Africa I shall conclude with a discussion of the *umakwheyana* and *ugubhu* of the Zulu people and similar bows among the Xhosa tribe. The *umakwheyana* has a demonstrated historical connection to the *xitende*, while the *ugubhu* is an *unbraced* musical bow, therefore having a sound and performance style that is perhaps the furthest removed from that of the berimbau. Nevertheless, these bows are all gourd-resonated. In what follows I shall attempt to demonstrate the variety of instrument types and of performance traditions within a single branch of the musical bow family.

Angola

Vou me embora, vou me embora, vou me embora pra Angola.
Berimbau tá me chamando, vamos logo e vadiar.
Na roda de capoeira vou jogar e vadiar
Vou me embora pra Angola que aqui não fico não
Para Angola vou me embora que aqui não sou querido.

I'm leaving for Angola.
The berimbau is calling me, let's leave soon and be free.
In the wheel of *capoeira* I will play and be 'lazy'.
I'm leaving for Angola because I am not staying here.
For Angola I'm leaving because here I am not wanted.[1]

By name alone, *capoeira* has an obvious connection to Angola. This connection is far from superficial. It has everything to do with the specifics of the movements of various peoples from Africa to Brazil via the slave trade. Angola is "Brazil's main Bantu-African connection."[2]

It is necessary to make the *Bantu* distinction. Whether conducted inside Brazil or done abroad, one of the problems with traditional historical study of Afro-Brazilian culture is something Kubik calls a 'panoramic view' of Africa.[3] This term refers to a distorted sense of African culture, whereby the dominant African cultural manifestations outside of Africa come to represent *all* of Africa. This happens elsewhere in the New World, too. Cuba is a good example. The Yoruban cultural inheritance there is so strong that one easily overlooks traces of other cultures that were brought to the island. Yet the famous Cuban author and historian, Fernando Ortiz, reported over one hundred different African ethnicities in Cuba that were divided into fourteen distinct 'nations'. [4] The case is similar in Brazil, where the Yoruban cultural traits show up strongly among the cult of the *orixás*

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[1] Traditional *corrido* from *capoeira Angola.* My translation.

[2] Gerhard Kubik, *Angolan traits in black music, games and dances of Brazil*, (Lisbon: Junta da Investigações do Ultramar, 1979), 12.

[3] *Ibid.*

[4] Morton Marks, *Afro-Cuba, A Musical Anthology*, (Rounder, 1088, 1984), liner notes.

that manifests itself as *Candomblé*. Unlike Cuba, however, the richness of Bantu culture in Brazil is readily apparent and *capoeira*, as well as *samba*, is a clear example.

The Roots of the Berimbau

Interestingly, Brazil served as a cultural mirror for Africa during the centuries of the slave trade. Kubik writes:

> some of the most intriguing indirect testimonies of Angolan musical instruments in the late 18th century and early 19th come from Brazil, where Angolan slaves continued to produce the musical instruments of their home cultures[5]…the berimbau was developed from a blend of Angolan gourd-resonated bows in the 19th-century, and many patterns have continued.[6]

Of this 'blend' I believe Kubik is referring to two Angolan bows in particular, namely the *hungo*, from the northwestern region of Angola (Luanda and surrounding areas) and the *mbulumbumba*, from the southwest. In 1965, Kubik made wonderful recordings of the latter that are housed in the Phonogrammarchiv der Osterreichischen Akademie der Wissenschaften in Vienna. Portions of these same recordings were released on an album no longer in print entitled *Humbi en Handa – Angola*, published in 1973 by the Royal Museum of Central Africa.

The *mbulumbumba*

This instrument is a gourd-resonated bow very similar to berimbau; however, there are a few important differences. First, the string seems not to be made of wire but rather of gut or some other natural material. I state this claim based on inference from recordings. In all the reading I have done about the bow, I have never come across an exact reference to its make-up. Second, the bow is typically shorter than a berimbau. The two examples discussed below are 100cm and 70cm respectively. The berimbau is usually between 130-160cm, sometimes longer. Third, the bow is held obliquely instead of vertically, i.e.,

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[5] Gerhard Kubik, "Angola," *The New Grove Dictionary of Music and Musicians,* ed. Stanley Sadie, 20 vols. (London: Macmillan, 2000), I: 674.

[6] *Ibid*, 676.

the bow crosses the chest from left to right at an angle. The gourd, however, contacts the chest of the player in the same location as does the berimbau. Fourth, the manner of holding the instrument, with the little finger under the tuning noose of the cabaça, is identical to berimbau; however, in place of a coin the player of *mbulumbumba* pinches the string with the thumb and index finger (the same fingers used to hold the coin of the berimbau). This fact gives further credence to the possibility of a natural material for the string in place of wire. When pinching the wire of my berimbau for comparison, the damping of the pitch is so great that the timbre is radically different from the open pitch. The same is not so for *mbulumbumba* on Kubik's recordings. Finally, the placement of the gourd Kubik reports as dividing the string at a ratio of 4:1.[7] In that way, the sympathetic vibration of the unplayed portion of the string intones a pitch two octaves above the longer section. This is indeed similar to berimbau, but in my experience berimbau tunings are closer approximations of the ratio 6:1.

The instrument finds its home among the Humbi and Handa tribes found in the culture region that covers much of southwestern Angola and stretches into northern parts of Namibia. During the 17th and 18th centuries, this region became a central recruitment zone for the slave trade to the New World, especially to Brazil and to Cuba. "According to some oral traditions of the Humbi these raids severely depopulated the south-west." [8]

Chapinga, Two Recordings ("Mucai muua", etc.)

In his studies in 1965, Kubik recorded two musicians performing on *mbulumbumba*. On July 15th, in Munengole, near Dinde, he recorded Chapinga, a wandering musician who was unknown to the area. He recorded two short pieces, both of which would seem to be instrumental. But interestingly, Kubik refutes this idea. "Although the bow player does not sing, this is by no means to be considered as 'instrumental music', a concept which is

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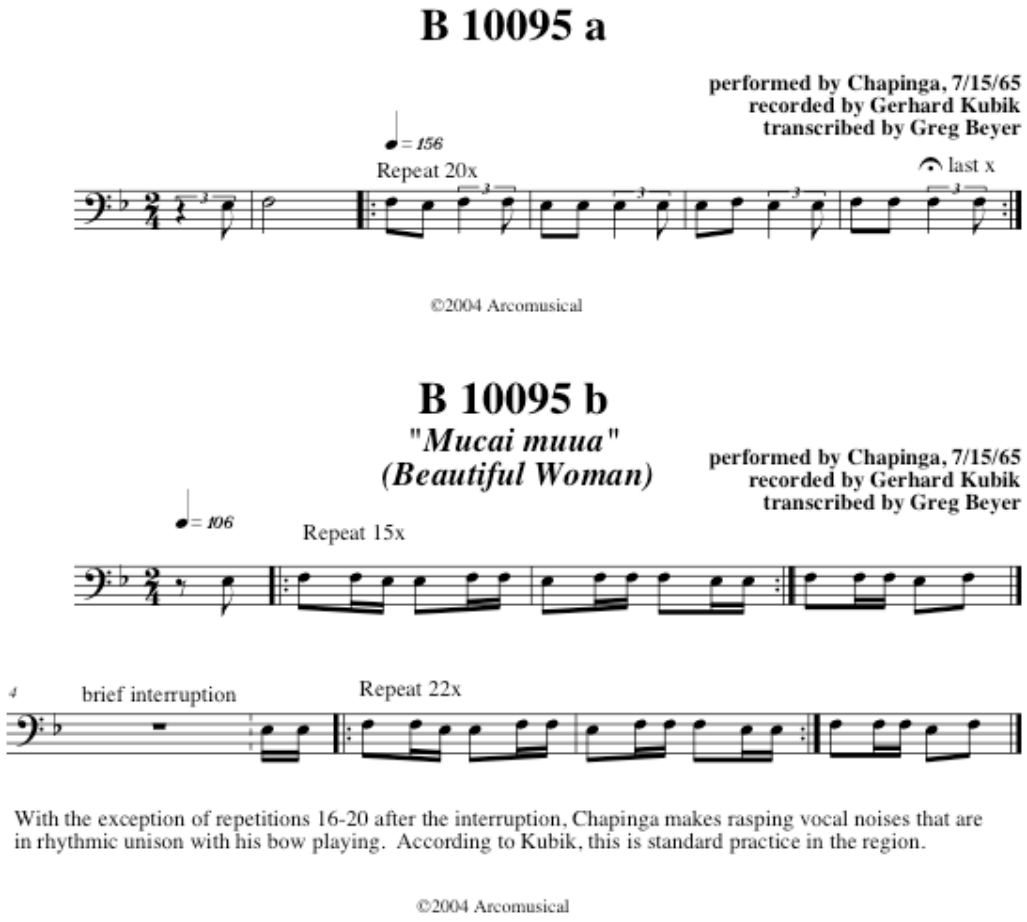
[7] Gerhard Kubik, *Angolan Traits*, 24.

[8] Gerhard Kubik, "Musical Bow Bows in South-Western Angola, 1965" *African Music* 5 (4, 1975-76): 99.

not applicable to the musical culture of south-west Angola, **for the bow song suggests words.** In the second piece, the implied text refers to a beautiful woman."[9]

What follows are my transcriptions of these songs.



Analysis

It is interesting to note that both patterns, (for these songs on the surface contain nothing more than a repetitive rhythmic pattern), have a simple binary symmetry to them. In both cases the second half inverts the 'melody' of the first half. There is a slight exception in 10095b, where a perfect inversion becomes problematic on the 'and' of beat 1. But

[9] *Ibid,* 101.

otherwise, this rule holds true. Of particular interest in 10095b is the vocal rasping that Kubik mentions as typical of the style from this region in Angola. He says, in fact, that the only reason it was not a part of the 10095a is because Chapinga had not yet become comfortable enough being recorded. To me, it resembles the noise element found as a physical part of so many African musical instruments. I am thinking of the role that the caxixi plays for the berimbau, or the function of bottle caps and shells strung onto the body of the Mozambiquean-Zimbabwean *mbira*, or the large metallic plates securely fastened to the rim of a West African *djembe*, each one covered with loose metal ringlets. All these examples function to sympathetically add noise to the otherwise 'pure' sounds of the instruments themselves. Kaemmer confirms that this aspect of instrumental music in the region is a widespread phenomenon.[10] The importance difference here is the obvious fact that the source of the 'noise' is the player's voice, and as such requires effort from and is under the control of the performer.

José Emanuel Virasanda, "Chirumba Chetu"

Nine days later on July 24th, in Mukondo, a village fairly close to Cacula, south of Quilenges, Kubik recorded the 'ethnomusicological celebrity' José Emanuel Virasanda.[11] At the time of the recording Virasanda was 18 years old, employed on a large potato farm run by Portuguese colonists. His song, entitled "Chirumba chetu" has become the subject of a number of cross-cultural studies dealing with the ability of Brazilian 'test-persons' to recognize this music as something familiar.[12] Kubik claims that his Brazilian informants immediately recognized the first rhythm that Virasanda played as the *capoeira toque*, *Sao Bento Grande*. The second rhythm that Virasanda plays was recognized as *Cavalaria*.

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[10] John E. Kaemmer, "Southern Africa: An Introduction," in *The Garland Encyclopedia of World Music,* ed. Ruth M. Stone, 4 vols. (New York: Garland, 1998), I: 701.

[11] Kubik, "Angola", *New Grove*, 676.

[12] Tiago De Oliveira Pinto, "Cross-Culturual Commmunication: How do Brazilian Berimbau Players Perceive an Angolan Musical Bow Performance?", *For Gerhard Kubik: Festschrift on the Occasion of his 60th Birthday*, ed. A. Schmidhofer and D. Schüller, Frankfurt: 1994.

In contrast to this, Tiago de Oliveira Pinto corroborated a later reflection of Kubik's from 1991, that "for a number of reasons, cross-cultural understanding is, by definition, not possible…Change of contours affects the content of cultures but not their nature as closed communication systems."[13] In 1984, inspired by Kubik's earlier research as mentioned above, Pinto set off to discover whether such inter-cultural recognition was actually possible. Using the same Virasanda recording, Pinto used his own basis of studies in the Recôncavo Baiano region of Bahia, Brazil, to interview a *capoeira* group from this region to test their ability to recognize something familiar in the recording. What he found was that the group of *capoeira* students and masters were by and large unable to recognize these rhythms as directly related to *capoeira* rhythms that they are familiar with. While some rhythms had a similar manner or gate, (*jeito)*[14], to rhythms with which they were familiar, nothing instantly rang out as a rhythm from *capoeira*. The Brazilians found the Angolan style of playing to be much more simplistic than their style. Where the Virasanda (and Chapinga) recordings show a manner of bow playing that is quite repetitive and unchanging, the Brazilian style is much looser, much more ready to freely improvise around a given pattern. That said, there are sections of the Virasanda recording that do show ample seemingly improvised variation techniques. With the following transcription, we can take a closer look.

A few words are necessary regarding the pitch material as well as the lyrics printed in the transcription. The pitches as written are at best approximations of a non-tempered scale system. This system is derived from the natural overtones that emit from the vibration of the bow string itself in conjunction with the amplification of said overtones with the gourd resonator of the instrument. Kubik and others have written extensively about these concerns and about how resultant pentatonic and hexatonic scalar patterns result from the merging of the overtones above the open string and the stopped string.[15] My own crude analysis of the actual pitch of the recording shows that the pitch G Virasanda actually performed is about 50 cents lower than the same pitch tuned relative to G=437cps. My

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[13] *Ibid*, 469.
[14] *Ibid,* 477.
[15] e.g. Gerhard Kubik, "Angola," *New Grove,* I, 676.

transcription, therefore, needs to be understood in this light as a first step, as an approximation of what was actually sung and played.

Regarding the lyrical content, my initial transcription was a syllabic approximation of what I could understand from the recording. I do not understand Luhanda. However, I have had the good fortune to be in contact with Marcelina Gomes, an ethnologist from this region of Angola who is now living in Lisbon. In October 2003, I attended the International Symposium on African Music at Princeton University, where Gerhard Kubik appeared as keynote speaker. I was able to spend time with Kubik to ask about his above-mentioned work. He gave me Marcelina's name, as she had been a student of his in some capacity, and thought she might be a useful contact for my studies.

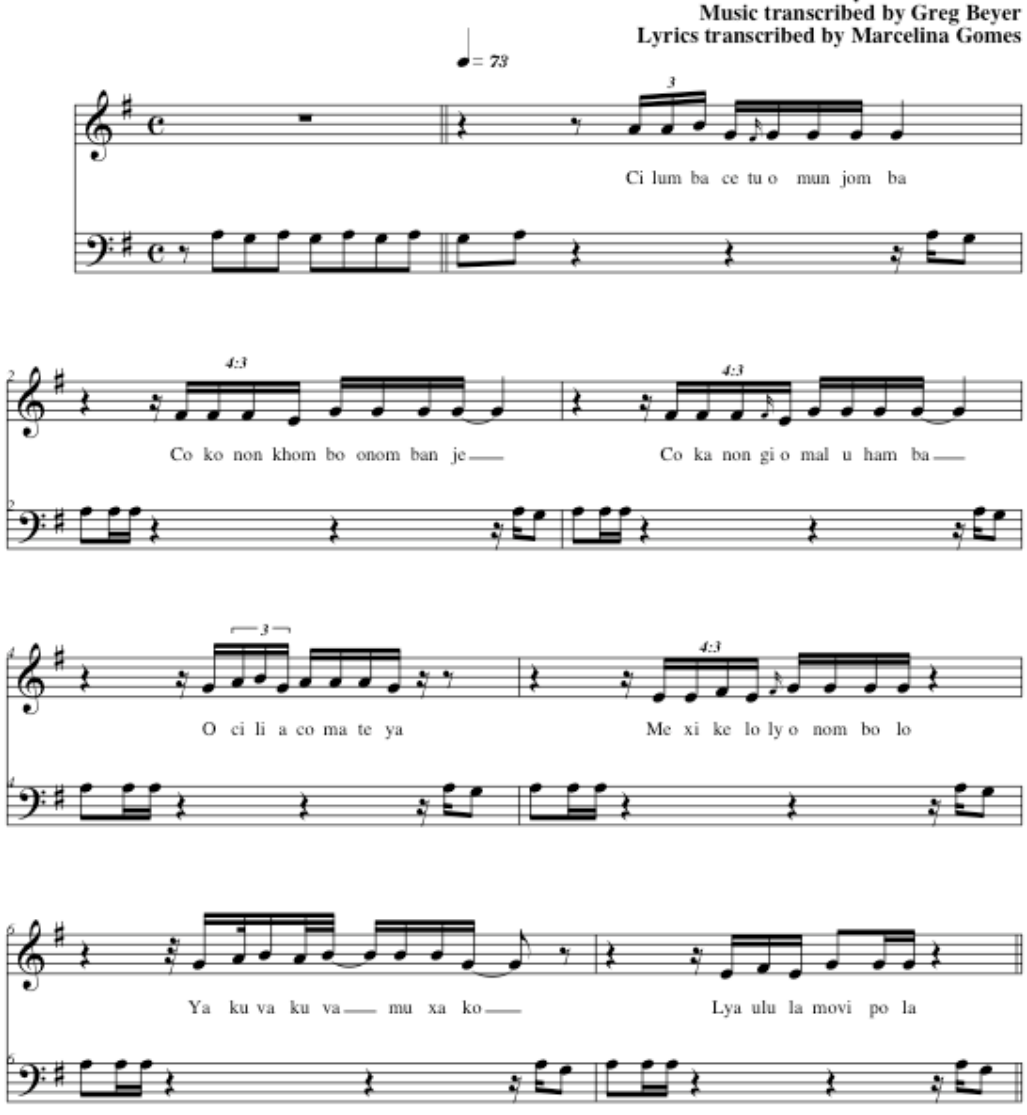
He was right. After making the transcription, when I initially contacted her, I hoped she might be able to point me toward a dictionary to do a bit of rough translation myself. She kindly informed me that Kubik had given her a copy of the same recording and that she had made an insightful transcription and translation of its lyrical content. This translation (in Portuguese) is followed by very intelligent analysis and commentary, which I will translate (in English) and summarize below.

To start, Gomes's own title for the song is *Cilumba cetu*. This alone gives some indication of the pronunciation for this written form of Luhanda. The following chart should make clear any uncertain pronunciation from the perspective of American English.

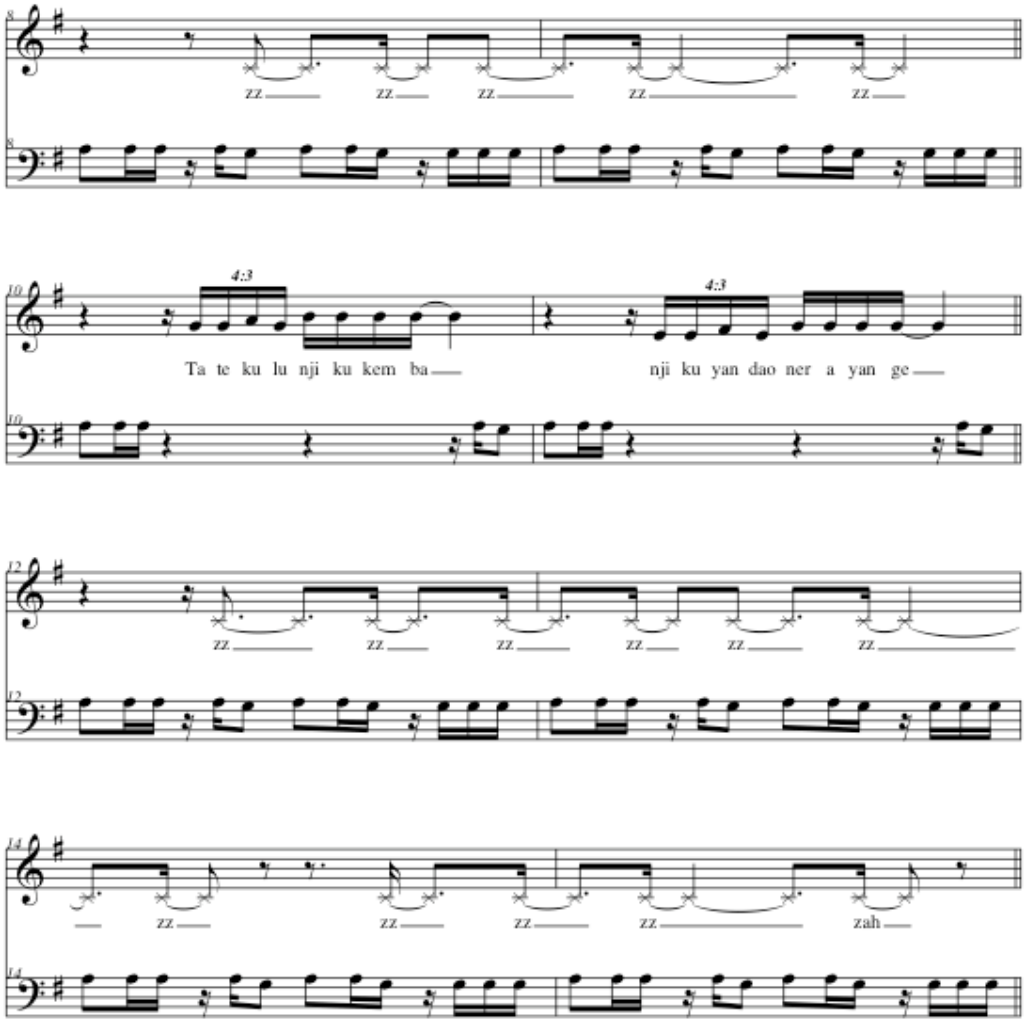
Consonants	Vowels
C = ch (as in chat)	A = ah (as in opera)
X = sh (as in she)	E = ay (as in ray)
L is often similar to R	I = ee (as in coffee)
	O = oh (as in omen)
	U = oo (as in moon)

B 10165 "Chirumba chetu"

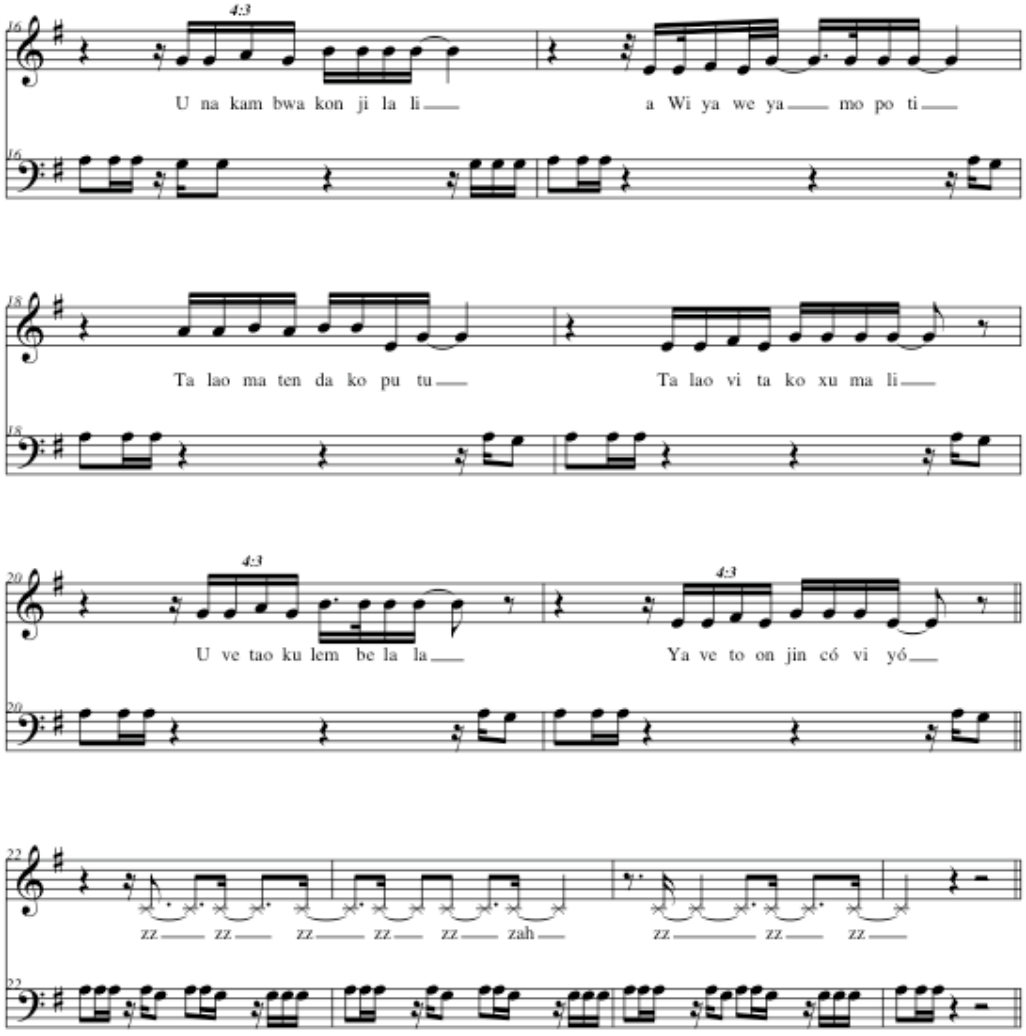
Composed/performed by José Emanuel Virasanda, 7/24/65
Recorded by Gerhard Kubik
Music transcribed by Greg Beyer
Lyrics transcribed by Marcelina Gomes

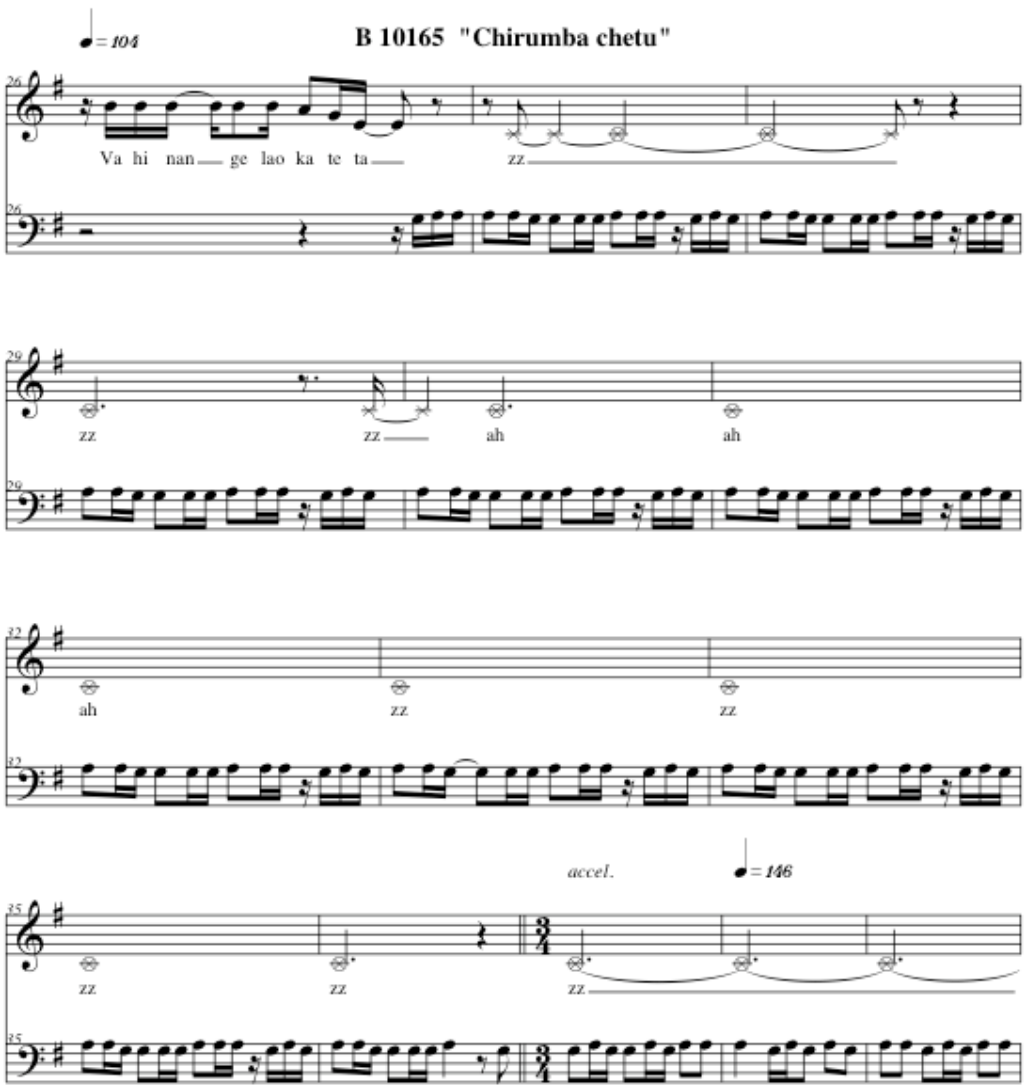


B 10165 "Chirumba chetu"



B 10165 "Chirumba chetu"





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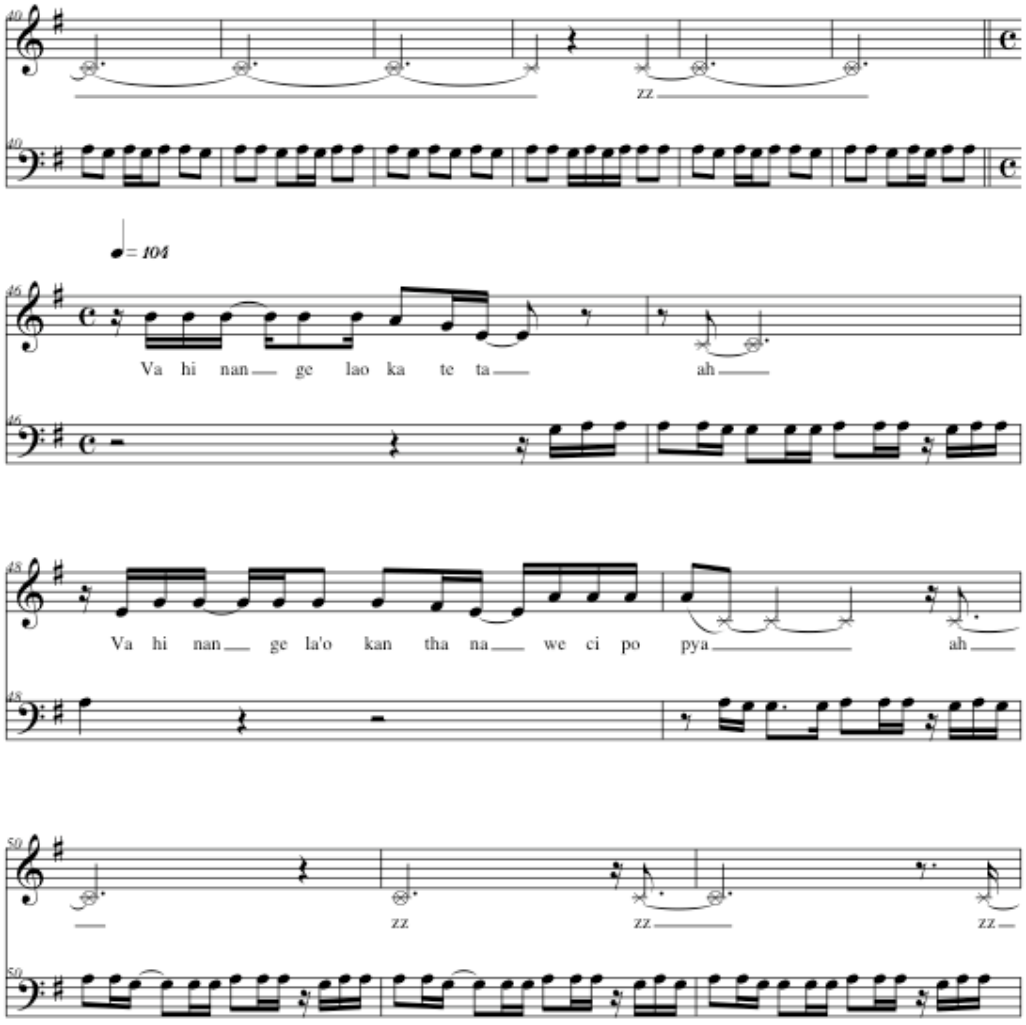

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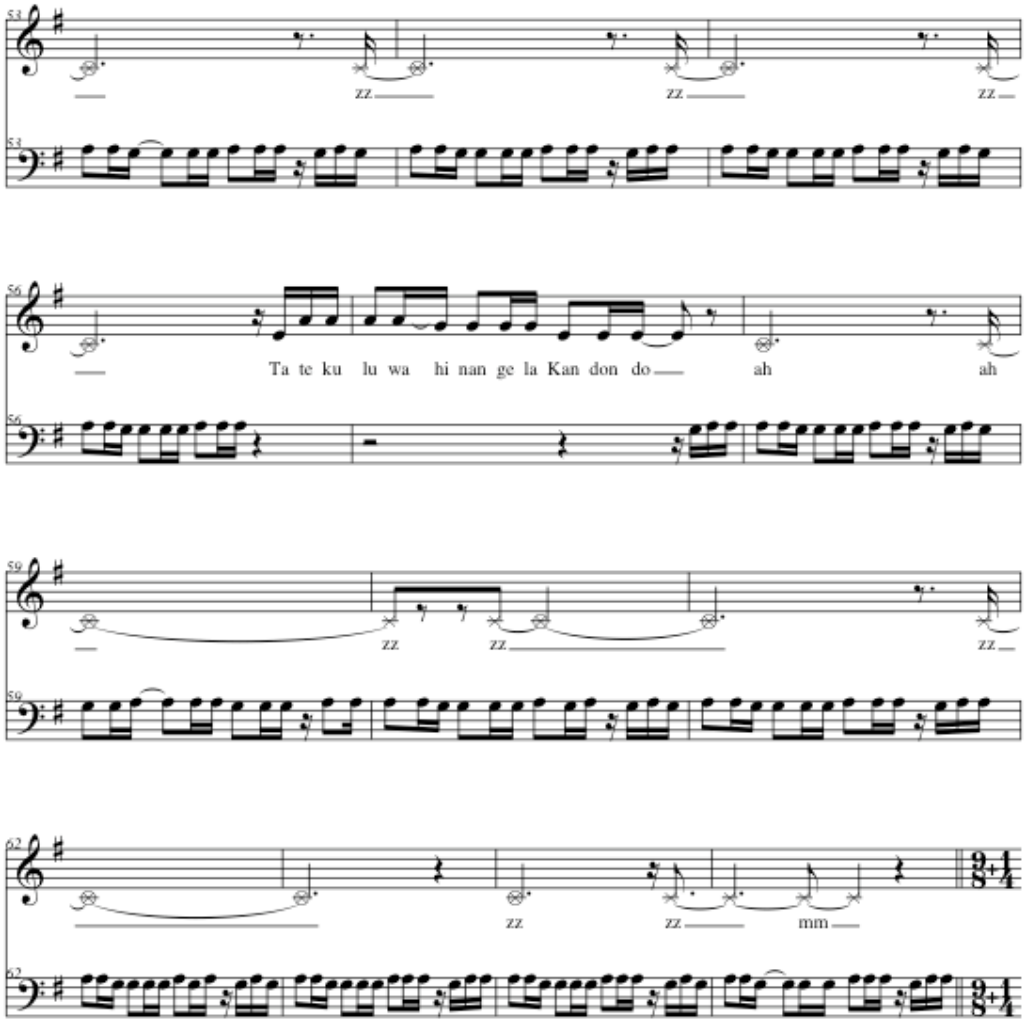

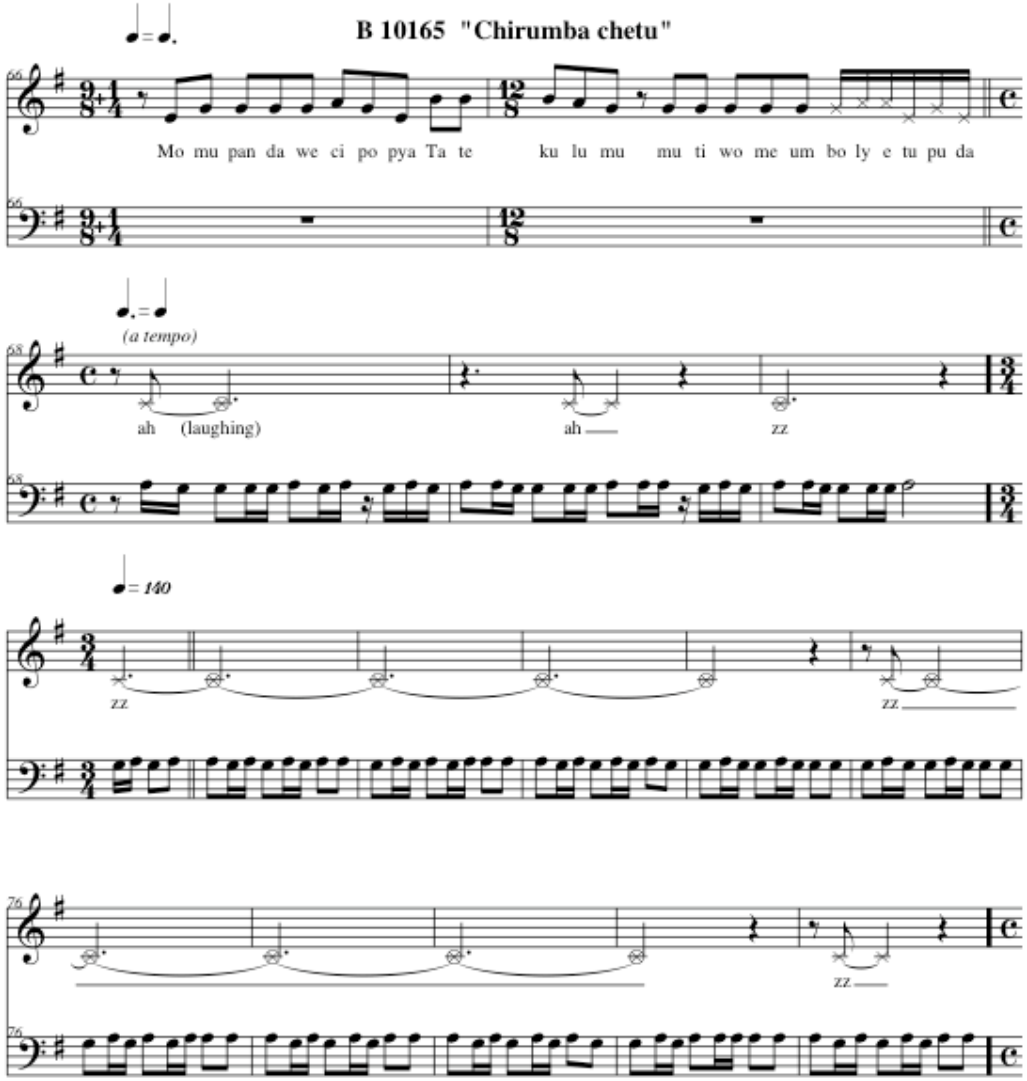

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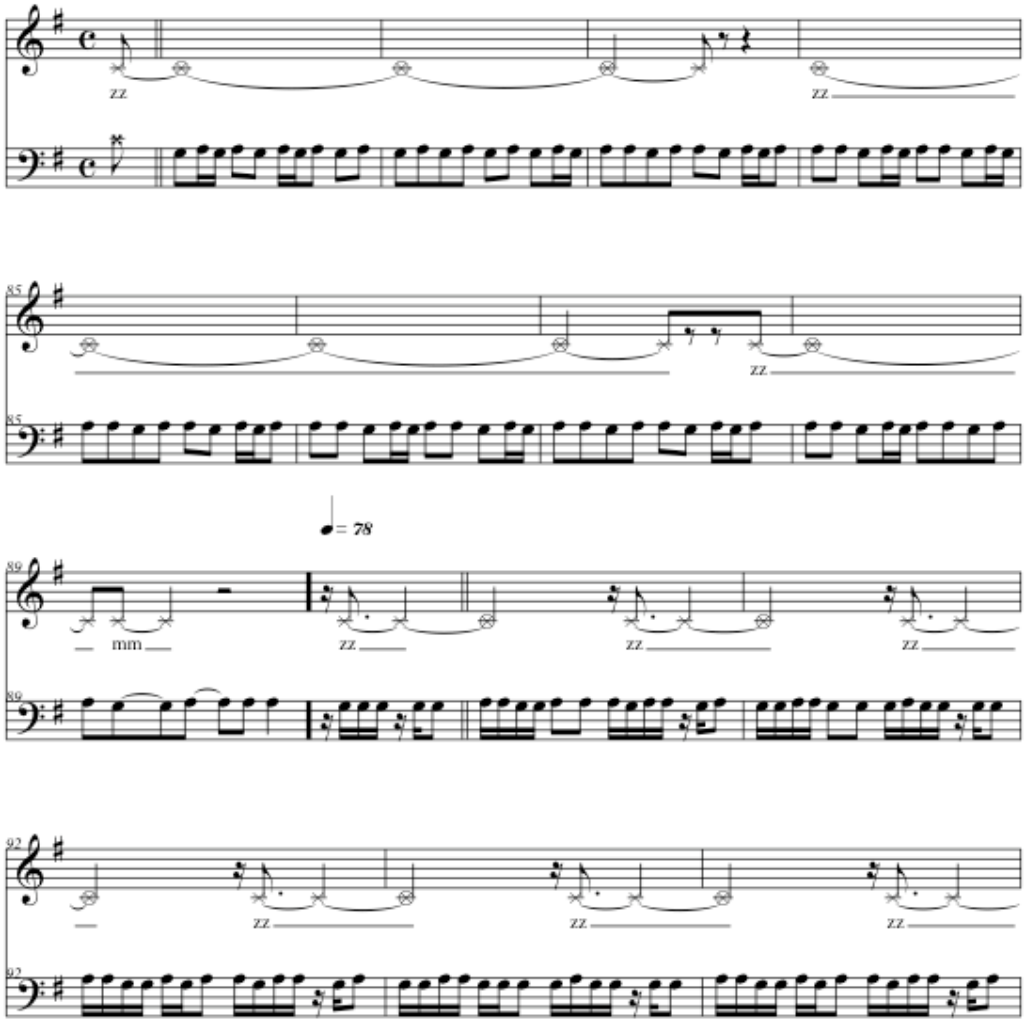

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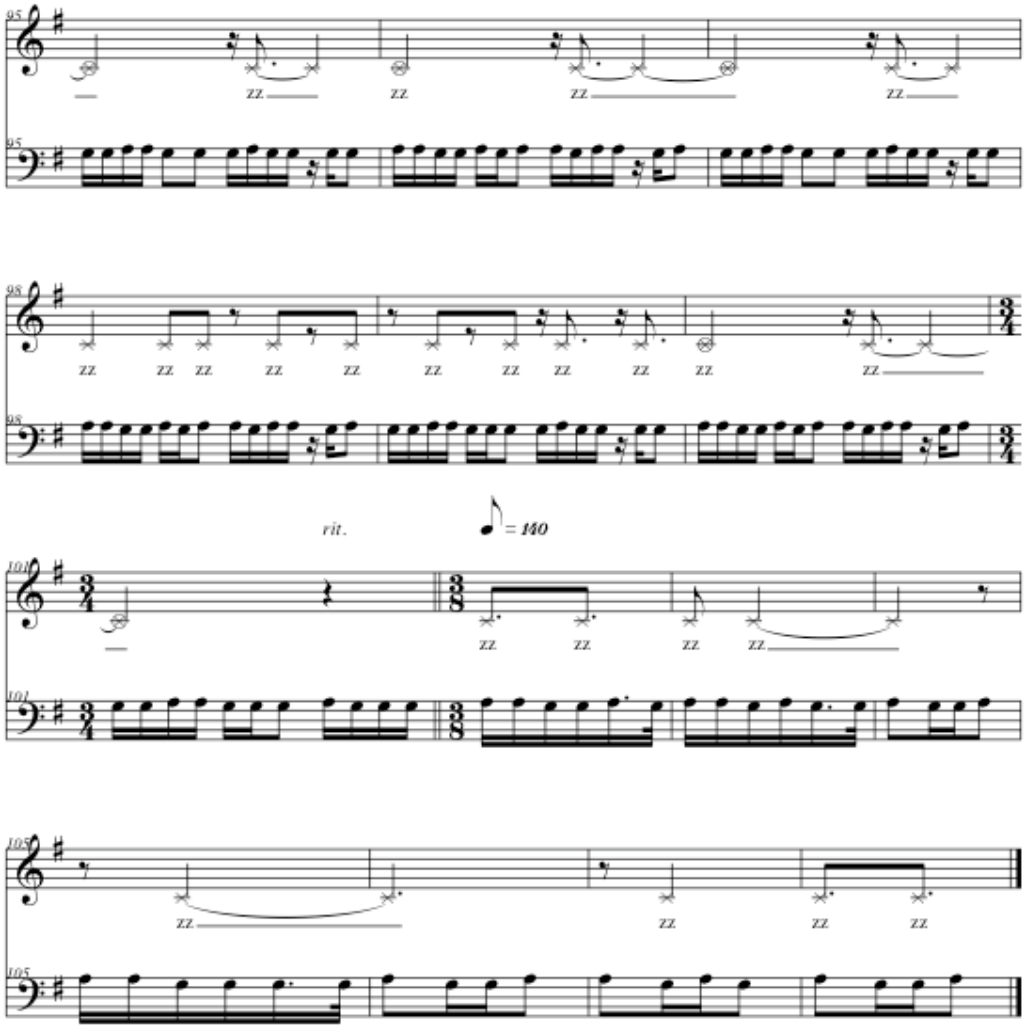

Musical Analysis

Over the course of the four-minute nineteen-second recording, Virasanda performs a sort of medley of three pieces. Kubik states that the first of these "has a structure astonishingly similar to that of the *rumba*".[16] What Kubik is referring to is the consistent implied 3+3+2 rhythmic feel that characterizes the music of the bow and of the singing. Kubik's concept of *rumba* seems to refer to the *tresillo*, the first half of the traditional *clave* pattern typical of Afro-Cuban music.[17] Kubik ponders a similar connection in the title itself, (i.e. "chirumba" = "rumba"). Considering Virasanda's possible knowledge of Cuban *rumba*, he enters into a discussion about the way in which cultural elements 'travel'.[18] This topic is fascinatingly open-ended and begging for further research.

According to the transcription presented here, the level of this 3+3+2 subdivision is at the 16th note, so that two cycles of 3+3+2 occur in each written measure. The rhythmic pattern becomes extremely clear when the *mbulumbumba* finally reaches the 'chorus', (m. 9-10, 13-16, etc.) where the lyrics end and Virasanda begins a vocal rasping that adds character to the sound of the bow. This is not unlike the earlier Chapinga example, except that here the rasp provides more of a drone, rather than a rhythmic enforcement. This bow pattern in retrospect reflects upon the rhythmic patterning of the vocal line. Although there are variations from line to line, the general scheme of the lyric is to begin on the 'e' of 2, push through beat 3 and end on the 'a' of 3. Each of these three points coincides with the bow pattern, and the second two (3 and the 'a' of 3) coincide directly with the underlying 'clave'. The most common pattern is the 4:3 polyrhythm beginning on the 'e' of 2. These notes 'push' themselves to beat 3, at which point the vocal line slows perceptibly and aligns perfectly with the underlying 16th-note subdivision.

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[16] Gerhard Kubik, *Music from the Humbi and the Handa of Angola*, (Royal Museum of Central Africa, Teruven, 6803 044, No. 9, 1973), liner notes 75.

[17] Because it is only the first half of *clave*, however, perhaps a more accurate parallel would be the rhythmic feel of the *baião* of the Brazilian northeast.

[18] Kubik, "Musical Bows", *African Music,* 104.

Song One Lyrics

Here are the lyrics of this first song as given to me by Gomes, and my English translation based upon her Portuguese translation:

Cilumba cetu omunjomba	Our 'cilumba' (mbulumbumba) is a party
Cokononkhombo onombanje	The goats are brown
Cokanongi omaluhamba	The sheep are gray
Ocilia comateya	They are far from the roofing tiles
Mexikelo lyo nombolo	In the barnyard the bread
Yakuvakuva muxako	Is spread about in the bag
Lya ulula movipola	(Mbulumbumba) yelled in the interior
Tate-kulu njikukemba	God I lie to you
Njikuyanda onera yange	I offer you my ring
Una kambwa konjilali	There is a small dog in the path
Wiya weya mopoti	That one arrived in a pot
Tala omatenda koputu	Look at the large gourds in Portugal
Tala ovita koxumali	Look at the wars up there
Uveta okulembelala	Strike remembering stricken
Yaveto onjinji	'Onjinji' in the teeth

Summarized Translation of Gomes' Analysis of the First Song

Gomes makes a few comments regarding the general song style of *mbulumbumba* musicians. First, the community in the area considers these people common folk. They are not 'professional' musicians in any sense. They do not publicly perform but rather use their music as a form of individual expression and as a way to pass the hours in their labors -- by-and-large the herding of cattle or other animals. The songs themselves are very likely improvisations based upon certain standard phrases or patterns that allow the musician to think and sing quickly, describing whatever subject is at hand.

This song begins by expressing the happiness of Virasanda to have the company of his new friend, Gerhard Kubik, and the company of his *mbulumbumba*. *Cilumba* is a poetic

expression for the instrument itself, only used in the contexts of songs, never in spoken language. Mentioning his herd of animals, Virasanda remarks with sadness that they are far from the roof tiles. 'Roof tiles' refer to the homes in the area built and occupied by Europeans who are there making commerce out of the livelihood of agriculture. Indigenous homes never used such materials. His mention of the distanced animals refers to the foreigner's vastly different manner of herding and of relating to the animals themselves from what he was traditionally accustomed. Whereas traditionally Virasanda and his people may have tended to the flock with personal care, in 'modern times' (1965) that method is facing challenge and crisis…

From long before any contact with Europeans, the Luhanda have traditionally been deists; their supreme god is *Tate-kulu*. In the second verse, Virasanda's communion with his god confesses his human shortcomings, i.e. his 'lying'. At the same time, however, he offers his ring, perhaps his most precious earthly possession at the time. His commitment to God reflects his own attempts to seek truth, especially in the face of such times of cultural crisis.

The third verse mentions a dog on the path and, in the same breath, someone who arrived in a pot. It is well known that during this period Europeans would traverse long distances in Africa, transported in small buggies over the shoulders of African slaves or servants. His mention of large gourds in Portugal refers to what he has overheard to be the splendor of the 'big city'. He also mentions war. During the 1960's, although things in the southern region of Angola were calm, the north around the capital was engaged in the early stages of what would become a horrible civil war lasting decades. The Angolan fight for independence had many internal divisions as well as external pressures from countries with economic interests. Angola became a disputed territory in the global 'cold war'. Radio was scarce in Angola during this time period, so it is much more likely that Virasanda, employed on a large European potato farm, was in some fashion a confidant of his master. Virasanda may have been a 'good boy' to his patron. In this way he came to know about or could imagine places and events outside of his own experience.

Second Song Musical Analysis

The second 'song' begins in m. 27, with a vocal 'send-off'. The vocal rasp predominates for the duration of the song and the gate of the bow ostinato is clearly in a normal 4/4 subdivision; however, one could argue that that 3 + 3 + 2 feel is retained in beats 3 and 4 of each measure.[19] Virasanda is clearly aware of an eight-beat (two-bar) cycle, as the last sixteenth in each measure is consistently first low, then high. This two-measure pattern repeats about five times, but then Virasanda veers seamlessly into a new groove that is most easily understood in 3/4. This section features more variation from moment to moment and is surely improvisational in character. However, there is still an underlying, recurring two-measure pattern over which Virasanda bases his subtle variations. I hope that my following analysis of Virasanda's improvisational techniques sheds light on his musical style:

Due to the accelerando in m. 38, let m. 39 become the first measure of the pattern, and call each two-measure pair A and B. In measure 41, A is varied in beat one and two (beat one uses the material of beat 3, and beat 2 is a melodic inversion of the original), but B is unchanged. In measure 43, A uses the original figure of beat three in all three beats and B is expanded only in beat 2. Measures 45 and 46 are just as measures 41 and 42.

In measure 47, the vocal send off returns, and is responded to two measures later. After this response the bow ostinato picks back up, this time characterized by more syncopation through simple omission of notes in the pattern that are 'on the beat'. Beat 2 is frequently omitted (m. 51-4). After the third lyrical send off in measure 58, the bow provides an uncharacteristic variation of the pattern in measure 60. This 'variation' is undeveloped, however, and sounds almost like a false move with a quick improvised recovery. In

[19] Through all of this I am consciously aware of the inadequate nature of analyzing this music in Western terms. Certainly Virasanda was not thinking of 'beats 3 and 4'. Nevertheless, these are the one set of tools to aid in an understanding of this material, and surely they are tools that are within the reach of anyone reading this analysis.

measures 67-68, Virasanda sings something that breaks down almost into spoken word[20], and what he is saying is clearly very amusing both to himself and to those around him listening, for there is much laughter on the tape immediately afterward. Perhaps the sight of 'onjinji' in the teeth is a funny one.

At m. 73 the 3/4 groove returns, and again we can derive a fairly clear A/B patterning. The first beat of each bar of the A pattern is always the lower note, whereas the first beat of each bar of B is always the raised pitch. Unlike the first 3/4 section, here there is clear repetition of pattern from one bar to the next, so the analytical breakdown of Virasanda's improvisational scheme would be, from measure 73-82: A B A B B B A A B A.

At m. 83, Virasanda breaks the gait with an unpitched pop of the stick on either the stave or the gourd of the bow that serves as a pick-up into the final section of this second 'piece' of his medley. This material is clearly related to the music of the 3/4 sections, but its music is best understood back in 4/4. After two seemingly unrelated introductory measures, Virasanda falls into a very clear two-measure pattern, A/B, at measure 86. Interestingly, this section ends in measure 92, with a figure that *clearly* recalls the original bow motif from the 'first piece' of the medley. Here it is written in eighth notes, whereas the opening was written in sixteenths, but the tempo here is nearly double what it was, so from an aural standpoint, it is exactly the same figure.

Lyrics to the Second Song

Vahinangela okateta	Remember *kateta* corn
Vahinangela okanthana wecipopya	Remember veal, he said
Tate-kulu wahinangela Kondondo	God, remember *Kandondo*
Momupanda wecipopya, Tate-kulu	In *Mupanda*, said God
muti wo meumbo lyetu	Tree of our village

[20] Here and elsewhere, where lyrics are more spoken than sung, I substitute 'x' noteheads for normal ones.

Summarized Translation of Gomes' Text Analysis to Song Two

Virasanda asks the listener to remember *kateta* and veal. Such staple foods were perhaps fond memories from his childhood, and Virasanda is nostalgically requesting that they not be forgotten. Virasanda also evokes *Tate-kulu* once again, asking that he remember someone named *Kandondo*. It is most likely that this person was someone that Virasanda held dear to him, or perhaps was a respected figure in his childhood community. It must be remembered here that at the time of the recording, Virsanda was only 18 years old. God responds to Virasanda in the song, and seems to say that *Kandondo*, in spirit at least, may be found in the *mupanda*, the large tree central to his childhood village. In such rural African communities, it is very common for a large *mupanda* to be located at the center of the community. These trees were considered 'works of god', and served the community in many important ways. Perhaps something akin to the 'town square' in a small American town, the tree was the location of important community meetings, festivals, etc. It was also a kind of courthouse, a place to settle disputes. An additional function may have been something similar to a chapel. The tree was a place to commune with the spirits of the community's ancestors, and a place to confess and commune with God.

Song Three Musical Analysis

There are no lyrics *per se* in the third song; however, it should be recalled, as in the examples of *Chapinga*, that many *mbulumbumba* songs are 'instrumental' but imply texts. The concept of instrumental music does not apply to music making in this region.

From measure 94, then, Virsasanda begins the final 'piece' of the medley. The tempo is more like that of the first piece, but here the sixteenths have a considerable swing to them. Again like the second piece, the gait is easily felt in 4/4, but the second half of each measure also recalls the 3 + 3 + 2 patterning. Once more, the overall pattern takes two measures to complete, and interesting here is the *yin/yang* relationship of the bow melody. The second bar inverts the pitch material of the first. With nothing new to say, Virasanda continues his vocal rasping through this section, and it soon becomes clear that

the song is about to end. A ritard at the end of measure 105 takes us back into music that recalls the 3/4 section, but the musical patterning is clearer in 3/8. The fact that the music ends on the raised bow note is indicative that if either pitch were to take on the 'function' of a 'tonic', it is certainly the upper pitch. Indeed, as it has been all along, all major cadence points return to the upper pitch, and all the bow patterns throughout the song typically begin and end on the upper note. In this respect, the music here and the music of many of the toques and songs of Brazilian *capoeira* share a stylistic trait.

* * *

The *hungo*

Kubik reports that the name *hungo* (pronounced oon-goo) "suggests historical connections with *lukungu* (musical bows) in south-west Democratic Republic of Congo. This is just to the north of the region where *hungo* finds its home, in the northwestern zone of Angola. For many reasons, it is an instrument even more similar to berimbau than is the *mbulumbumba*. The string is of wire. The noose through the gourd divides the wire into two unequal parts; the much shorter part is below the gourd and is not used for playing. Another implement is used to achieve a second fundamental pitch. In place of the berimbau's coin or stone, hungo players use the neck of a broken bottle, something similar to the American slide guitar. Finally, the hungo is held vertically, so a performer even looks like he/she is playing berimbau.

One of the most famous performers of this instrument is a man named Miguel Francisco dos Santos Kituxi (b. 1941). He has had for many years a group called, *Kituxi e os seus acompanhantes* (Kituxi and his companions). Still living and working in Luanda, this band has made various recordings in the popular *semba* genre of dance band music. His style crosses influences of traditional playing with electric pop sounds, such as a prominent electric bass line in many of his songs.

Os Jovens do Hungo, "Núa monua" and "Issabu" from the record, *Sembele* (1995)

A similar group that claims to be highly influenced by Kituxi and his group is *Os Jovens do Hungo* (Hungo Youth). This is a younger band of Angolan nationals living in Portugal. They fled because of the tremendous strife caused by so many years of war in Angola (the same war mentioned by Virasanda) that lasted decades and only recently ended. They currently have two recordings available on the Portuguese label, Strauss. The first of these was recorded in 1995, and is entitled *Sembele*. What is refreshing about this group is that they stick to acoustic performance. The band is simply a group of five percussionists singing and playing instruments from their part of the world.

Photo 1. Os Jovens do Hungo

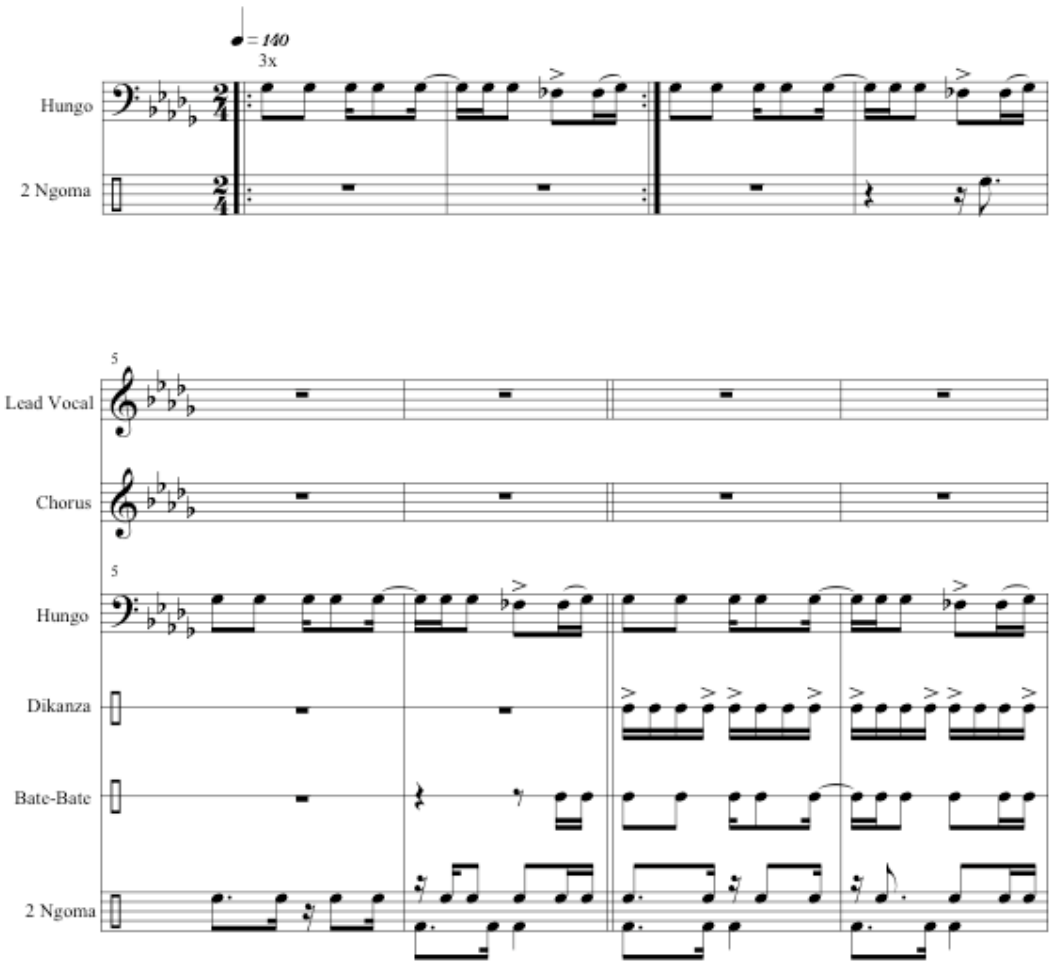
From left to right in the above photo, the instruments being played are the *dikanza*, a bamboo scraper or reco-reco type instrument; the smaller *ngoma*, a handrum; the *hungo*; the larger *ngoma*; and the *bate-bate*, a larger bamboo, struck with a stick to provide a constant timeline pattern. The *hungo* player is the lead singer and the rest of the players form the chorus, a characteristic that has interesting parallels with *capoeira*. Their style, too, is consistently call-response.[21]

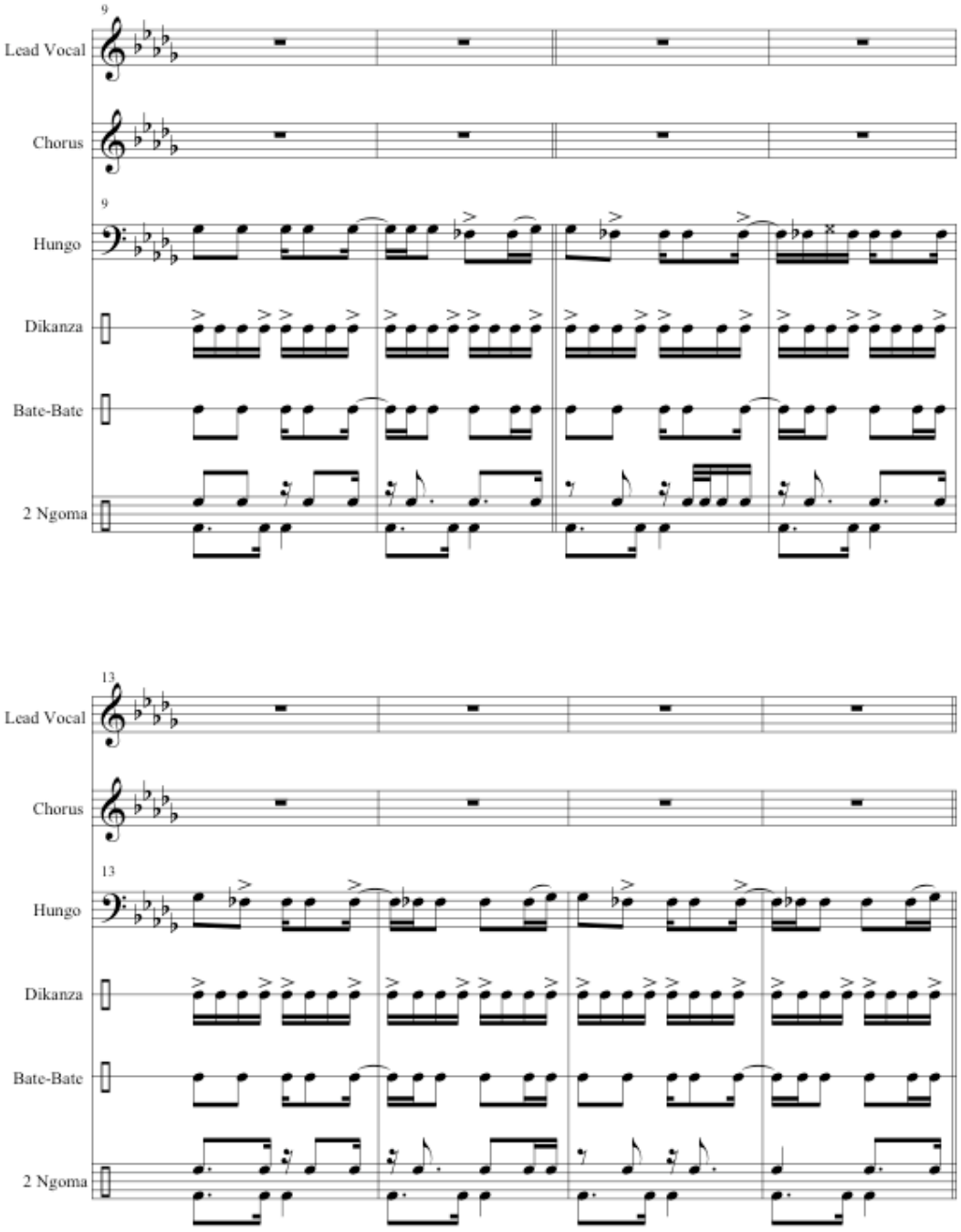
The following two examples illustrate very important rhythmic relationships to various forms of Brazilian music, thereby lending credence to Kubik's conception of Bantu extensions overseas.

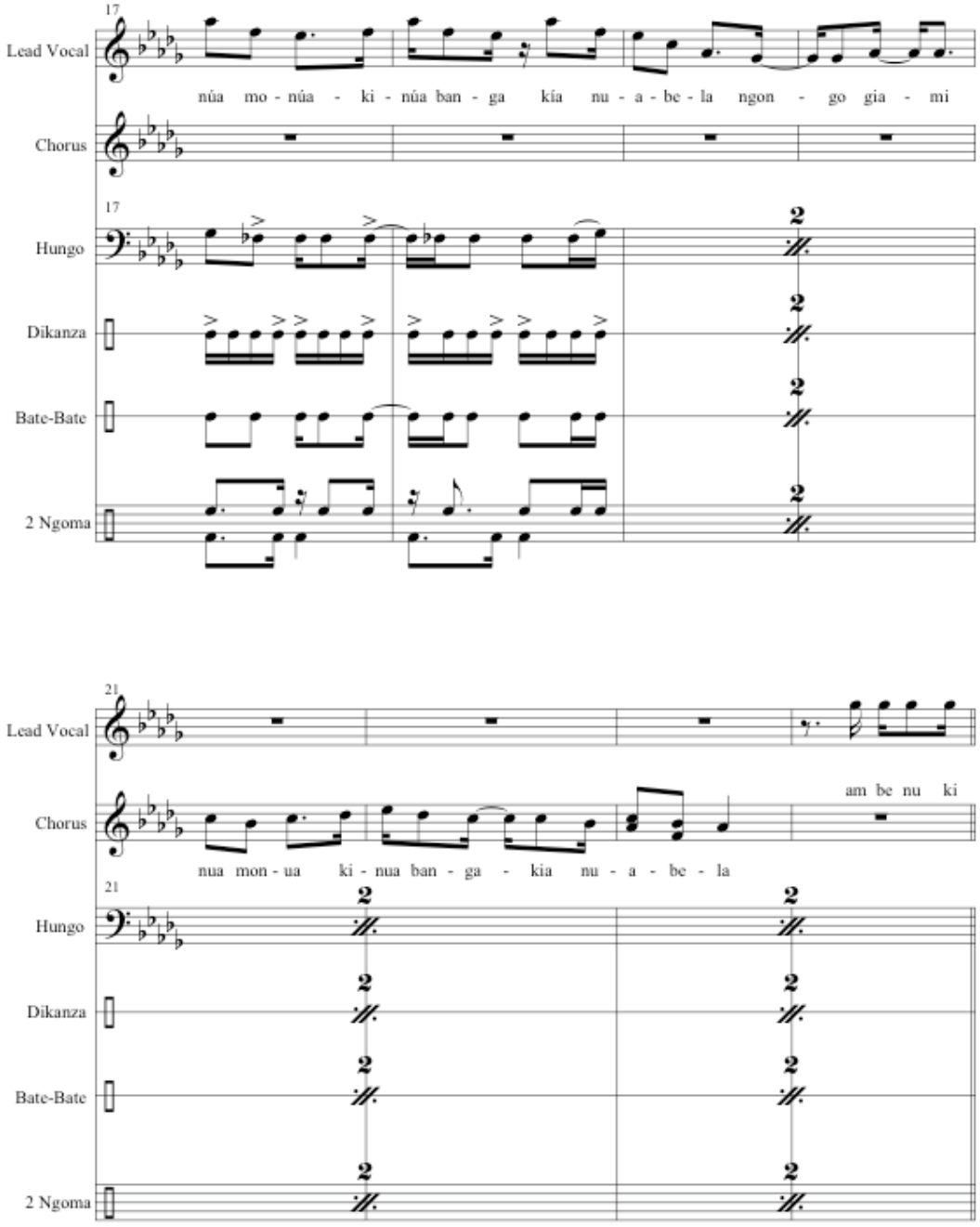
[21] Recall that the *mestre* of the *roda* of *Capoeria Angola* more-often-than-not plays the *gunga* and as vocal soloist leads the call-and-response singing.

núa monua

words by Silva F. Paixão
music by Os Jovens do Hungo
transcribed by Greg Beyer




9
Lead Vocal
Chorus
9
Hungo
Dikanza
Bate-Bate
2 Ngoma
13
Lead Vocal
Chorus
13
Hungo
Dikanza
Bate-Bate
2 Ngoma


17
Lead Vocal
núa mo - núa - ki - núa ban - ga kía nu - a - be - la ngon - go gia - mi
Chorus
17
Hungo
Dikanza
Bate-Bate
2 Ngoma
21
Lead Vocal
am be nu ki
Chorus
nua mon - ua ki - nua ban - ga - kia nu - a - be - la
21
Hungo
Dikanza
Bate-Bate
2 Ngoma

"Núa Monua"

This track has a groove that is remarkably similar to a Brazilian *samba*. It is similar in name, too. *Semba* is a dance music from the northwestern region of Angola that is very popular among the urban youth, a generation that *Os Jovens* clearly represents. When the lower of the two *ngoma* enters in measure six, its role to pound out a foundational two-beat pattern is exactly that of the Brazilian *surdo*. The *bate-bate* timeline pattern is arguably something like the part of the Brazilian *tamborim* or even *agogô*. However, the lineage is perhaps stronger in favor of the *tamborim*, as these timeline patterns from Angola differentiate themselves from the timelines found further north and west in Africa by performance on the body of a drum, i.e. something wooden, as opposed to on a metal bell.

The *hungo* begins the track with a two-measure ostinato that also beats out the timeline. Characteristic of this pattern is the alternation of notes on downbeats and notes on upbeats. This provides a concept of clave, i.e. an 'on' side and an 'off' side that work together as opposing forces to balance each other out to create a strong groove for dancing. There is very little rhythmic variation as the track continues. The *hungo*, doubled by the *bate-bate*, is responsible for holding this timeline in place. This is a characteristic African music phenomenon.

> Time-line patterns are so important structurally in those types of African music based on them that we can confidently call them the metric back-bone of these musics. They are orientation patterns, steering and holding together the motional process, with participating musicans and dancers depending on them. In this quality the removal or even slight modification of a time-line pattern immediately leads to the disintegration of the music concerned.[22]

What is striking about this particular recording is the poly-tonality heard between the *hungo* and the vocal lines. Or perhaps it is more likely that the *hungo* is not providing a tonal center at all but rather a percussive color and function that is distantly related to the overall key center of the song. The mode of the singing is roughly A-flat mixolydian, or perhaps an A-flat pentatonic employing the lowered 7th scale-degree. The bow is tuned to

[22] Kubik, *Angolan Traits,* 18.

an E-natural, (in this case notated as F-flat). This tuning allows the player to stop the wire and achieve the whole step above, G-flat. This upper note is the lowered 7th scale degree of A-flat, providing a mixolydian sound. However, although the recording begins with the bow predominantly playing the G-flat, just before the singing starts the bow drops to a consistent figure that emphasizes the F-flat. When the vocal lines begin, then, the effect is jarring, not at all like the Virasanda recording analyzed above. It rather seems more like early recordings of Naná Vasconcelos with Milton Nascimento, where the instrument is treated more as a percussive color despite its clear pitch content.

Because the bow playing continues to provide the basic timeline throughout the rest of the song, I did not feel it necessary to provide the rest of the transcription of the vocal lines. However, of major importance in this song is the content of the lyrics. The language sung is Kimbundu, the predominant language of the city of Luanda, from where the group hails. What is intriguing to me is the biting and accusatory nature of the words. There is something of a kindred spirit at work here when compared to the lyrics of many *capoeira* songs. Keep in mind that this was written and recorded in 1995, in a time before the incredibly long civil war in Angola had ended, a war that is chiefly responsible for this group's exile. The political commentary is seething.

Núa monua
Kinúa banga
Kia nuabela

Ngongó giami, uê

Sonhi gia messo ngana
Gia nukuatela
Ambe
Yosso eno núa megia
know
Nuámba kuma
Núa megiono ngó

Hato-ze ka zuela yé uê
Kia tu giba
Kia tu beta
Kia tu xinga

Kia tu longolola
Amba tuala ni ytiti

Now see
What you've done?
And still having fun…

So much is my suffering

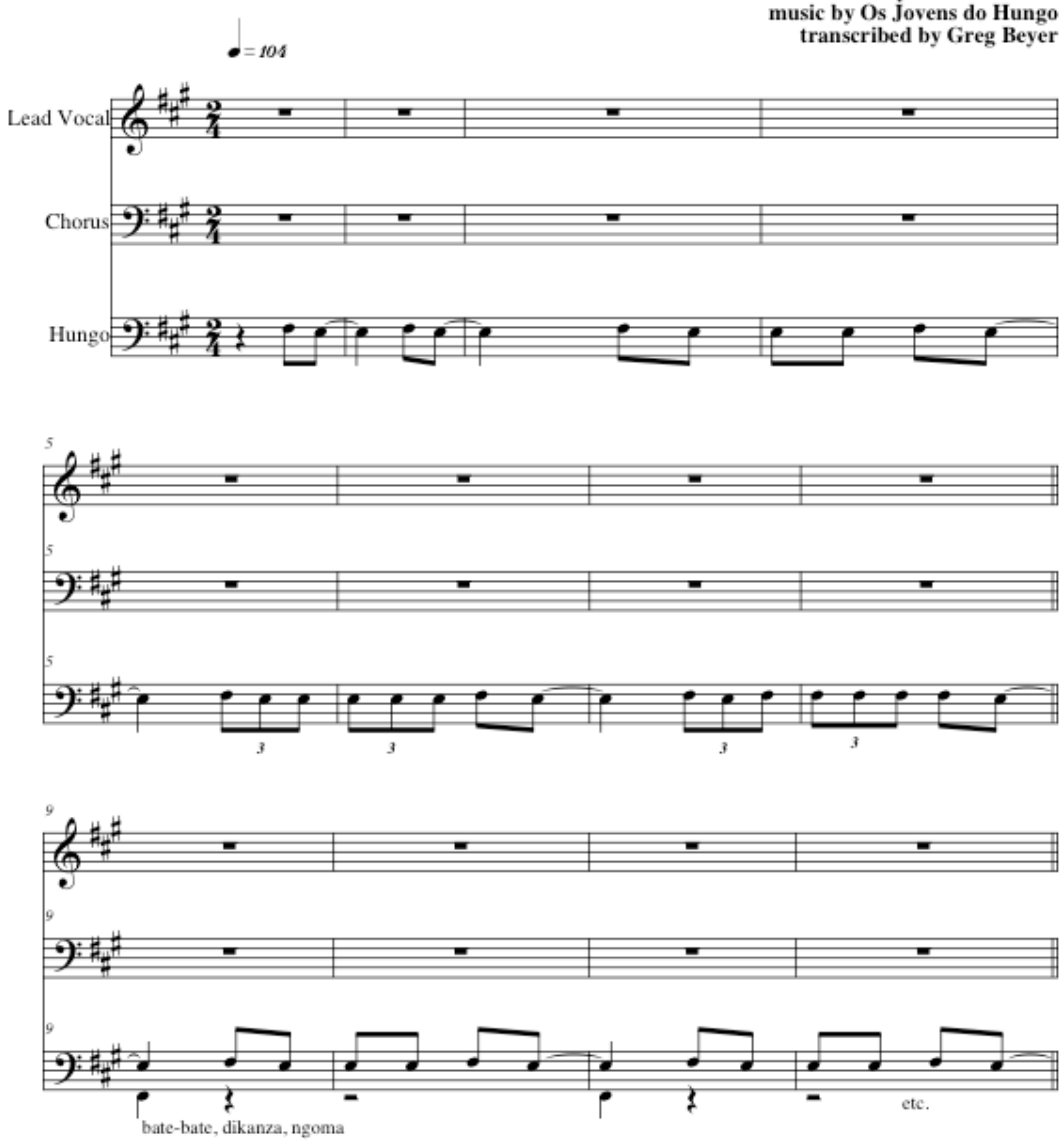
You've embarrassment
In your eyes
And you say
That you don't

What I'm talking about
This suffering

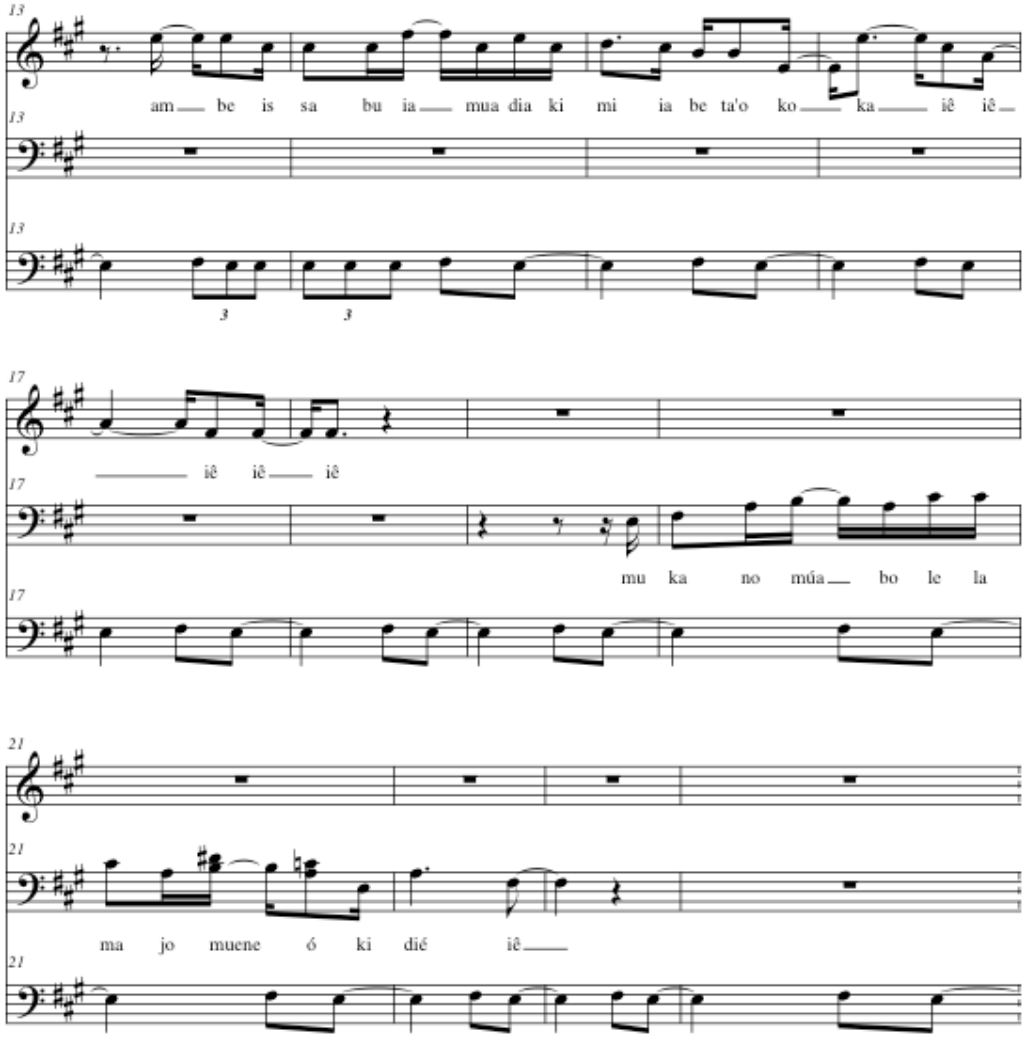
People cannot speak
When they're dead
When they've suffered
When they've been
morally offended
But you don't understand
And say that you are full
of pride

Issabu

words by Silva F. Paixão
music by Os Jovens do Hungo
transcribed by Greg Beyer



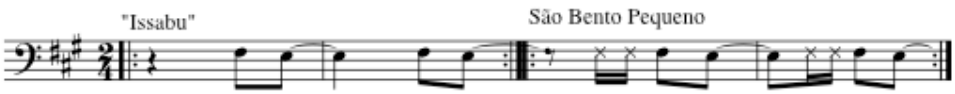
Issabu



“Issabu”

In the liner notes to the album, this rhythm is called a *lamento com Dituika*. There is a section toward the end of the recording where the music picks up to a swinging double-time feel where both beats of the each bar are emphasized rather than just the second, as in the opening. This second section is the *Dituika.* It is this opening section, the ‘lament’ that I have included in the above transcription, because of the obvious rhythmic connections to the rhythms of *Capoeira Angola.* Is this the clear and undeniable ancestor of the *Capoeira* toques? It is difficult to say, and perhaps not a worthwhile question. It would be all-too-easy to do so, and it is just as likely that the members of *Os Jovens* are influenced by the Brazilian music. Nevertheless, the connection from simply a musical perspective is undeniable. The manner of playing is virtually the same as the toque, *São Bento Pequeno*, where the lower fundamental is emphasized.

Comparing "Issabu" with São Bento Pequeno



Again the above transcription represents only the opening portion of the track, for the *hungo* playing is virtually unchanging for the rest of the track until the aforementioned *Dituika* section. Note how the lyrics again bitterly question the knowledge and leadership of the government.

Ambe issabu ia muadiakimi	They say the stories of the elders
Ia beta o kota	Are the most important
Mukano múa bolela	In a mouth with rotten teeth
Majo muene ó kidi	Lies the truth
Mukano ia muadiakimi	From the mouth of an elder
Matunda majó maboló	Fall rotten teeth

Matundé	But do not fall
Maka maboló	Rotten words
Ambe! Kidi-kidi	They say that truth is truth
Kidi-kidi kidi	Place is place
Osso mungongo	Who in the world
Ua kambe kididi	Has no place
Ua duana	Is bad
Lelo mungongo	Today in the world
Ó ginvi kene mutala	White hair has no age
Ó ginvi	White hair
Tu issanguela ku muigi	You will find in every generation
Lelo mungongo	Today in the world
Ó kuigia kene mutala	Knowledge has no age
Ó kuigia	Knowledge
Tu issanguela mungongo	We've already found it in the world
Kiene kia kala uê	It is just like
Ó kalunga mungongo	Death in the world
Xicola	School
Tu issanguela mungongo	We've already found it in the world
Ambe ó kuigia mungongo	They say knowledge in the world
Xicola	School
Tu issanguela mungongo	We've already found it in the world

* * *

From time to time I find myself staring at the amazing photo of Chapinga taken by Kubik at the time of his recording in 1965.[23] I am also sent spinning by the caption below the photo that is present only in the liner notes to Kubik's record, *Music from the Humbi and Handa of Angola* (1973).

> It is noteworthy that this musician has strongly ethiopoid features.[24] (Kubik, 1973)

I do not understand exactly what this means, but somehow I believe Kubik is trying to make cultural connections between bow playing of West Africa with bow playing of East Africa. In Tracey's review of the same recording, this train of thought receives confirmation.

> The notes are, in fact, the most interesting part of the document, hinting at far distant connections of this music with a Hamitic origin south and west of Lake Victoria.[25]

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[23] It is published in two locations that I know of. One is in the liner notes to his recording, *Humbi and Handa*, put out by the Royal Muesum of Central Africa, (1973) and the other is in Kubik's article about these and other bows from the region published in *African Music Society Journal*, (1975-76). Kubik complains about the version found in the former due to the carelessness of the publisher who printed all the photos "*side-wrong* so all my musical bow players are now left-handed". Keeping its incorrectness in the back of my mind, I still prefer this version. It is larger and clearer, allowing the details of the bow and of the man and his immediate surroundings to make his music come alive, if only in my imagination.

[24] Kubik, *Humbi and Handa,* photo caption in liner notes.

[25] Andrew Tracey, "Humbi en Handa – Angola," *African Music* 5(4): 1975, 153.

Elsewhere, Kubik makes this point of speculation a little more clear, and provides a possible historical reason for the link.

> Since there are no documented connections between these gourd-resonated xylophones and those of the old Kingdom of Kongo, it could be that its inspiration came from contacts opened up by the African-Portuguese explorers with the lower Zambezi valley in the 18th Century…Of similar historical significance is the presence of the **hungo** in Luanda and surrounding areas.[26]

Clearly, these ethnomusicologists speculate that these musical traditions, already the ancestral seeds of the Brazilian berimbau music, are themselves predicated on other older traditions from still further east. The idea of cultural contacts opened up through Portuguese colonization led my searches to the logical destination of Mozambique.

[26] Gerhard Kubik, "Angola," *The New Grove Dictionary of Music and Musicians,* ed. Stanley Sadie, 20 vols. (London: Macmillan, 2000), I: 676.

Mozambique

Viva, viva a FRELIMO,
Guia do Povo Moçambicano!
Povo heróico qu'arma em punho
O colonialismo derubou.

Todo o Povo unido
Desde o Rovuma até o Maputo,
Luta contra imperialismo
Continua e sempre vencerá.

Unido ao mundo inteiro,
Lutando contra a burguesia,
Nossa Pátria será túmulo
Do capitalismo e exploração.

Long live FRELIMO,
Guide of the Mozambican people
Heroic people who, gun in hand,
Toppled colonialism.

All the people united
From Rovuma to Maputo
Struggle against imperialism
Continue and will always win.

United with the entire world,
Struggling against the bourgeoisie,
Our country will be the tomb
Of capitalism and exploitation.[1]

Mozambique is a country with an incredibly tragic history. By many accounts Portuguese colonization was brutal, thoughtless and selfish. In 1498, Vasco da Gama, envoy from the Portuguese government, was the first European to arrive in the region. He came into contact, and then into conflict, with Arab traders who had established costal trading posts since the beginning of the 6th century AD. His function was to establish supply points for Portuguese traders en route to India. The Arabic trading community resisted his presence, but their already established routes of trade in ivory, gold, and slavery provided the Portuguese with the incentive to stay on.

Stay they did. Over the course of the next 250 years, the trade developed in such a way that slavery became the most lucrative commodity. To oversee all this activity, the Portuguese established the General Government of Mozambique in 1752, with its capital in Lourenço Marques (today known as Maputo, still the capital of the country). Over one million people from Mozambique were taken to work as slaves in Brazil, Cuba and North

[1] The Mozambiquean national anthem.

America. While this segment of Bantu culture is often overlooked in the new world, traces of its influence do exist. Frequently such traces are labeled as having an unknown origin. One intriguing, albeit comic, example is reported by Kubik:

> In 1974, I visited Salvador/Bahia in the company of a renowned musician from Malawi, Donald Kachamba, whose southeast African cultural background helped us to single out what could possibly be Mozambiquean traits. His most impressing [sic] finding was not in the field of music, however. He was able to establish a convincing identity between the distilled alcohol called 'cachaça' in Brazil and the stuff known in Malawi and northern Mozambique as 'kachasu'. The term 'cachaça' had long been on the list of Afro-Brazilian words of 'unknown origin' in the Brazilian socio-ethnographic literature.[2]

The nature of the Portuguese colonizing presence in Mozambique continued to exploit human and natural resources for another two centuries. At the Berlin Conference in 1884, Mozambique officially became a Portuguese colony. From this point on, rather than invest in the country's social infrastructure, Portugal effectively took on a role as 'landlord'. When the Fascist dictator Antònio Salazar became the ruler of Portugal in 1932, he constructed a system in which fertile land and human labor were rented to British and French companies to set up plantations growing cash crops such as cotton, and tea. Salazar further required all indigenous males over the age of fifteen to work on these plantations for half the year, often in chains. In addition, the Portuguese heavily taxed any income made through the fruits of such labor.[3] The introduction of cash crops meant the decreased production of food, and this lead to widespread famine in the 1940's and 50's.

Portugal made no effort to develop the country's social welfare. The few schools and hospitals that did exist were in the larger cities and reserved for the Portuguese and other white elite. Growing resentment against this form of government began to foment. In 1960, Portuguese soldiers opened fire on a peaceful demonstration protesting taxation,

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[2]Gerhard Kubik, *Angolan Traits in Black Music, Games and Dances of Brazil,* (Lisbon: Junta de Investigações Científicas do Ultramar, 1979), 12.

[3] Similar laws were set up in Angola -- see the discussion of José Emanuel Virasanda in the chapter on Angola.

and nearly 600 people were killed. So began the independence movement, led by an organization named the Mozambique Liberation Front, *Frelimo* (Frente para a Liberação de Moçambique). Their effort to completely liberate the country from colonization began a war that lasted over ten years. Its end came with the fall of Salazar's regime in Portugal in 1974.

Frelimo officially took control of Mozambique on June 25, 1975. Their efforts to rebuild the country were undermined by their own inexperience, lack of resources, and opportunistic neighboring countries. The Portuguese in Mozambique almost instantly vanished, taking any remnants of the social infrastructure they had created with them. For example, only 80 doctors and 10 teachers remained in the country. Frelimo turned to the Communist governments of the Soviet Union and East Germany for help.

Little help came. By the 1980's, the country was virtually bankrupt. There was virtually no border control to speak of, and Mozambique became a safe-haven for members of independence fighting organizations from Rhodesia (now Zimbabwe) and South Africa. In a concentrated effort to prevent this from continuing, these two countries organized and trained a guerrilla army of fighters from Mozambique to overthrow Frelimo. This movement was known as Mozambique National Resistance, *Renamo* (Resistencía Nacional Moçambique). 'Civil war' ensued, although the conflict was largely fueled by outside interests. This state of affairs, in combination with horrible natural catastrophes such as droughts and floods, has brought the country to increasing despair. In 1992, both sides signed a peace treaty, and the government held its first free elections in 1994. The head of Frelimo, Joaquim Chissano, became the president and has worked to rebuild the country's infrastructure. Mozambique has also received much outside aid. However, natural disaster continues to strike the country. Drought and flooding seem to occur regularly. The largest flooding occurred in January 2001, when about 700 people were killed, more than 500,000 were left homeless and an onset of cholera became rampant. Despite such hardship, the rebuilding process seems to slowly and steadily improve the situation in the country, although Mozambique remains one of the poorest countries in the world.

* * *

Despite its tragic past of incredible hardship, the native cultures of Mozambique seem to retain a thriving vitality. Sculpture and painting of striking quality within Africa hails from Mozambique. Traditions and stories have been and continue to be preserved and transmitted orally. The written word has taken on much greater importance throughout the 20th Century as Portuguese became the official language of the country and common tongue amongst the country's sixteen major ethnic groups. Unfortunately, due to the civil war many teens and young adults had their education halted and many of this generation do not speak Portuguese.

Music making, as elsewhere in Africa, is widespread in Mozambique. It is part of the social fabric. Perhaps the most famous manifestation of traditional music is the Chopi xylophone (mbila) orchestras that were developed in the times when the Chopi people were self-governed with chiefdoms that sponsored such orchestras. Today these traditions are thankfully seeing a revival, having gone through a time of near extinction due to the destruction of traditional societal conventions because of the civil war.

Musical bows are many and varied in Mozambique. As in Angola and elsewhere throughout southern Africa, three types of musical bow are represented: mouth-, ground-, and gourd-resonated. Here we will focus once again on gourd-resonated bows that use a style of playing similar to berimbau. The most popular of this type of musical bow is the *xitende* (also *chitende*).

The *xitende*

This bow finds its home spread all over southern Mozambique, but especially among the Tsonga. The size of this bow is extremely varied, from fairly small (see photo 1), to as long as 2 meters or about 6.5 feet.[4]

Little boy with *xitende*.[5]

Like the berimbau, this instrument uses a cabaça to amplify the sound of the string. However, there are some important differences between *xitende* and berimbau. Typically, the tuning noose that divides the wire is placed much closer to the center of the instrument, rather than close to one end. This division of the playing area, close but not exactly a 1:1 ratio, enables the performer to achieve two fundamental pitches from the instrument without having to utilize the hand or another implement such as a coin, stone,

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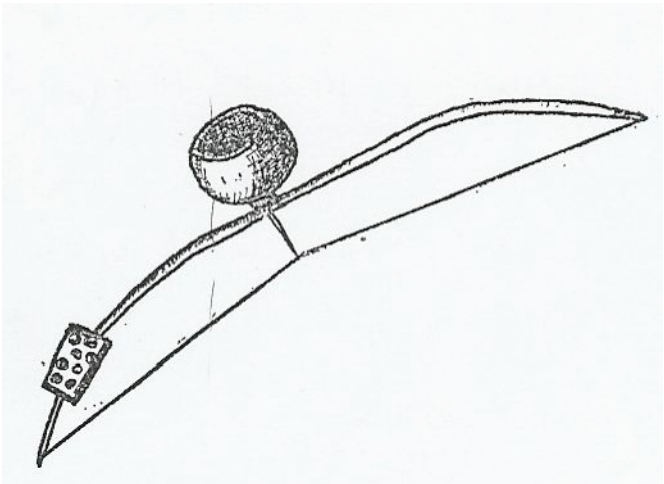
[4] Maria da Luz Teixeira-Duarte, *Catalogo de Instrumentos Musicais de Moçambique,* (Maputo: Direcção Nacional de Cultura, 1980), 10.

[5] Photo taken from URL: http://www.geocities.com/TheTropics/Paradise/2332/instrumentos/. In correspondence with the contact source of this site, this and most other photos located there are from a famous work of ethnomusicological study in the area from 1962 written by Margot Dias, *Instrumentos Musicais de Moçambique*.

or bottleneck. Occasionally the hand is used to achieve a *third* fundamental, but this is not a primary feature of performance technique.[6] Another important difference is displayed in the pencil drawing of *xitende* found in Teixeira-Duarte's book, although she does not mention this feature in her notes.[7]



Pencil drawing of *xitende*, taken from *Catalogo dos Instrumentos Musicais de Moçambique*.

There appears attached to one end of this particular specimen a board with rattles. This important distinction I believe is closely linked to the African aesthetic of 'noise' as an indispensable facet of a musical instrument. Although there is no mention of this aspect of the instrument in the accompanying text, I believe it is not an uncommon feature, as some of the recorded examples I have obtained indicate that something of the sort is definitely at work while the instrument is being played.

Thomas F. Johnston writes succinctly, if not somewhat academically, about the social function of the *xitende* in Tsonga culture.[8] Unlike Tsonga drumming, that plays an important role in formally organized social institutions such as puberty rites and the animistic practice of spirit exorcism, bow playing is seen as a solitary pastime. It

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[6] David K. Rycroft, "Musical bow," *The New Grove Dictionary of Music and Musicians,* ed. Stanley Sadie, 20 vols. (London: Macmillan, 2000), XII: 468.

[7] Maria da Luz Teixeira-Duarte, *Catalogo de Instrumentos,* 10.

[8] Thomas F. Johnston, "Shangana-Tsonga Drum and Bow Rhythms." *African Music* V(1, 1971) 59-71.

"belongs to the category of *xichaya*, solo instrument-playing" and may be done "any time and anywhere, unrelated to institutionalized group activities."[9] Johnston continues, describing the musical style, manner of performance and the individualistic nature of the bow:

> iambic, trochaic and appoggiatura-style rhythms, including the use of unusual and piquant meters, reflect the fact that frequently a solo artist (a professional, above the level of communal music-makers) is at work, often alone. His musicianship is subtle…bows are at their best within a 'chamber-music' context, where the subtleties…can be heard and appreciated by a small audience. Bow playing, being relatively, but not totally, free from the integrative and normative pressures of the main social institutions, provides a necessary outlet for individualism and the creative process.[10]

The *xitende* is most often used as an accompaniment for solo singing. The concept of the wandering troubadour (*xilombe*) is very common in this region, as it is throughout much of southern Africa, and an instrument of choice for such a musician is the *xitende*. The songs are typically humorous or lighthearted, although some can be quite critical of current socio-political affairs.

In 1995 as a part of the *FOLKlore* series on the Italian label, SUDNORD Records, a group of ethnomusicologists published a collection of field-recordings from the southern region of Mozambique. According to the liner notes of *Arcos, Cordas e Flautas*, this disc is the result of the first field-research campaign promoted in 1993 by the National Archive of Cultural Patrimony of Mozambique (ARPAC – Archivo do Patromonio Cultural), in collaboration with the International Crocevia Center in Italy and the Institute for Social Communication in Maputo.[11] On it, there are six tracks that feature *xitende*. Four of these are songs performed by the same musician, Antóntio Maquina, all recorded in the Gaza province town of Homoine. Maquina is reportedly a wandering blind musician, who every morning traverses the streets of Homoine improvising his rapid-fire

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[9] *Ibid,* 59.

[10] *Ibid,* 70.

[11] Lucas J. Mucavele, Erasmo Treglia and João A. Vilanculo, *Arcos, Cordas Flautas,* FOLKlore, Vol. 8, Mozambico. (SudNord Records, SN0041, 1995).

verses. Another recording registers a similar wandering musician, Felisberto "Makwapatiya" Uqueio, in the nearby town of Chibuto. The final cut on the record unfortunately is unaccompanied by any written notes; the performer is listed as anonymous and there is no indication of where the recording was made. Despite this lack of documentation the producers must have felt compelled to include it on the CD anyway, due to its rare and special nature. It is a magical moment; a musician, seemingly surrounded by a group of eager listeners, is playing a fantastic ostinato pattern on his *xitende* in 5/8 meter and at the same time recounting the basic tenets of Mozambiquean history. Told in Portuguese, the rhythm and melody of this musician's flowing speech weave an incredible counterpoint against the backdrop of the *xitende*, as he amuses and questions his captive audience.

What follows are my transcriptions of segments from five of these tracks. Again I wish to point out that while I use western notation in the transcriptions themselves and western notions to describe them, this theoretical background is only a tool of interpretation that approximates what this music is actually about.[12] There can be no substitute for listening to the recordings. That said, with the recordings at hand these transcriptions will certainly be of some insight. In what concerns the lyrics, I do not understand what I assume to be the language of the Tsonga, nor was I fortunate enough in this case to have contact with someone who does. Therefore what I have written down is my best attempt at a phonetically translation of the syllables that make up Maquina's phrases. Again, I feel this is a first step towards understanding. Admittedly it is crude, yet it is already much more material than has been provided about this recording in any other written source, and therefore of some use on the road to a fuller understanding of the music.

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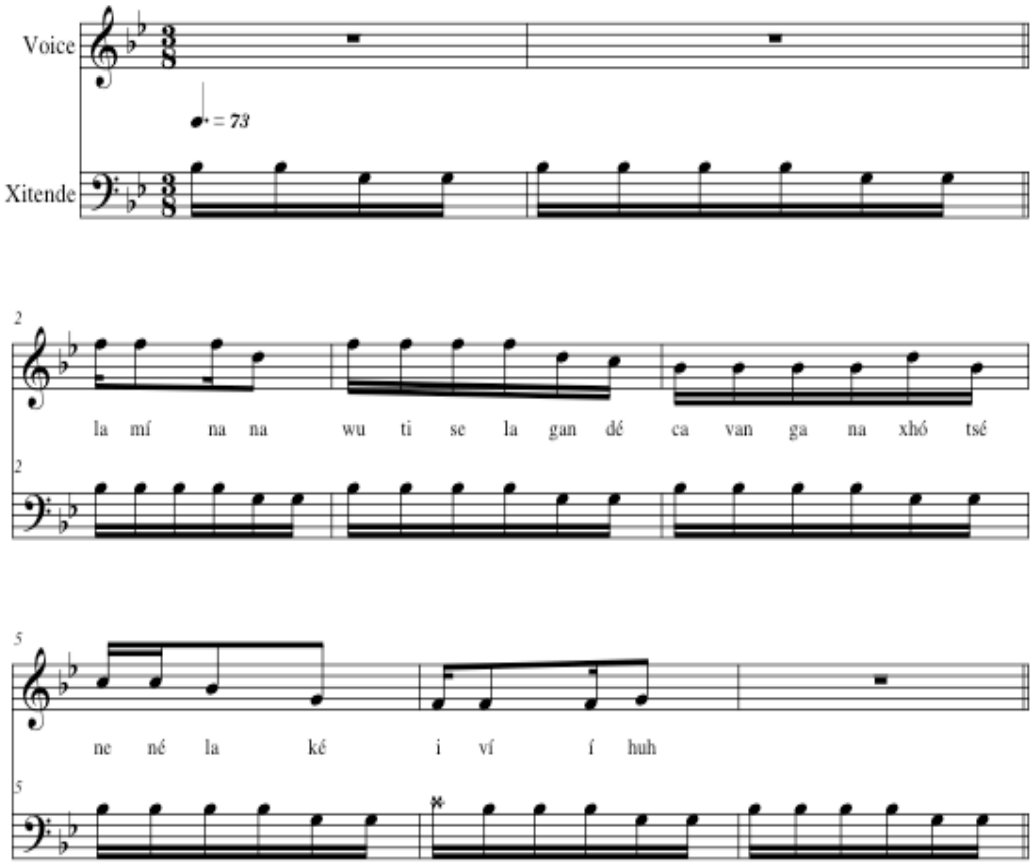
[12] Just as an example, the 'pentatonicism' described below does approximate what was sung, but the pitches themselves do not correlate directly to the equal-tempered 12-tone scale. They do not come from this system at all, but rather from the overtones heard from the musical bow itself. Kubik and others describe in great length and detail the construction of scales and harmonic fields in Southern African music. (e.g. Kubik, *Humbi en Handa*; Rycroft, "Musical Bow", *New Grove*)

2. Nawutisela

Composed/Performed by António Maquina
Transcribed by Greg Beyer

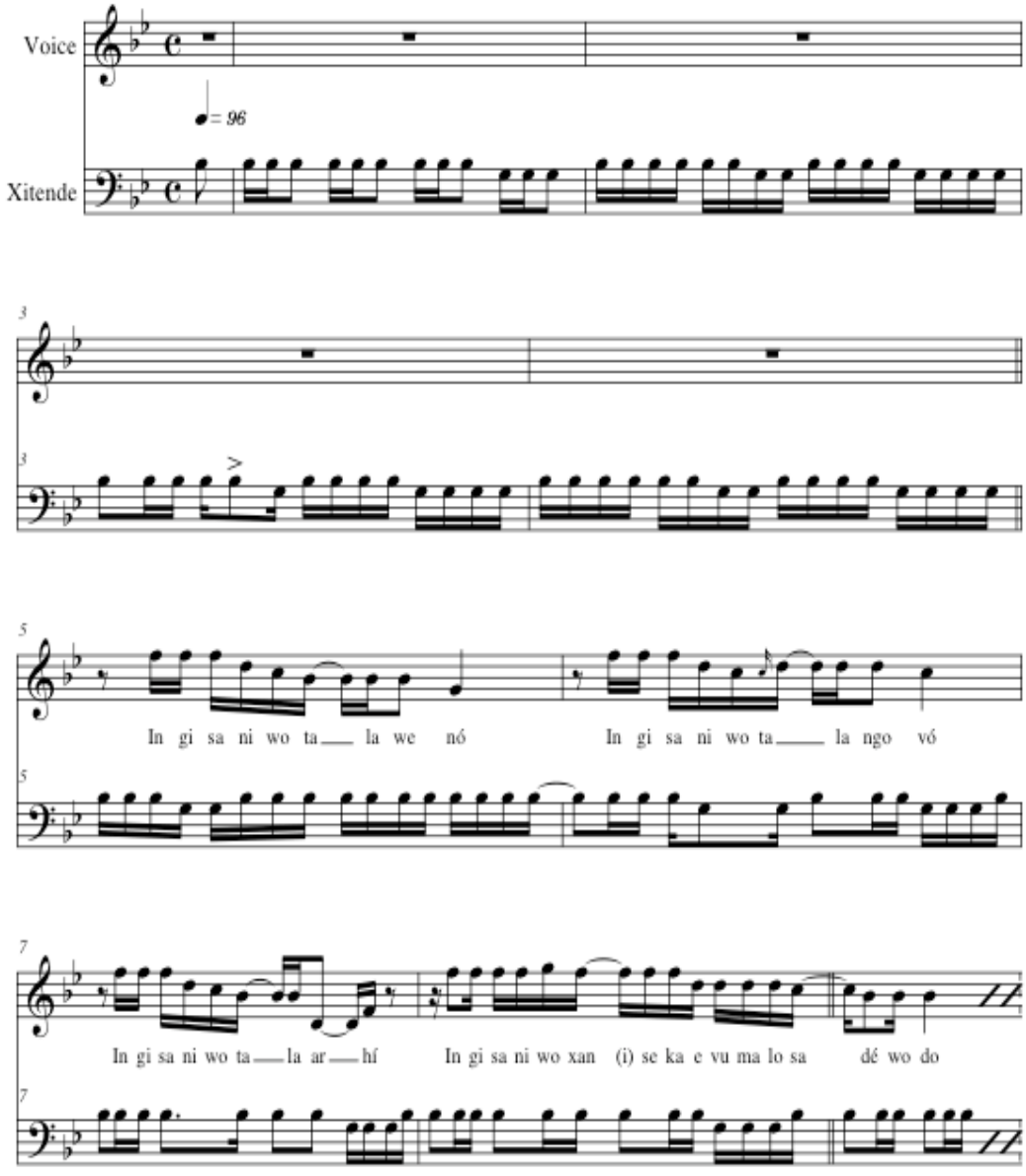


Nawutisela

This is the first of four tracks on the record performed by António Maquina. The gourd on his bow is positioned in such a way that it divides the wire into two unequal portions so that the difference in pitch is consistently close to a minor third. The higher of these two pitches, B-flat, effectively serves as the tonic for Maquina's melody while the minor third below, G, becomes the (major) 6th scale degree. The melody is essentially sung utilizing a major pentatonic scale on B-flat. The pitch G, then, becomes the 5th member of this five-note scale. This transcription is taken from the very beginning of the recording, and only accounts for the first of many improvised lines. However, much of the musical material of the remaining three and one half minutes is quite similar. The *xitende* ostinato almost never changes, and many of the melodic gestures are related if not identical. The rhythms of the melodies simply alter to fit the words. What is incredibly impressive in this recording (and the remaining three) from a performance perspective is the tempo. One hand is essentially beating out these 16th-notes on the bow for nearly four minutes straight, while the vocal patterns sail vividly over the ostinato. Maquina and his *xitende* sound joyful and effortless.

7. Ingisani wo xaniseka

Composed/Performed by António Maquina
Transcribed by Greg Beyer



Ingisani wo saniseka

In this second example, the gait of the music sets it apart from the first, yet many characteristics are the same. The B-flat tonal center remains, dictated by the tuning of the instrument. The pentatonic scale is used here, too, just as in the last. Concerning the lines of the words to the song, this transcription provides the first four, each one measure long. Each line begins with the words, *Ingisani wo*, and various rejoinders finish each thought. Interestingly, the title comes from the fourth line, not the first. It is also perhaps indicative of Maquina's personal style that the melody of this line begins F-D, as does the melody of the previous example. Although the transcription is done in 16th notes, it is important to point out that there is a lot of swing happening on the recording. These are the rhythms being played and sung, but Maquina executes them with a very strong sense of pulse and a very playful sense of swing. Another good reason to listen to the record!

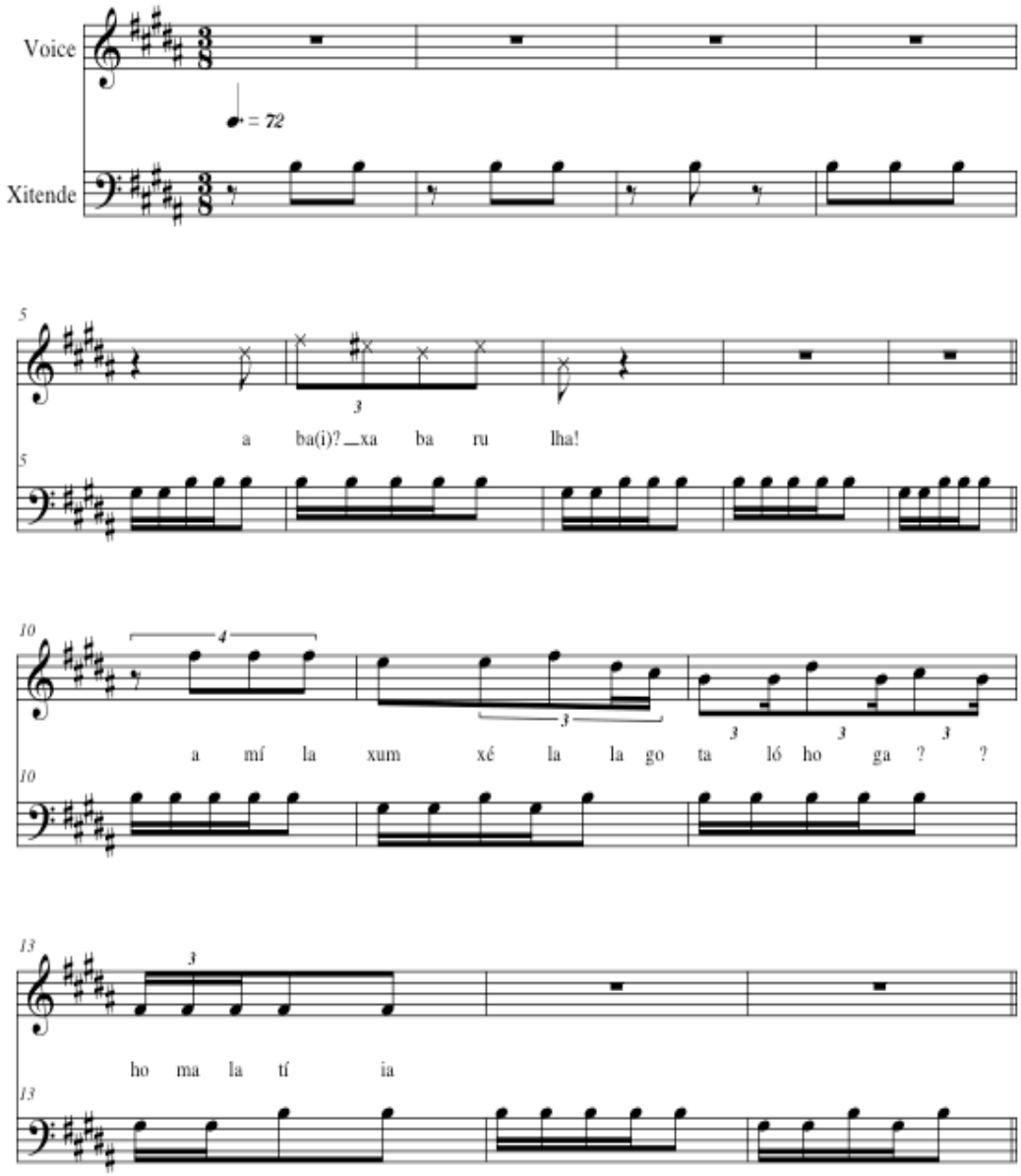
Unlike "Nawutisela", this selection features a very strong noise-making component to the instrument itself. If Maquina's instrument is anything at all like the Teixeira-Duarte diagram shown above, then this noise-maker must be something that is freely added and taken away from the instrument and not an intrinsic part of the instrument body, similar to the gourd-resonator. Aesthetically, it is similar to the buzzing-throat sounds of the Virasanda recording from Angola, and indeed, something connected to a larger, more general African musical syntax. Martin Scherzinger, Professor of Ethnomusicology at the Eastman School of Music and *mbira* specialist, shared with me the following thoughts on the subject:

> I think the noise factor (like the snare on a snare drum) is central to the aesthetic; it serves to add further dimensions to the physical work done to produce the sound (i.e.: like the production of inherent patterns, which exceed the kinaesthetic movements by either performer in a mbira or akadinda or whatever context, the snare-like co-vibration produces unexpected dimensions, which allow the music to speak back ... and put the performer in a kind of listening relationship to the sound.[13]

[13] Martin Scherzinger, e-mail correspondence, May 23, 2004.

14. Madoda Nigwelani

Composed/Performed by António Maquina
Transcribed by Greg Beyer



Madoda Nigwelani

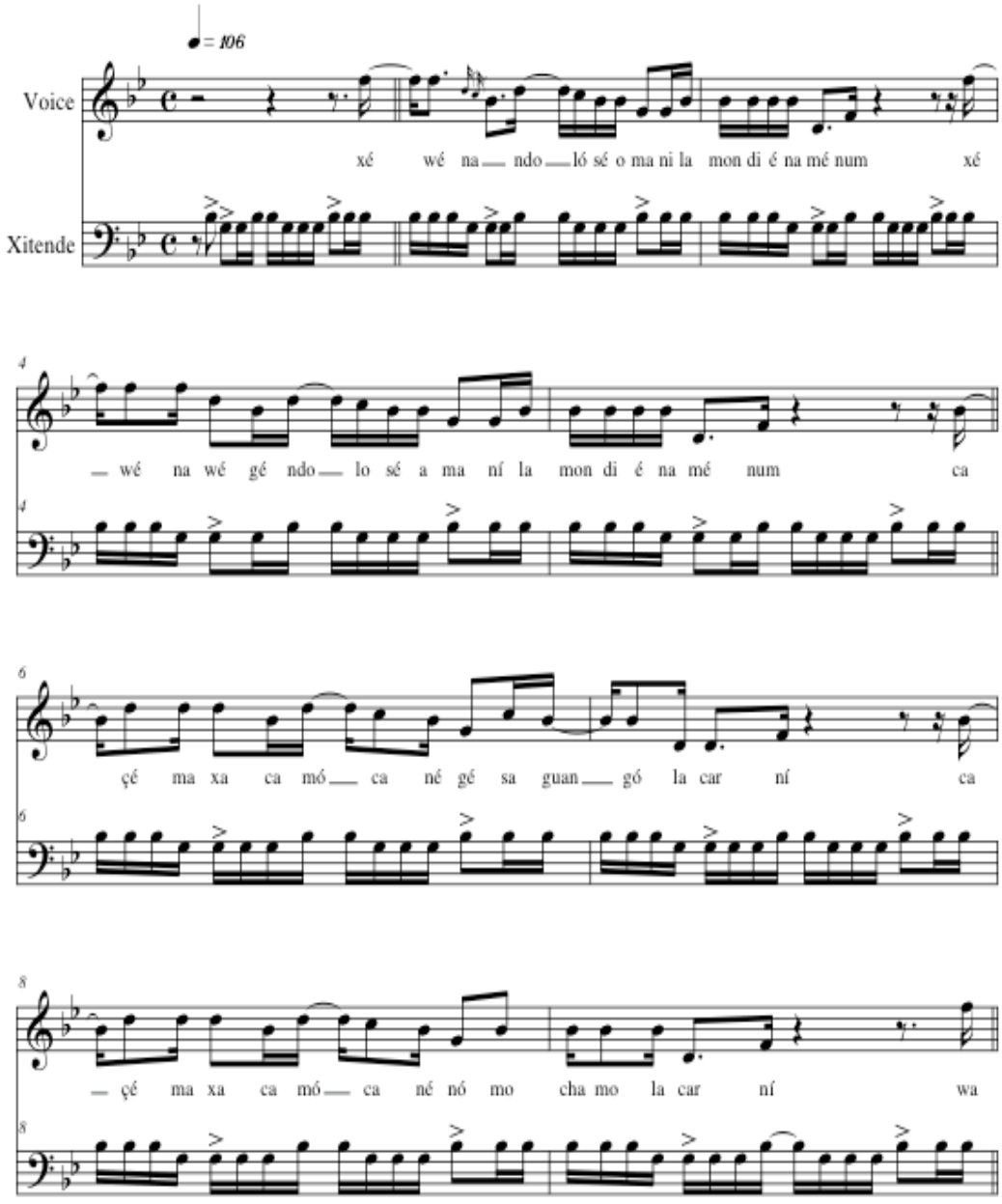
While the minor third tuning remains a constant of Maquina's bow, here the tuning is somehow slightly higher -- high enough to be called a B-natural. Whenever x-noteheads are used in the voice staff, it indicates that this was spoken, not sung. I did my best, however, to discern the approximate pitch level of the spoken word. In this particular case, the spoken word is at least partially in Portuguese. The word *barulho* means 'noise'. The first half is not as clear; however, it may be *baixa*, which means 'low' or 'less'. Letting my imagination render the situation, I wonder if Maquina wasn't mimicking someone who was not fond of his music, requesting him to keep it down!

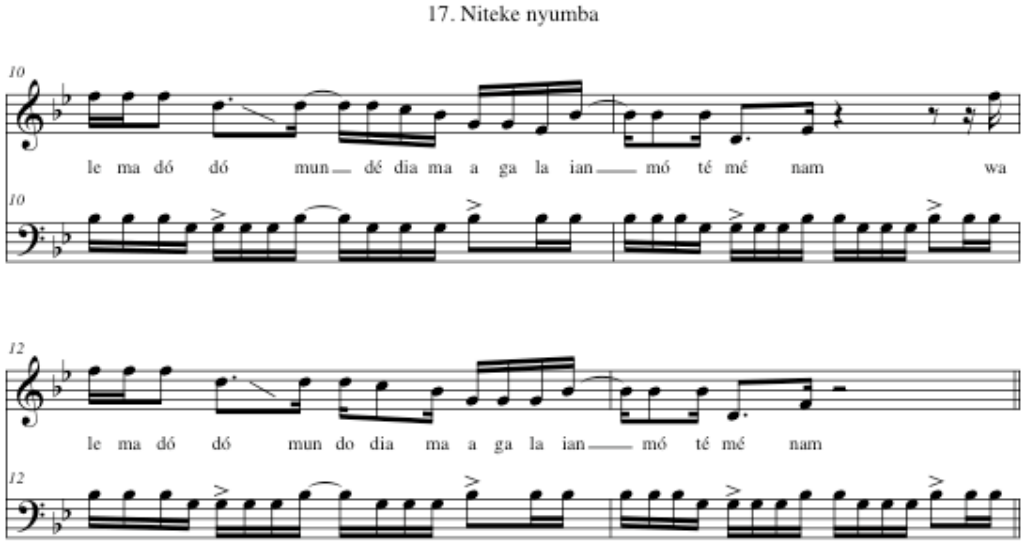
Of the four Maquina recordings, this example shows most clearly the vocal virtuosity that he is capable of. At an already rapid tempo, Maquina spits out piercingly clear 16th-note triplets over the top of the constant 16th-notes of the *xitende* ostinato. While this transcription only handles the first line of verse, many more follow with triplets that at times cover the entire length of the line.

This selection also features a strong buzzing element as part of the instrumental sound of the *xitende*.

17. Niteke nyumba

Composed/Performed by António Maquina
Transcribed by Greg Beyer





Niteke nyumba

Back in the key of B-flat major pentatonic and returning to a swung groove in what amounts to 4/4 time, this is a joyful song that seems playful and high-spirited. At about three minutes, forty-five seconds into the recording, Maquina begins singing a list of women's names that each fit into the following phrase:

'na _____ nawena waxisam'[14]

He uses the names, Dona, Teresa, Amelia, Maria, Olinda, Gavela, Karena, Agina, Vitora, Anita, Helena, Erina, Louisa, Motia, and Elisa. While it remains unknown to me what the phrase means, this passage still gives the impression that he is having fun singing what, on the surface at least, is clearly a light-hearted song.

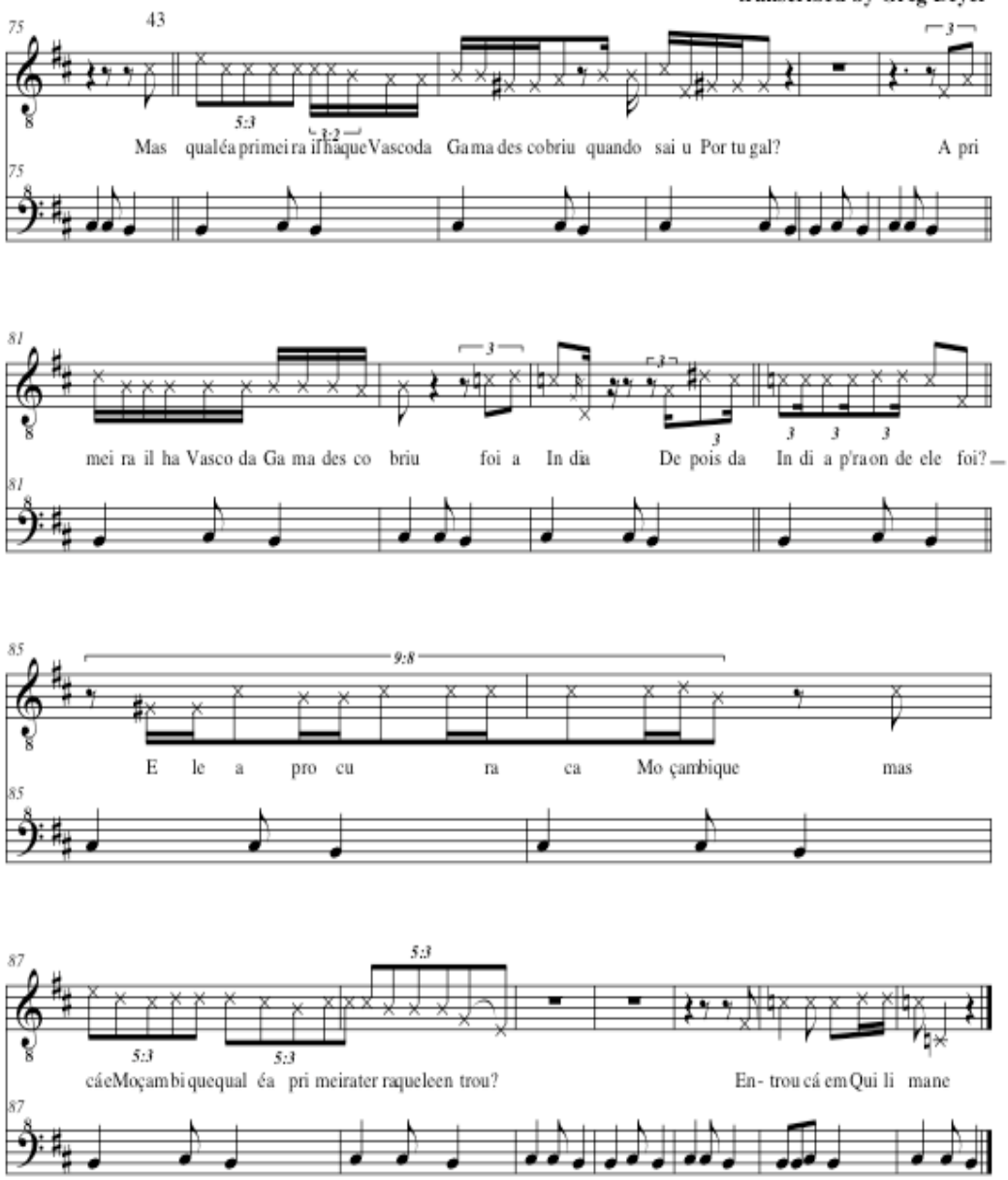
[14] Again, this is my syllabic transcription. I do not know what this phrase means, nor can I profess that these are actually words. This represents my best attempt at a phonetic description and as such could most likely be corrected and translated by someone knowledgeable of the Tsonga language.

Again the melodic figure begins largely on the pitch F and descends to D. In lines 3 and 4 the line begins on D; these two lines somehow respond to the first two. The fifth and sixth lines are shown again starting on F. As mentioned above, there are clear melodic patterns that Maquina has developed in his personal style of singing. Whether this style typifies a more general playing style from the region is a question that deserves more attention than can presently be given.

Like Nawutisela, the buzzing sound of the bow is absent.

20. Moçambique

Unkown performer/composer
transcribed by Greg Beyer



Moçambique

The final track on this album reveals an unknown *xitende* player taking on the traditional and historical role of a *griot* or in this case a *xilombe,* the member of society responsible for the preservation and transmission of the oral history of a people. The musician, speaking in Portuguese, provides an interesting perspective on the history of the country. Over a very engaging and unusual 5/8 ostinato bow part, the player recites two stories about slavery during colonial times and about Vasco da Gama and his role in the 'discovery' of Moçambique. This transcription details a segment from nearly three minutes into the five-minute track. The rhythms and pitches of the vocal part should not be seen as musical figures precisely performed by the player. Rather, they represent my best attempt to show the essential melodic shape and rhythmic flow of the musician's natural speech patterns.

This segment comes from the part of the story that deals with Vasco da Gama. Here is my transcription and translation of the words:

Mas qual é a primeira ilha	But which is the first island
que Vasco da Gama descobriu	that Vasco da Gama discovered
quando saiu Portugal?	When he left Portugal?
A primeira ilha que	The first island that
Vasco da Gama descobriu	Vasco da Gama discovered
foi a India	was India.
Depois da India	After India
para onde ele foi?	where did he go?
Ele a procurou cá	He looked here
a Moçambique	to Moçambique.
Mas cá em Moçambique	But here in Moçambique
qual é a primeira	which is the first
terra que ele entrou?	place that he entered?
Entrou cá em Quelimane.	He entered here in Quelimane.

What is absolutely fascinating here is the ability to 'listen in' on what was a real storytelling session. This recording is a document of *oral tradition*, as history is being passed on via the rhythm of the musical bow. The story continues, as the musician recounts the date when Vasco da Gama landed in Moçambique, what the weather was like that day, who were the first people he came into contact with, and how the country got its name. Much of this material is told with an infectious humor.

From a performance point of view, most impressive is the performer's ability to continue a consistent groove in 5/8 time (3+2) while his free flowing manner of speech creates a spellbindingly beautiful counterpoint above the rhythm. The rhythm of the bow is always the same, only the pitch of the first note in each bar is different, creating a more-or-less consistent two-bar ostinato. Often, however, the player repeats one or the other pattern twice in succession. It should be noted that, while rhythmic patterns in 5/8 are not the first thing that comes to mind when one things of African music, it does seem to be a not-uncommon aspect of Tsonga music. Thomas F. Johnston transcribed portions of two *xitende* songs performed by a Joseph Mageza from elsewhere in the region for his article *Shangana-Tsonga Drum and Bow Rhythms*, and the second of these features similar rhythmic figures that clearly delineate a music 'in 5'.[15]

Where does this tradition come from? Kaemmer offers a possible clue:

> The national dance of the Tsonga, the *muchongolo*…represents the actions of warriors in battle, and features asymmetrical rhythms."[16]

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[15] Thomas F. Johnston, "Shangana-Tsonga Drum and Bow Rhythms", *African Music,* 68.

[16] John E. Kaemmer, "Southern Africa: An Introduction," in *The Garland Encyclopedia of World Music,* ed. Ruth M. Stone, 4 vols, (New York: Garland, 1998), I:710.

* * *

As I wondered about the origins of the Tsonga *xitende* tradition, it was Thomas Johnston's article about the *xizambi* that offered me some insight.

> What is certain, however, is that xizambi music (and Tsonga music in general) is an amalgam resulting from historical factors. Studies of the Tsonga made half a century ago mention the xitende bow but not the xizambi bow…(this) suggests that musical acculturation has occurred and may be a peranent force within African music. In the case of the Tsonga, processes of musical change have accelerated within the past one-hundred years, and this can be traced to new inter-tribal contacts caused by migration…[17]

Kaemmer, following a discussion of musical bows in the opening remarks to his introductory chapter on southern African music, continues this line of thought offering this disclaimer:

> Though the following treatment of different groups gives the impression of distinct differences, the actual situation consists of ethnic boundaries that are frequently indistinct. The same is true of differences between musical traditions.[18]

Elsewhere, Kaemmer draws specific links between the Shangana-Tsonga and peoples from further south:

> During the early 1800's, the Boers emigrated north to escape the English, and the indigenous peoples became involved in wars with the whites and with each other. Various groups separated themselves from the Zulu kingdom and fled, conquering others as they went…The Shangana in Mozambique, and along its border with Zimbabwe and South Africa, are also descendents of the Zulu dispersion.[19]

Albeit logical, I still find it fascinating to discover that a bow that is virtually identical to the *xitende* is found among the Zulu in South Africa. However, the Zulu have another bow with an even richer tradition and an older root, the *ugubhu.*

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[17] Thomas F. Johnston, "Xizambi Friction-Bow Music of the Shangana-Tsonga," *African Music* IV(4, 1970), 95.

[18] John E. Kaemmer, "Southern Africa", *Garland Encyclopedia*, 710.

[19] *Ibid*, 705.

South Africa

…but more southerly still we come to the home par excellence of this type of musical bow…[1]

While the musical bow in its myriad guises occurs with frequency all over sub-Saharan Africa, South Africa is home to a very special instrument and tradition among gourd-resonated bows. The instrument is called the *ugubhu,* and in an intriguing example of synchronicity, mention of its name has made the arts news here in the United States this summer (2004). On June 4-6, the first-ever Zulu opera received its U.S. premeire at Chicago's Ravinia Festival. The subject of this opera was none other than the very popular member and musician of the Zulu royal family, Princess Constance Magogo kaDinuzulu. Her instrument of choice? The *ugubhu*.

> Ravinia is no longer your great-great-grandfather's summer music festival. And "Princess Magogo kaDinuzulu," a Zulu-language, Western-style opera imported from Durban, South Africa, where it had its premiere in 2002, is nobody's idea of a typical Ravinia Festival opening night…Unfolding in flashbacks, the opera tells the life story of a real Zulu princess, Constance Magogo kaDinuzulu, who was born in 1900 and died in 1984. Daughter of a Zulu king, she was an accomplished singer and composer, a historian of traditional Zulu music and especially interested in the historically important Zulu instrument, the *ugubhu,* a kind of musical bow.[2]

The *ugubhu*

The majority of information about this bow is taken from an article by David K. Rycroft entitled, "The Zulu Bow Songs of Princess Magogo,", and published in 1975 in the journal, *African Music*. This instrument, at first glance, could easily be mistaken for the berimbau. However, upon hearing *ugubhu* it is immediately apparent that this instrument has a character all its own.

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[1] Henry Balfour, *The Natural History of the Musical Bow,* (Oxford: Clarendon Press, 1899), 22.

[2] Wynne Delacoma, "Ravinia is fit for a 'Princess'," *Chicago Sun Times,* May 30, 2004, http://www.suntimes.com/output/delacoma/sho-sunday-magogo30.html.

The bow is made of a fairly long hardwood stave, on average a bit longer than an average capoeira berimbau (i.e. greater than 150 cm).[3] Like the berimbau, the instrument also uses a gourd as its resonator; however, the gourd is attached to the stave *alone*. The loop that typically divides the string into two sections, holding the gourd firmly in place against the bow, is not there. By definition, then, the *ugubhu* is an 'unbraced' gourd-resonated musical bow. See photo 1.

Photo 1. 'Mantombi Matotiyana interprets the *uhadi* bow compositions of the late Nofinishi Dywili.' The *uhadi* is the Xhosa equivalent to the Zulu *ugubhu*. The gourd is not in contact with the string.[4]

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[3] David K. Rycroft, "The Zulu Bow Songs of Princess Magogo," *African Music* 4 (1975-76), 59.

[4] Anthea Garman, "Sixteen Strings to One," *Cue*. July 2, 2003. http://www.rmr.ru.ac.za. Photo credit, Cara Visser.

Because the string is not divided, the length of the vibrating string is longer than would be on a berimbau of the same length. The material of the string itself on an *ugubhu* or *uhadi* is not of wire but rather of twisted hairs from a cow's tail. Rycroft reports that Magogo had recently started substituting a type of thin plastic string for the hair. This plastic was thin enough to twist or braid in a similar fashion to the hair. [5] The hair, naturally, has a much lower tensile strength than wire taken from inside a car tire, as is typically the case with the berimbau. The combination of material and undivided length means that the resultant pitch from the string of a *ugubhu* will be much, much lower than that of a berimbau of equal length.

Recordings confirm this fact. The essence of Rycroft's article is a thorough set of transcriptions and analyses of a collection of recordings of the Princess playing *ugubhu* made in the early 1970's by Hugh Tracey. This collection is available on CD (Music of Africa Series #37) from the *International Library of African Music*, in Grahamstown, South Africa. The sound of *ugubhu* seems at first like an enormous, yet sweet and gentle, berimbau. It possesses a bass tone that is rich and haunting.

One can also glean from the photo above a certain insight into the technical aspect of playing the instrument. Like the berimbau, the hand that holds the bow is also responsible for the changes in fundamental pitch of the instrument. More like the Angolan *mbulumbumba*, however, the pitch shift is effected by a pinching movement of the thumb and index finger. The natural materials of the string, also like the *mbulumbumba*, allow the raised pitch to be clearly heard. (This technique, while not impossible on berimbau, is not nearly as effective, because the timbre shift between open and 'raised' pitches is severe, due to the natural damping effect of human skin on the wire.)

Rycroft addresses a number of issues of particular importance to my discussion of musical bows. These are as follows: tuning related to the calabash, selective amplification of harmonics, the melodic structure and vocal tonality of the songs related

[5] David K. Rycroft, "Zulu Bow Songs" *African Music*, 59.

to the tuning of the bow, root progressions of each song's bow ostinato, and metrical organization of this particular form of Zulu traditional music.

Tuning

On the subject of the proper tuning of a musical bow, the Zulu seem to have a similar sensibility to *capoeiristas* in Brazil. Rycroft reports the following practice:

> To tune the ugubhu before playing, the string tension is adjusted until the required partials can be resonated by the calabash. It is not merely a matter of choosing pitches that are convenient for the voice (as suggested by Kirby). The open string yields a low-pitched fundamental (usually around 55 to 65 c.p.s. – anywhere from A' to C below the bass clef. This fundamental itself, however, is scarcely audible compared with the amplitude of its harmonics. The second partial (an octave higher) actually gives the impression of being the fundamental. Were this really the case, however, the upper partials, numbers 3 to 5, which are clearly audible when the mouth of the resonator is unrestricted, would of course sound an octave higher than they actually do.[6]

This practice reminds me of firsthand experience in Brazil, working with *Mestre* Valmir Damasceno. Damasceno works painstakingly to find the perfect marriage between bow and calabash. The size and shape of the gourd have everything to do with the resulting timbre and quality of sound at a given pitch level. This makes acoustic sense. Like organ pipes, the size of the chamber is adjusted to each particular note. Unlike metal tubes, however, gourds grow naturally and take on a size and shape that is unique and unpredictable. The idiosyncrasies of a given gourd will certainly affect the timbre of the bow, but the optimum pitch for each gourd has much to do with its size and shape.

Selective Amplification of Harmonics

Similar to the acoustics of a timpani, the *ugubhu* has an 'invisible' fundamental that we intuit must be there due to the pitch level of the natural harmonic series above it. This series of harmonics is exploited musically by an adept performer of the *ugubhu.*

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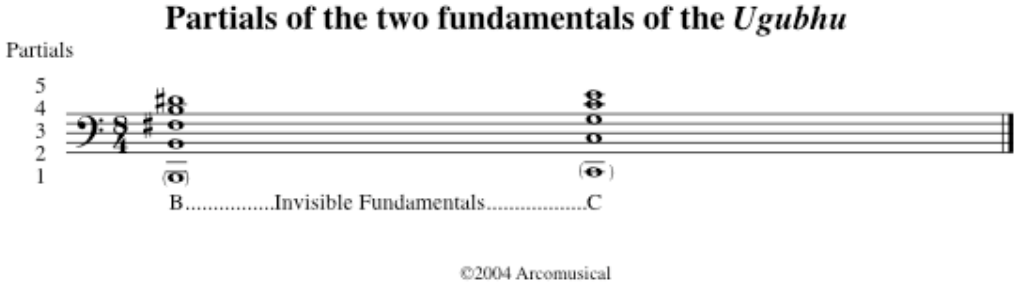
[6] *Ibid,* 60.

As mentioned above, to achieve a second 'fundamental' above that of the open string, the player pinches the string with the thumb and index finger. The resulting pitch is different with different players and with different songs, but in the case of Tracey's recordings of Princess Magogo, she consistently worked with an interval that approximates a semitone, anywhere from 80 to 150 cents.[7] These two adjacent half-steps (the open string and the stopped note) each produce a set of partials. Given careful manipulation of the position of the mouth of the gourd in relation to the stomach or breast of the performer, partials three to five can be heard singing above the open note pitches. An agile performer like Magogo can amplify a specific partial and make it part of a 'melody' above the fundamental half-step motion provided by the 2nd partials. It should be pointed out that this effect is perhaps clear only to the performer and not intended necessarily for the ears of the audience. The sounds of these upper partials do not carry much past the instrument.

The following example should clarify this point.



In Rycroft's transcriptions where he does include some indication of selective harmonics, he shows them as a stack of pitches above the 2nd partial. The 'invisible' fundamental is not shown.

[7] *Ibid,* 60.

Partials three to five spell major triads in 2nd inversion, and the combination of these six pitches spell an E harmonic minor scale minus the fourth scale degree. However, over the 'bass line' that is clearly audible from the *ugubhu*, the resulting harmonic implications are either a sort of C Lydian (C, D, F#, G, B) or a sort of B phrygian with a raised 3rd scale degree. Which modal color predominates depends upon the phrasing of the bow part in relationship to the song. At any rate, these very same pitches form the basis of the vocal melodies that are composed and sung with *ugubhu* accompaniment.

Melodies and Songs

The melodies of the *ugubhu* songs utilize these 'overtone' pitches and their octave equivalents. Often, one of the six pitches is altered (D natural is frequently sung in place of D#) or omitted altogether. This depends largely on the song. As mentioned above, the overall implied harmonic scheme of these melodies depends upon the 'tonic' of the song, as determined by the ostinato pattern of the *ugubhu*. In the Tracey recordings, Magogo used a number of different rhythmic patterns and ostinato phrase lengths.[8] What is fascinating is how 'exotic' these resultant scales sound. They are reminiscent of some of the altered or symmetrical scale formations used by Debussy in his attempts to evoke the Far East (i.e. early 20th Century *chinoiserie)*. They have nothing to do with Western notions of tonality or of pentatonicism. "No functional hierarchy of discord and concord seems consistently operative."[9]

That said, Rycroft also points out that these songs reveal the inner workings of only a single traditional style within the realm of Zulu musical output. "It would be very far from the truth…to assume that the dihemitonic hexa (or penta) scale employed in these bow-songs was found in all types of Zulu music."[10]

These songs, as a body of musical output, set themselves apart from other African bow traditions that have so far been discussed. Whereas the *mbulumbumba* and

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[8] *Ibid*, 65.
[9] *Ibid*, 69.
[10] *Ibid*.

the *xitende* are instruments of the wandering minstrel or itinerant farmer and serve as a means of expression and social commentary for the individual commoner, the *ugubhu* is an instrument utilized inside a royal tradition for making music. Princess Magogo was highly regarded as the pinnacle of Zulu musical creativity. Although unable to write music herself her body of repertoire committed to memory was vast, representing generations of Zulu music making. With her death, much of this tradition became obsolete, as sadly, she seemed not to have someone willing to carry on the tradition.[11]

Although Rycroft makes this claim, Martin Scherzinger, ethnomusicologist from South Africa states otherwise. "Magogo was amazing. Others survive her, though, Nofinishi Dwyli amongst others (though she too died two years ago)."[12]

Carrying on a Tradition in Modern Times

In addition to being an established ethnomusicologist, Scherzinger is also an intriguing composer and a friend. We met long ago at Columbia University, running into each other while I was working with another composer on a piece for solo berimbau and electronics. When he saw my berimbau, he asked if I happened to know the *chipendani*, a mouth-resonated bow from Moçambique, Zimbabwe, and northeastern South Africa. I admitted I did not know the instrument, and he told me he would show me one the next day. He also immediately informed me that he would write me a piece. I was really excited by this contact, and asked if he wanted me to show him the instrument in more detail. He replied no, he already had his idea and knew exactly what he wanted to do. He brought it back the next day. Entitled, *Drumming for Berimbau*, it is a short etude of about 3 minutes length. At the time, it was unplayable, or rather, *I* could not play it. I had just started playing berimbau, and the piece asks for an incredible amount of work with the coin. He also wrote for the pitches, G, Ab, and Bb. At the time I thought he misinterpreted my statement, "You can produce the open pitch of the string, a half step and a whole step." I meant and perhaps even said "above the open pitch", but evidently that did not come across. What I have come to ponder recently, though, is the thought

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[11] *Ibid,* 58.

[12] Martin Scherzinger, e-mail correspondence, June 22, 2004.

that Scherzinger did not misinterpret, but rather relied upon his own knowledge of bows from his part of the world; bows about which, at the time, I knew nothing about. In light of comparison studies between berimbau and *xitende*, it is exciting to discover what pitches are possible to produce by positioning the gourd at various places along the length of the bow. As the gourd moves closer to the center of the bow, like the *xitende*, the two notes on either side of the string come closer and closer together. Not only this but, as the original playing length is now much shorter than on a *berimbau*, the coin itself is capable of reaching up to a minor third above the open string. The details of this discovery shall be worked out and codified later in this thesis.

* * *

Scherzinger recently pointed my attention to an interesting project that has been ongoing since 2002 and plans to run until 2005. Entitled "Bow Project", and run by Dr. Michael Blake, president of New Music SA (South Africa), this is an initiative to interface indigenous musical tradition of South Africa with contemporary musical thought. The project is centered upon the *uhadi* song tradition of the famous *Xhosa* musician, recently deceased Nofinishi Dywili. New Music SA invites South African composers from various backgrounds, (classical, jazz, pop) to transcribe one of Dywili's bow-songs and use the material as musical inspiration for a new piece of string quartet music. The culmination of each year's cycle is a concert in which 'Madosini' (Mantombi Matotiyana) performs the original work and that original is followed by the new work based on the original. The performance alternates then, between traditional bow-song and contemporary work for string quartet, as each composer is assigned a different song to transcribe.

Apparently the project has been quite successful. A couple of reviews from South African media sources prove this point.

> If you happened to miss last year's sell-out performances of the Bow Project, you're in luck in 2004. NewMusicSA will commission new works for the project in 2005 and previous works will be presented at this year's New Music Indaba, to

be held at the 2004 National Arts Festival. The Bow Project, which has been courageously and solely sponsored by the Distell Foundation for the Performing Arts since 2002, preserves our indigenous heritage in a living tradition and draws out new creative voices.[13]

"Everyone wants to write a bow piece now," quipped New-MusicSA president Michael Blake, introducing the first of two programmes of new music inspired by uhadi bow music of the Eastern Cape to be showcased at this year's festival. This is the second year of a three-year project that has outgrown its original parameters as a component of the 2002 New Music Indaba (NMI).

This first programme of Phase 2 amply demonstrated that the project continues to generate enthusiasm among composers and audiences alike. In the process, it has become one of this country's more sustained attempts at facilitating meaningful interaction between performers and composers from socio-economically depressed areas. Uhadi music, of which Dywili was the most famous exponent, offers composers a range of resources for possible elaboration in other idioms. However, the move from this personal genre of music-making to even the relative intimacy of a chamber music medium requires inventive translation. A bass line tapped out on the bowstring in complex shifting meters yields an oscillating, two-chord harmonic background over which melodic lines are cyclically intoned by the singer. Perhaps the subtlest but also the most magical feature of this music is the sheen of overtones, harmonies and countermelodies produced by the player moving the calabash resonator in relation to her body, a feature of the instrument that is seldom effectively communicated in concert halls. The creative transcriptions of the Dywili recordings that were to have served as bridges between the pieces in their more original form (now performed by Cape Town-based uhadi player Mantombi Matotiyana), and the new music derived from them, regrettably had to be omitted after soprano Pumeza Matshikiza took ill last week. Nevertheless, it was evident that the composers whose pieces were showcased developed elements of uhadi music in various directions…

If the NMI's breadth of artistic vision was vindicated by any aspect of this concert, though, for me it emerged in conversation with the featured uhadi soloist after the performance. It materialised that, although she has played traditional instruments since growing up in the former Transkei, Matotiyana has taken up studying the uhadi only in the last year, and that the engaging encore that she presented to the audience at the concert's close was itself a new composition. It is in the unlikely convergence of what is ostensibly the most traditional with the newest of new music, and developing platforms for promoting and developing both, that the NMI is most potently sounding out new possibilities for South African music."[14]

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[13] *Dispatch,* June 12, 2004, http://www.dispatch.co.za.

[14] Brett Pyper, "Sounding out the new by re-imagining the old," *Cue*, July 1, 2003, http://www.rmr.ru.ac.za.

What I find particularly notable about this project is the potential that is being unleashed via an interface of modern and traditional cultures that is all-at-once respectful, curious, and innovative. The enormous success that it seems to be having also means that its energy is resonating with a receptive audience. Blake, its director, prophetically stated the following in an interview:

> The time has come for projects of this nature to come to fruition. However, this project has not as of yet melded traditions together. "Although many in the audience expected it, there was no integration of the two forms of music. "This was never the intention of this phase of the project.[15]

The time has come indeed…and it brings good news. It seems that there are more phases planned for the future.

[15] Anthea Garman, "Sixteen Strings to One," *Cue,* July 2, 2003. http://www.rmr.ru.ac.za

The Genesis of a Repertoire and the Development of Extended Techniques: Lejaren Hiller's *An Apotheosis of Archaeopteryx* (1979)

The time has come for projects of this nature to come to fruition.[1]

Coming across Dr. Blake's statement about his own Bow Project was a welcome confirmation for my own activity with the berimbau. As a response to the challenge put to me by my first berimbau teacher, Cabello, I have begun to find my voice with the berimbau through an attempt to unify my passion for the instrument with my own background in contemporary music performance. This background was in large part developed at the Manhattan School of Music under the inspiring guidance of Steven Schick, percussionist. I hope in some way that my project, *O Berimbau,* answers Schick's musings about the future of percussion music:

> I hope that in the future we will see …ever greater cultural and stylistic diversity in musical discourse…I hope that contemporary music will become more inclusive…I have hopes for a percussion music with more repose and more moments of real beauty.[2]

In what follows, then, I will discuss the aspect of my project that deals with this interface of the berimbau with contemporary musical thought.

* * *

Hunting for existing repertoire for the *berimbau* via the Internet, I came across references to a work by Lejaren Hiller entitled, *An Apotheosis of Archaeopteryx*. A duo for piccolo and berimbau written in 1979, this unusual piece was at that time perhaps the only one of its kind written in America. The score was available for study at the Performing Arts Library of the City of New York, so I went to have a look. The piece looked interesting

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[1] Anthea Garman, "Sixteen Strings to One," *Cue*, July 2, 2003. http://www.rmr.ru.ac.za.

[2] Steve Schick, Program notes to *Three Nights of Percussion*, November 1-3, 1998.

enough, and definitely presented unusual challenges for the berimbau. I contacted the publisher, Kallisti Music Press in Philadelphia, and they sent two copies of the score.

The work was written for piccolo specialist Lawrence Trott and percussionist Jan Williams. Trott commissioned Hiller to write a work for an album project entitled, *For the Birds*.[3] According to Williams, Hiller had been vacationing in Brazil and came back with a lovely musical souvenir, a berimbau. Juxtaposing the simplicity of the instrument with the idea of Trott's project, Hiller chose to name the piece after the first bird known to man -- a prototypical bird, a dinosaur with feathers, the *archaeopteryx*.

The work is in six movements, played attacca. The movements, appropriately, have Portuguese names, *Prelúdio*, *Primeira Dança, Segunda Dança, Terceira Dança, Desenvolvimento,* and *Conclusão*. In my own opinion each of these movements works well musically with the exception of the 'Development' and, when that bit is omitted, the piece is a joy to play.

Hiller, it would seem from the score, did not truly know how to play the berimbau himself. That is a good thing, because he ended up writing passages for the instrument that simply are not possible using traditional techniques. It is clear, however, that he was familiar with some traditional playing, for the material in the 'Prelude' and 'Conclusion' is fairly straightforward and idiomatically written.[4]

Furthermore, it is interesting to note that he was aware of some expanded techniques such as those developed by Naná Vasconcelos. For example, in the 'Conclusion', measures 169 ff call for unpitched playing on the bow itself, and in mm. 177 ff, Hiller wrote for the technique of a one-hand tremolo between the bow and the wire. In the 'Prelude', mm. 21-22 ask for the sounding of the harmonic one octave and one fifth above the open string (F).

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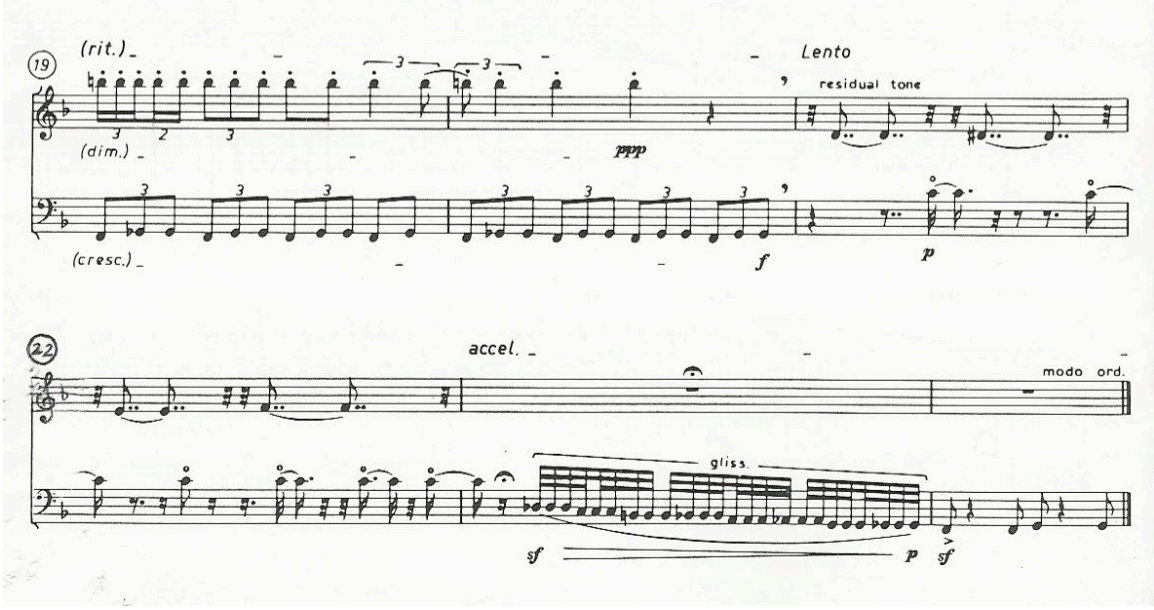
[3] I received a copy of this CD much later from Jan Williams when Due East,(flutist Erin Lesser and myself), had the opportunity to perform the work for him.

[4] In all the examples from the score, the berimbau staff is written *below* the piccolo staff.



Lejaren Hiller, *An Apotheosis of Archaeopteryx, Préludío,* mm. 19-24.

In measure 23, however, Hiller begins to demonstrate his capacity to imagine music for the berimbau has nothing to do with traditional playing. Here he writes a chromatic glissando that begins a minor sixth above the open string and lands firmly on the F. Nothing I had gleaned from studying capoeira music or Naná's recordings prepared me to solve this problem. However, I already had the inkling of a solution brewing in my mind, and this music would allow me to test my idea.

Pain: the Mother of Invention

Speak to any *capoerista* about the berimbau long enough, and eventually you will hear the complaint, "It absolutely kills my little finger." I cannot agree more, or over-emphasize the very real physical danger that the berimbau presents the player. ALL of the weight of this instrument rests on the smallest finger of the hand that holds the instrument. It does not take long, to this day, for the instrument to induce a sort of numbness in my left hand little finger, despite many attempts I have made to solve this problem. I have had some success, however, in decreasing the amount of pain that the

instrument inflicts. This success came after a few failed attempts at resolving the problem. But as the notion goes, there is always a certain success in failure.

In the summer of 2000, I attended the Darmstadt Summer New Music Course for the second time. I was working on a new piece for berimbau and electronics that was still largely incomplete. This unnamed piece would eventually become *…a falta que ele me faz…* by Brazilian composer, Elaine Freitas. We premiered that piece in 2001 at Columbia University.

Elaine attended the summer course, too, so I decided to bring along the little bit that I did have together to show her and the other percussionists at the Course. I remember spending many hours in my free time just sitting and playing the instrument, working on technical exercises and what not. I also recall a lot of pain, and thinking that there must be a way to solve the problem.

Rehearsing a piece of chamber music with a number of instrumentalists, I had my set-up next to the bass clarinetist. It was then that I noticed the clarinetist's neckstrap supporting the weight of the heavy bass clarinet.

"Can I borrow that after rehearsal?"

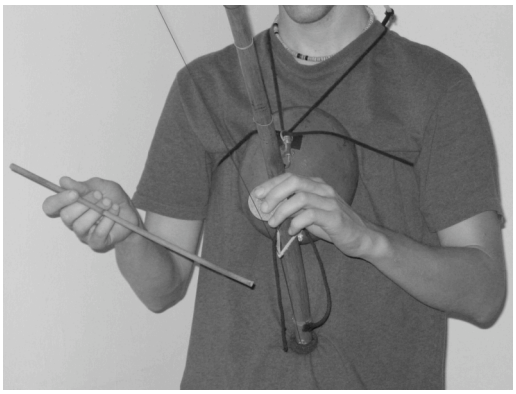
I figured out a way to attach the strap to the berimbau by fashioning a sort of hook on the instrument itself with a short piece of rope and a self-closing Velcro loop used to keep microphone wires properly coiled up when not in use. I thought, "If I can just separate the weight of the instrument between my little finger and my neck, this will work perfectly".

It did not. It was awkward and basically useless. However, fooling around with it over my neck, I secured the butt end of the bow against my stomach. I realized that in so doing, I was able to let go of the instrument with both hands. The instrument would

stabilize itself against my neck and my stomach. This was a revelation. I could now play the instrument with a stick in each hand…

…or grab two caxixi and play them instead of the instrument…

…or, and this was the best part, I could stop the string with the coin all along the wire as far as my arm could reach…



Images of extended playing technique.

This was amazing. I was no longer confined to the interval of a major second. The berimbau became a slide guitar. The only problem, I realized, was the sliding part. The coin slid too well. It slid right off the side of the wire. To properly stop the wire to achieve a discernable note on the berimbau, the player is required to use a lot of pressure. I just could not get the required pressure on the string without pushing the coin right off the wire. This required further invention.

I went to a hardware store and found a rounded metal file. This allowed me to put a half-moon notch on one side of the coin. Now I could press and the coin could only slip to the edge of the notch. The notch catches the wire inside of itself. Problem solved. Later on, I revised this design to function more efficiently. I now use a coin that has many smaller notches.

Coin, notched on one side to catch the wire firmly.

The issue of resolving the pain in the little finger would take some further experimentation, but this accidental discovery of a new way of playing the instrument, (something that happened before I ever saw *Apotheosis*), would enable me to solve the issue of expanded range found throughout the Hiller score.

Solving the Idiosyncrasies of *An Apotheosis*

The figure in m. 23 (see above example), and all ensuing similar figures, (mm. 35-6, 45-46,) plus the quasi-melodic writing all through the 'second and third dances' now had ready-made solutions, *almost*. The idea of being able to move the coin up and down the wire freely meant that achieving a wider range of pitches from the wire was now a simple matter. What still remained incredibly problematic was the consistent achievement of exact pitches.

First, I needed a 'fretboard'. I recalled reading an article about monochord instruments and use of Pythagorean numerical systems to achieve a just intonation. This reminded me very much of the work of Harry Partch with integer ratios to achieve his microtonal system of tuning. Hiller kept *An Apotheosis* within the realm of the twelve-tone system, however, so I fashioned my design utilizing numbers that would approximate the 12-tone octave. I measured the length of my berimbau when tuned to F and found it to be 122cm in length. I then made calculations for twelve-tones and marked each position on the stave of the instrument with white and black tape, using each to represent either the white or black keys of a piano. At first, this system seemed to work well. But when I detuned

the instrument and then retuned it, or when I wanted to use a fundamental that was not F, I found these tape markings would become each time further and further removed from the correct notes. When I went to move the tape, the tape left a sticky residue on the instrument that soon collected dirt and dust. Clearly, for reasons both musical and aesthetic, I needed to find a different solution than tape.

Rubber bands.

Problem solved. I have used little hair elastics in different colors on my instrument ever since. They work well, leave no mess, and are easily adjustable so that you can move them up or down slightly each time you retune the instrument.

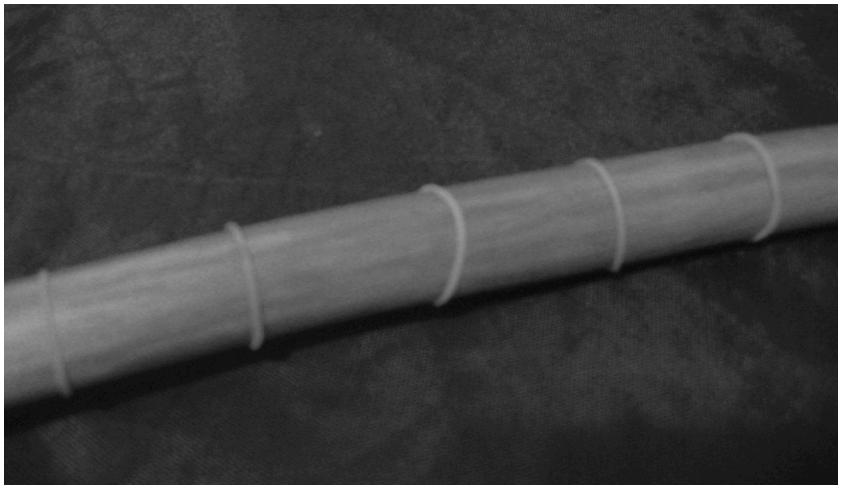


Image of instrument with rubber band 'fret board'

* * *

Back to the Hiller, I could now feel confident that I would be in tune to play the music. Or so I thought. I would always begin the piece in tune, but then often the instrument would slip out again. This time, it was the fundamental pitch itself that would change. This new technique of playing with the instrument over the shoulder provides its own particular set of disadvantages as well as the above-mentioned disadvantages.

There are two substantial drawbacks to this playing style. First, the player is no longer capable of opening and closing the aperture of the cabaça against the chest. The instrument therefore loses a bit of its characteristic tone quality and rich personality. Second, with the little finger no longer supporting the bridge, the pressure of the wire naturally forces the bridge and therefore the gourd lower and lower. While there is no real solution to the first problem, this second problem, I realized, was what was now causing me to continue going out of tune. This was another problem that needed to be solved, and again took a number of failed attempts until I found a good solution. These attempts included more rubber bands, elastics, and library-sized #2 pencils.

The best solution I have yet come across for keeping the cabaça in place is something I learned from checking out the instrument of New York Brazilian percussionist, Cyro Baptista. The cord he uses to tie the bridge is very long, and he uses the extra length (once the knot for the bridge has been tied off) to tie around the stave in multiple knots. This keeps the gourd relatively in place. It still is not a perfect solution, but I have not found or thought of anything that works better. I have seen other *capoeiristas* use a bit of gaffer's tape on the back of the stave where the gourd presses to keep the gourd from slipping. This actually works, but it causes a problem that is far worse – it destroys the tone quality of the instrument because the gourd no longer vibrates directly against the stave. Even with Cyro's solution, which I am fairly certain he got from Naná Vasconcelos[5], one needs to be careful that the knots do not bunch up in the spot where the gourd will rest against the stave. Any impedance of that contact diminishes the tone quality.

[5] My visit with Naná confirmed this to be true. His gourd is also attached in the same manner. In characteristic fashion, the 'cord' tied to the gourd was not cord at all, but rather a purple tennis-shoe lace!

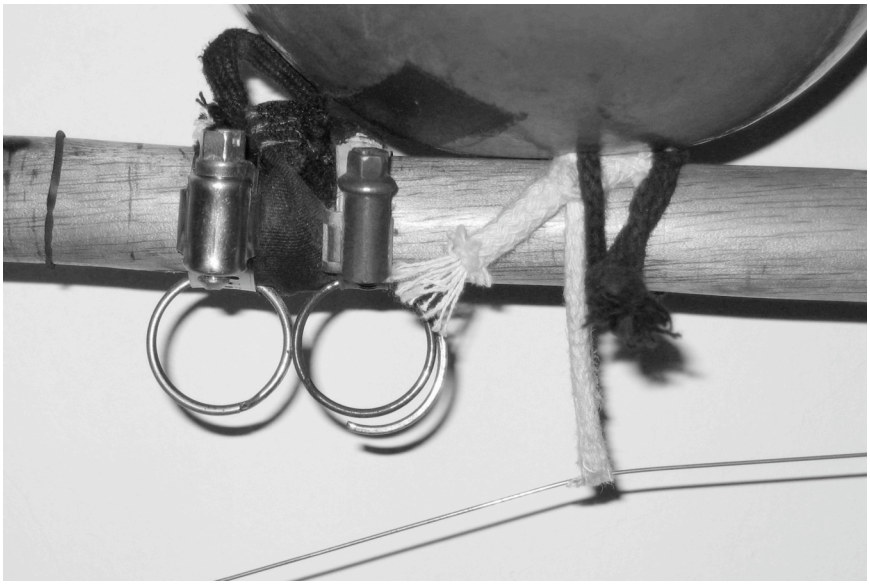


Image of a secure system for keeping the cabaça stationary. The white cord goes around both stave and wire, while the black ties tightly only around the stave.

This image also shows quite clearly a pair of metal key rings attached to the stave with hose clamps. This device is to date my best attempt at solving the issue of pain. The small finger still supports the weight of the instrument, but the third and fourth fingers slide through the key rings, thereby redistributing the weight between three fingers. Although completely unorthodox, it is a system that has generally been well received by *capoeiristas* that I have shown it to. As an aside, I am certainly not the only one to use hose clamps in various manners to modify the berimbau. Arthur Jarvinen's work, *The Paces of Yu* (1990), also asks for a special berimbau using hose clamps as a means to keep the pitch of the instrument from slipping.

Hiller Solved

Through all of this trial and error, I had developed a very workable solution to be able to consistently perform the music of *Apotheosis*. Technique out of the way, I was able to move onto more interesting issues of interpretation.

In contrast to the rest of the repertoire I have developed for the berimbau, of the most interesting aspects of this piece is that it is not a solo. In fact, it is in the end much more of a work for piccolo with berimbau accompaniment. Of the two parts, the piccolo part is much more challenging and active. Working with a wind player, I needed to address the

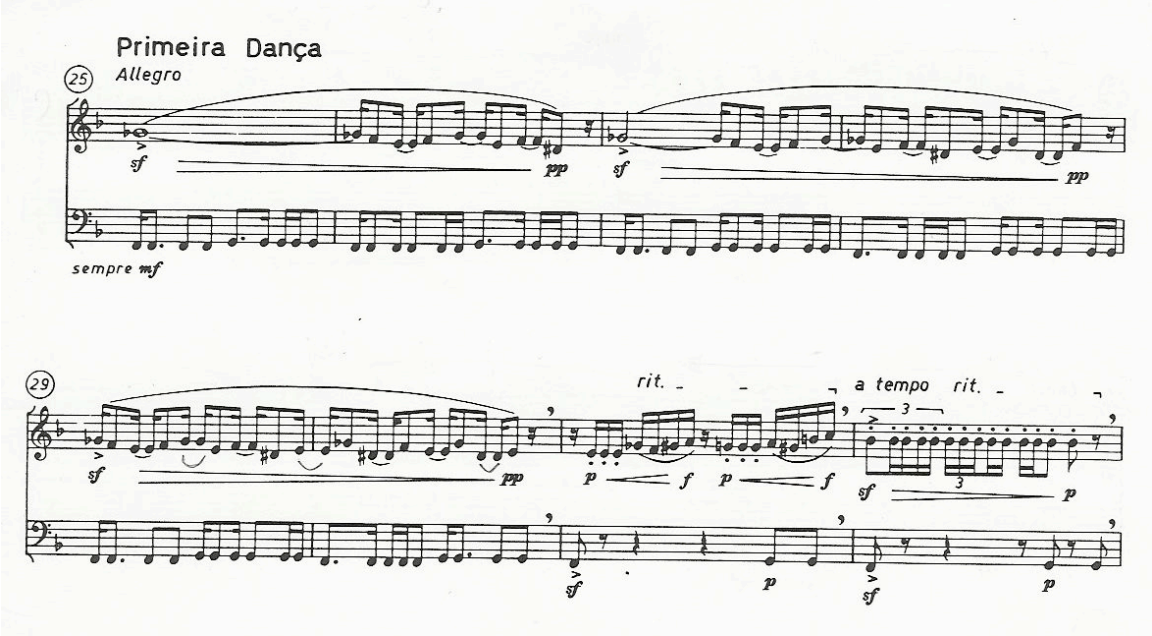
issues of breath, space, and note length. There are a number of breath marks in the score, and I needed to find a way to make the wire stop ringing accordingly. This is an obvious point, and would almost go without saying if it were not for the fact that I had been coming at this piece from the point of view of traditional and solo berimbau playing. In both contexts, stopping the string from ringing is not an active technique. To say it is never done is probably not true[6], but it clearly not a feature of any traditional or progressive playing.

Dressed to Dance

Each of the three dances in the middle of this work presents its own material, but all three utilize notes above G and therefore at times require the employment of the shoulder strap technique. I found in each movement dance something lacking in the written part. The way the music is written did not correspond to what I knew a berimbau could do. So I took the liberty of elaborating on the parts to make them groove harder, to make them dance.

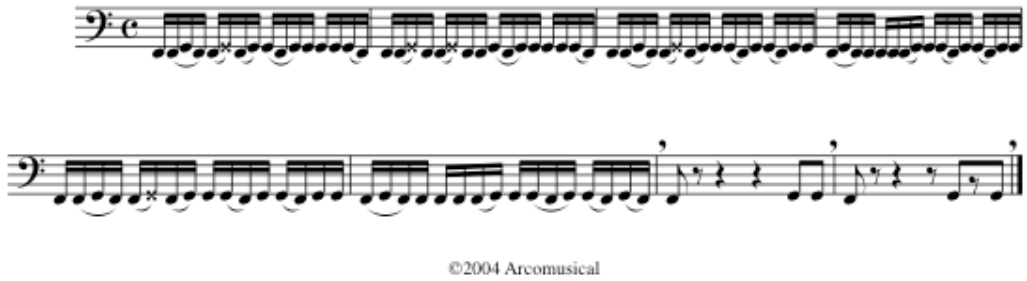
Primeira Dança is composed of three extremely similar phrases that follow one after the other. These phrases begin at m. 25, m. 37, and m. 49, and the piccolo parts are simply transpositions of the same material, each time up a tri-tone. The berimbau parts are confined to establishing a 16-note pulse using simple two beat rhythmic patterns that are heard over the course of the first 6 measures in each phrase. The berimbau always begins the measure on F and plays beats 3 and 4 on G. The result is nothing more than non-descript and banal. However, I decided to take the skeleton of the written part and continue to play that in the right hand, while using the coin in the left hand in various ways to create a continuous stream of 16th-notes. The result of this, I believe, is quite exciting.

[6] In fact, a 'muffling technique' is mentioned on page 124 of Luiz Almeida da Anunciação's book on the berimbau, *A Percussão dos Ritmos Brasileiros,* volume 1. He, too, however, calls it a 'seldom executed' technique.



An Apotheosis of Archaeopteryx, Primeira Dança, mm. 25-32.

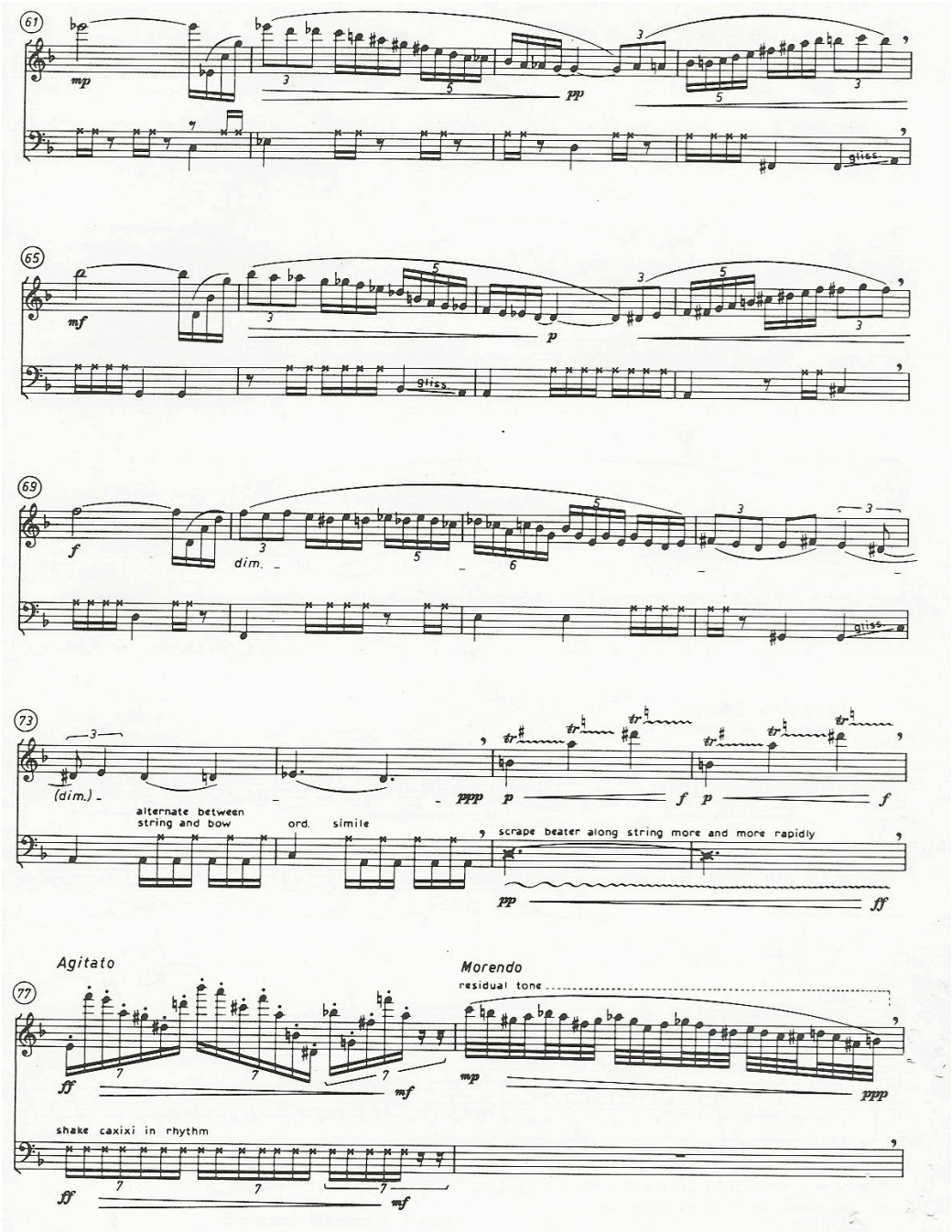
***Apotheosis of Archaeopteryx*, mm. 25-32**



Same passage, filled out in a manner that reflects stylistic traits of Naná Vasconcelos.

I find in *Segunda Dança* the need to recall certain skills and concepts related to timpani playing. The texture that the berimbau provides here is comprised of two elements -- a moving bass line and a recurring rhythmic figure on gourd. Regarding the latter, with so many figures on the gourd this sound can easily become overbearing, being the loudest and most brittle timbre of which the instrument is capable. Depending on the venue, I typically substitute the stave for the gourd in this movement. But relative to the bass line, I find it helpful to think as if I were playing a tuning etude on a set of pedal timpani. I often choose to play the notes for the written length as opposed to L.V. because I can

then silently slide the coin to the next pitch before restriking. In cases where this is not an option, (mm. 61-2, mm. 73-4), it becomes a matter of a lightning-fast slide of the coin into place at the very last possible moment, to make the change of pitch coincide almost exactly with the point of contact for the next note.



'Segunda Dança', mm. 61-78.

I also find that 'scraping the string with the stick' (m. 75) does not produce any meaningful sound. A workable substitute is a rapid succession of 'crushed strokes' that put pressure onto the string and create an audible but not clearly distinguishable pitch difference. This technique is identical to that performed by Naná Vasconcelos in *O Berimbau, pt. 1*.

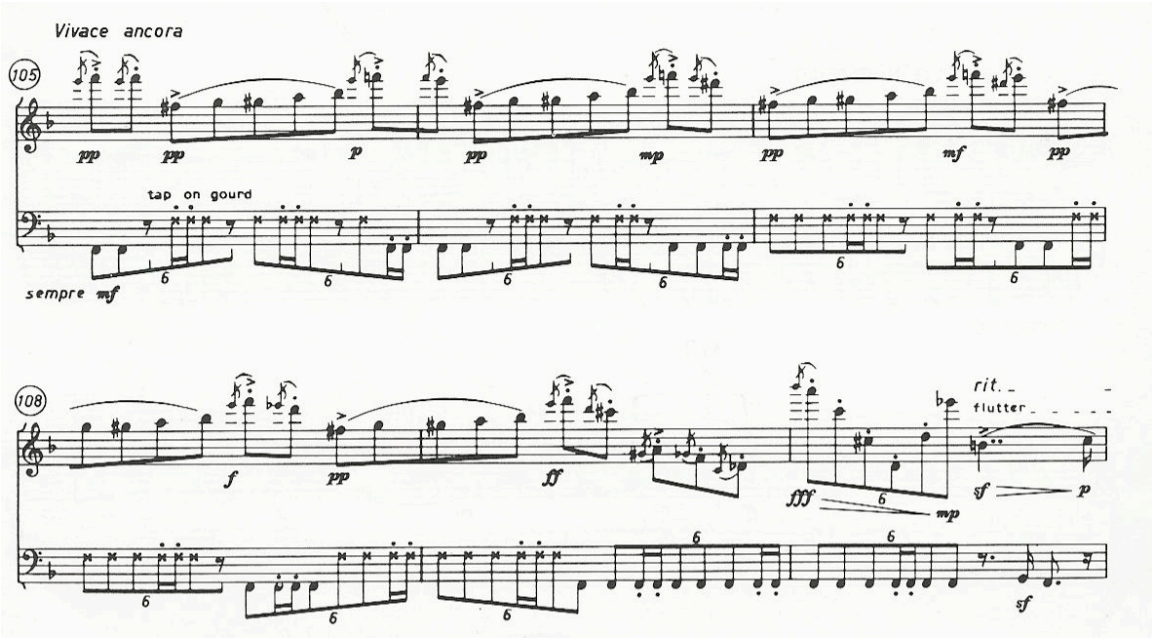
A further embellishment that I find particularly enjoyable is to begin a sort of tremolo with the caxixi to coincide with the piccolo gesture in m. 78. The caxixi ripping through septuplets in m. 77 are quite a surprise, and it seems a shame not to continue their involvement to the end of the idea as the piccolo finishes the phrase in the next measure. So I do continue to play in m. 78, loosely shaking the caxixi to create a wash of noise that follows the decrescendo of the piccolo part.

The *Terçeira Dança* provides an interesting ensemble challenge as the piccolo part is in continuous duple meter, while the berimbau part plays consistently in triplets. Furthermore, the phrases lengths do not coincide. The piccolo is playing a pattern of 9/8, and later 7/8, while the berimbau keeps to 4/4. Fortunately the pulse stays constant, and the way the parts line up is not too hard to track. While the performance note at the bottom of this page addressed to the berimbau part is valuable for the apparent license to turn the sixteenth figures into 32^{nd}-note triplets, the idea of feeling the bar of 4/4 as three pulses in 12/8 time is preposterous. Take away the common pulse between the players with parts that already do not line-up in terms of phrase length and one would certainly create a train wreck in performance.

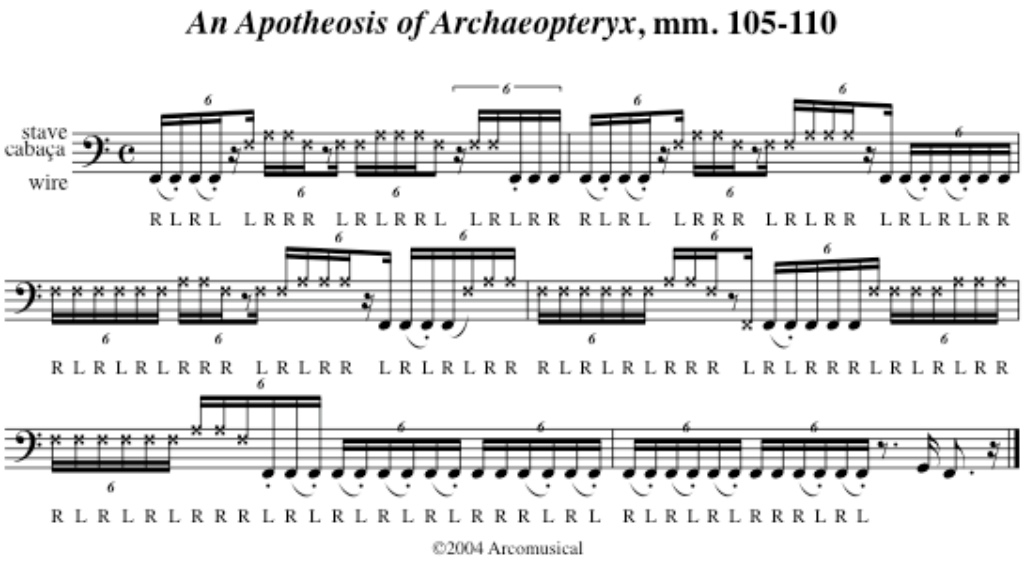
The staccato markings on all the sixteenth note figures in the berimbau part caused me to try to create a different timbre. Instead of using the coin here, I adapted the idea of bow players from South Africa and Mozambique and use my finger. This creates a much duller tone than the coin, and worked well to keep the notes deliberately short. Using finger here also allows me to articulate the written eighth-note triplet rests that make up part of the rhythm. As the figure bar by bar begins to fill itself in I also felt prompted, in

a manner similar to the first dance, to embellish the figure with finger damping on the sixteenth notes between all the eighth-notes of the figure.

This sort of embellishment became extremely interesting in m. 105 ff., where Hiller begins writing for taps on the gourd. This new manner of playing the instrument leaves both hands free to do whatever comes to mind, so instead of using a single timbre on the gourd, I broke up the written rhythm between the staff and the gourd, eighths and sixteenths respectively, and filled in the remaining 16th-notes spaces with my left hand thumb on the side of the gourd. I use the thumb as a substitute for certain of the written eighth-notes, too, as I see fit. What I enjoy timbrally here is the combination of three distinctive sounds combining in a continual stream of 16th-note triplets that still retains the flavor of the original rhythm.



'Terceira Dança', mm. 105-110.



Same passage, with highly embellished patterns utilizing unpitched strokes on cabaça and stave with both hands. The staccato markings on the wire represent thumb dampening.

* * *

When Erin Lesser and I performed this work for Jan Williams, he really enjoyed the interpretation. He told us a little about his set of solutions to the problems addressed above. Apparently Hiller wrote the piece with the berimbau tuned in F because that was what his instrument was tuned to. It is interesting to note that his written F is most likely an octave below the actual sound of the instrument. Either Hiller misinterpreted the pitch, or considered it a transposing instrument for ease of notation, or he was keenly aware of the instruments 'invisible' fundamental. Neither Hiller nor Williams at that time was aware of the possibility of retuning the instrument. Furthermore, Williams said that to get the notes above the range of the traditional manner of playing, he attached the instrument for the entire work to a microphone stand so that it would be free-standing and could therefore be approached from any angle. Although I never tried that myself, I thought that a rather ingenious way to approach the problem, especially for someone like Williams with no prior experience with the instrument. The only issue with that solution is that the performer is married to that manner of playing for the entire piece, thereby losing any capability to achieve the opening and closing of the gourd against the chest so characteristic of the berimbau sound. What I find preferable about my approach is that

moving from traditional playing to the shoulder-strap position and back takes only a matter of a second or two, and allows the option of continuous playing even as one is moving from one position to the other. This technique has seen further exploration in more recent pieces that have been written for this project.

Andrew Noble's *Just Visiting* (2001)

The ritualistic quality invoked through the sparse musical language and subtle theater of Andrew Noble's *Just Visiting* draws attention to the finer details of the sound of the berimbau. Noble wrote a beautiful piece for six berimbaus (five of them prerecorded). Its haunting, understated atmosphere highlights the magical aspect of this instrument's origins…the mystical power of a beautiful ringing tone from a single vibrating string.

Through the process of collaborating on this project, Andy and I became close friends. I approached him about the idea of writing a piece for berimbau, and he took time to think about it. When he accepted, he already had a plan in mind. His idea to write a piece for six berimbaus excited me greatly. I distinctly recall going into detail about my own ideas of creating harmonies with variably tuned instruments (something that would later come to pass in my own composition), while Andy listened patiently. Then he responded:

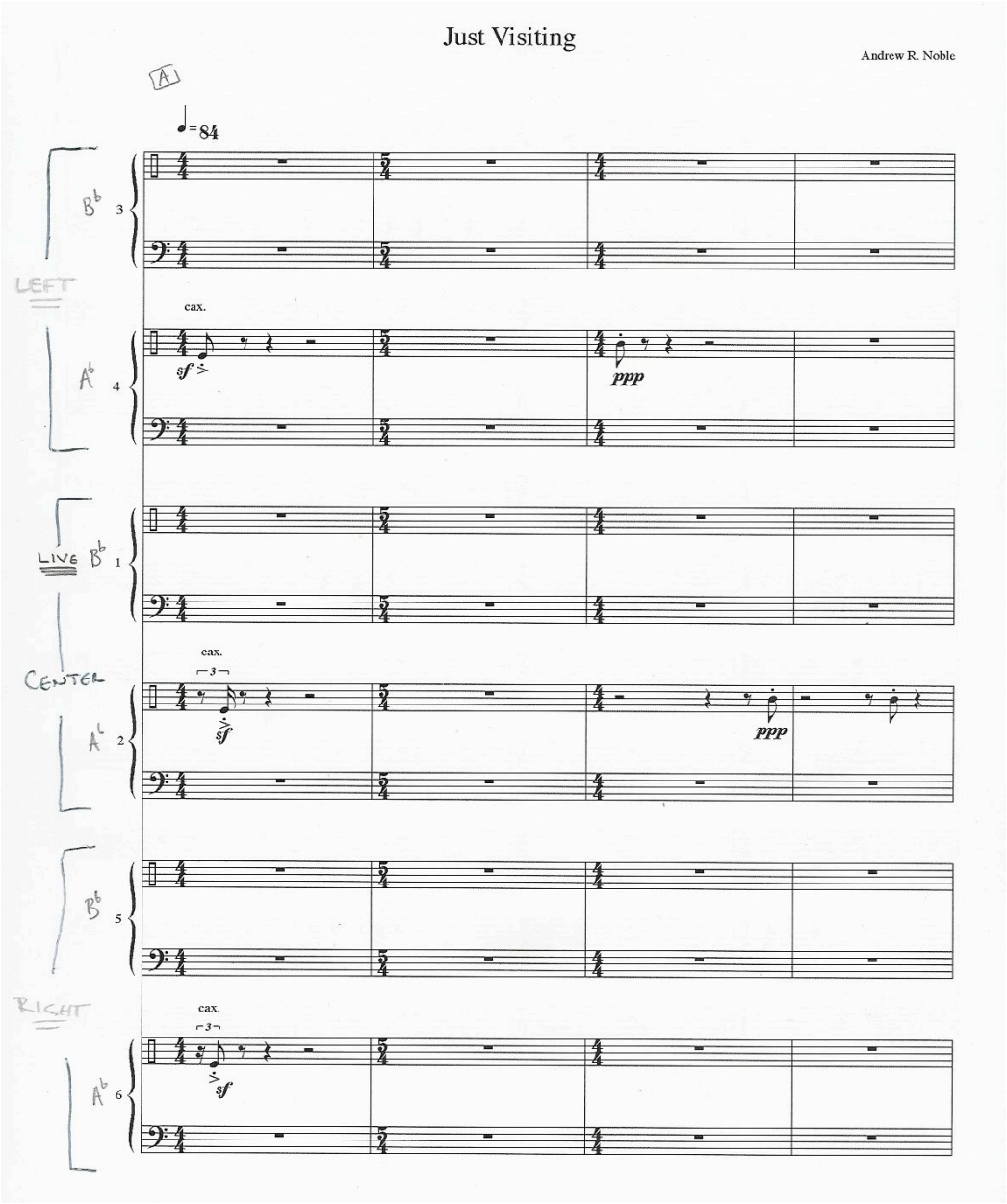
> "No, I am going to tune three of them to B-flat, and the other three to A-flat. That way, all six instruments can play Bb."

My heart sank. That was not what I wanted to hear, and I could not imagine why he would possibly use six instruments to create the same pitch. I was so eager to expand the instrument that I was initially blind-sided by Noble's own conception. Andy was set, however, and we were off on a musical experiment.

It worked…in ways both expected and unexpected.

Deciding to work within the limited pitch register of the berimbau, Andy developed ideas involving other parameters of the instrument sound. Issues of timbre and resonance become important building blocks in this piece. He also decided to exploit the possibilities of the pre-recorded medium. One of the more interesting ideas Andy proposed was a simple system of panning. Live, I play one of the B-flat instruments in the center of the stage. The 'second' part accompanies me in the center, 'playing' an A-

flat instrument. Parts three and four are a similar pair of tracks, panned all the way to the left, and parts five and six are panned all the way to the right. In this manner, Noble left himself with three identical palates with which to work, and allowing for gestures to be duplicated from one of these three positions or any combination thereof. A single idea could be 'thrown around' the space of the stage.



Andy Noble, *Just Visiting*, mm. 1-4. Three duos panned 'left', 'center', and 'right'. The part played live is the third system.

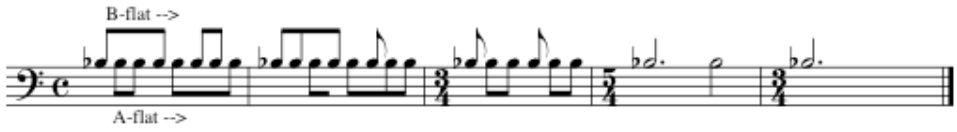
In the opening moments of the work, utilizing the sounds of the traditional companion of the berimbau, the *caxixi*, Noble created a sparse sonic texture with little movement and wide-open space. He wrote for two different sizes of basket to create a sense of depth in this otherwise homogenous texture. Beginning with a *sforzando* gesture with the large caxixi, the piece immediately demands attention. This is followed after a substantial pause by various *piano* and *pianissimo* shakes and stirs of the small caxixi. The effect of this introduction is haunting, a feeling that is further enhanced in live performance, due to its disembodied quality. All the caxixi music is on the prerecorded tracks. I walk to the middle of the stage, plant my berimbau on the floor like a staff, and wait patiently to enter some forty-five seconds later as the music sweeps through the space.

When I do finally enter in m. 15, I am joined by the other two B-flat instruments to expand the incredible sound of a single berimbau note played *fortisissimo*. This moment begins the 'exposition'. Here Noble works with two aspects of sound. Limiting himself to the pitch B-flat, it becomes clear that they are two very different B-flats. The B-flat pitch of the A-flat instrument requires the coin against the wire. This shortening of the vibrating string excites a different set of partials than the B-flat of the instrument tuned to B-flat. To enhance this disparity of timbre, a glance at the score reveals that Noble is clearly thinking of the six instruments as two groups of three, the A-flats and the B-flats. These two groups work as 'teams', set-off against each other to provide interesting contrasts in color.

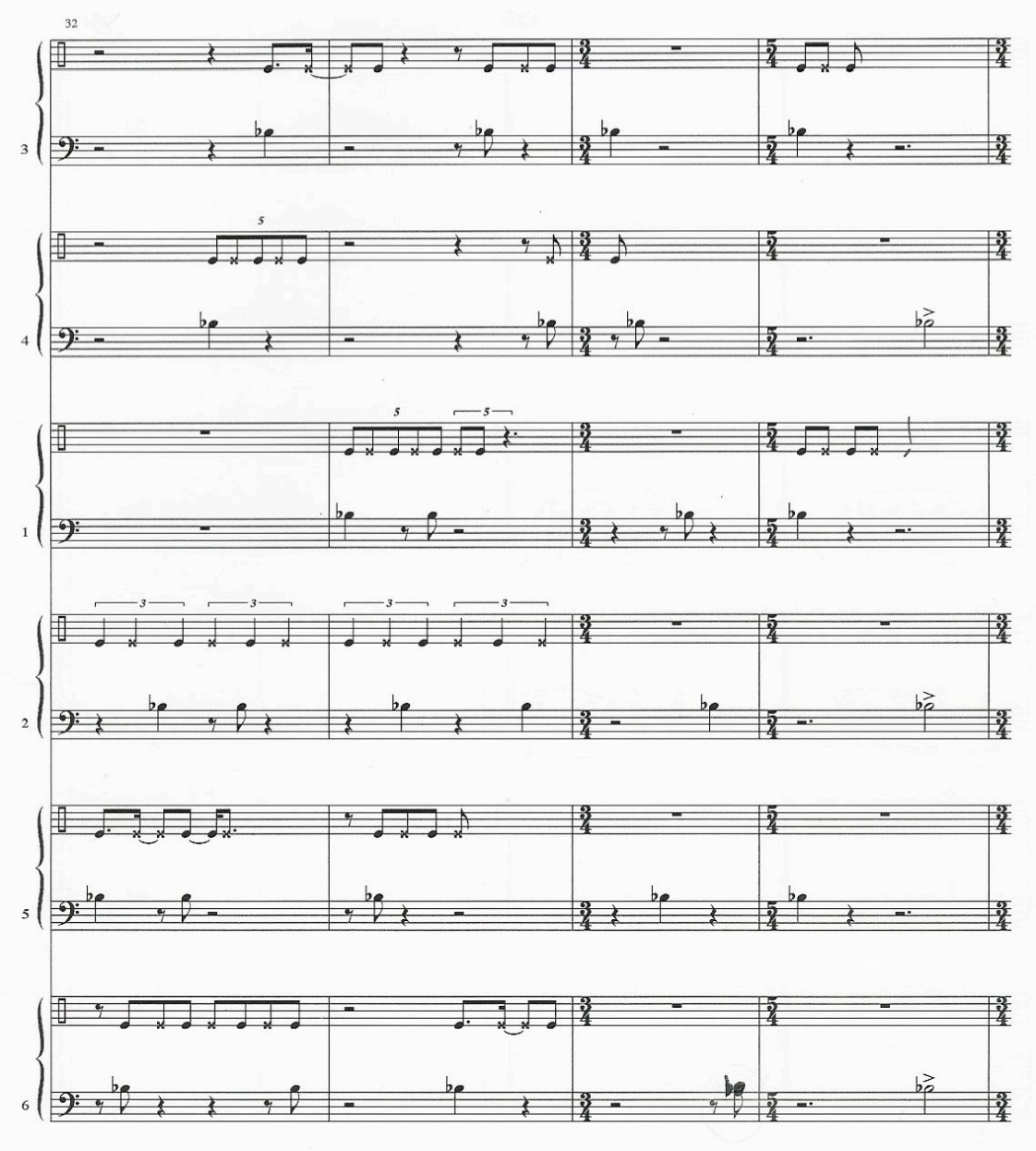
A second idea begins to unfold in measure 22. Each instrument is given a grand staff in the score. The upper staff in each uses an unpitched clef. This staff is for the sounds of the caxixi, for the sound of the stick striking or rubbing the cabaça (as in mm. 18-19), and in this case the rhythmic opening and closing of the gourd against the stomach. This element of Noble's piece reveals an incredible sheen of overtones that spin out at various rhythmic rates, an idea that seems distantly related to Rycroft's discussion of the amplification of selective harmonics on the South African *ugubhu*. Here, the third partial (one octave and one perfect fifth above the fundamental) is clearly audible as the gourd is pulled away from the chest, its rhythmically planned presence and absence accounting for

this incredible sound. These subtle figures begin innocently as quarter note or eighth-note figures. However, within bars other figures appear and by measure 29 the sheen takes on polyrhythmic shape as groups of three, four and five weave in and out of another. This rhythmic crescendo is brought to climax in measures 32-34, as the six parts weave together a constant beating of eighth-note strokes on the wire, while the gourds continue their polyrhythmic undercurrent. This eighth-note stream is not as constant as it looks on first glance, however. The pattern is broken up between the B-flat team and the A-flat team in a way that is highly syncopated. The B-flat team is the stronger of the two teams, however, always occupying beat one of each bar.

Andrew Noble, Just Visiting, mm. 32-36, breakdown of B-flat and A-flat instruments



The spell finally breaks in measure 35, when the live part meets its original partners, the B-flat instruments 3 and 5, and strikes the downbeat, their gourds responding in a unison eighth-note figure that is clearly and coherently audible in comparison to the commotion of the previous seconds. The other 'team' of A-flat instruments responds on beat four of the same bar, a unison B-flat with a timbre that is markedly different than that of the B-flat instruments. Measure 36 is again marked by a down-beat by the B-flat group, and so ends this timbral cadence as well as this section of the work.

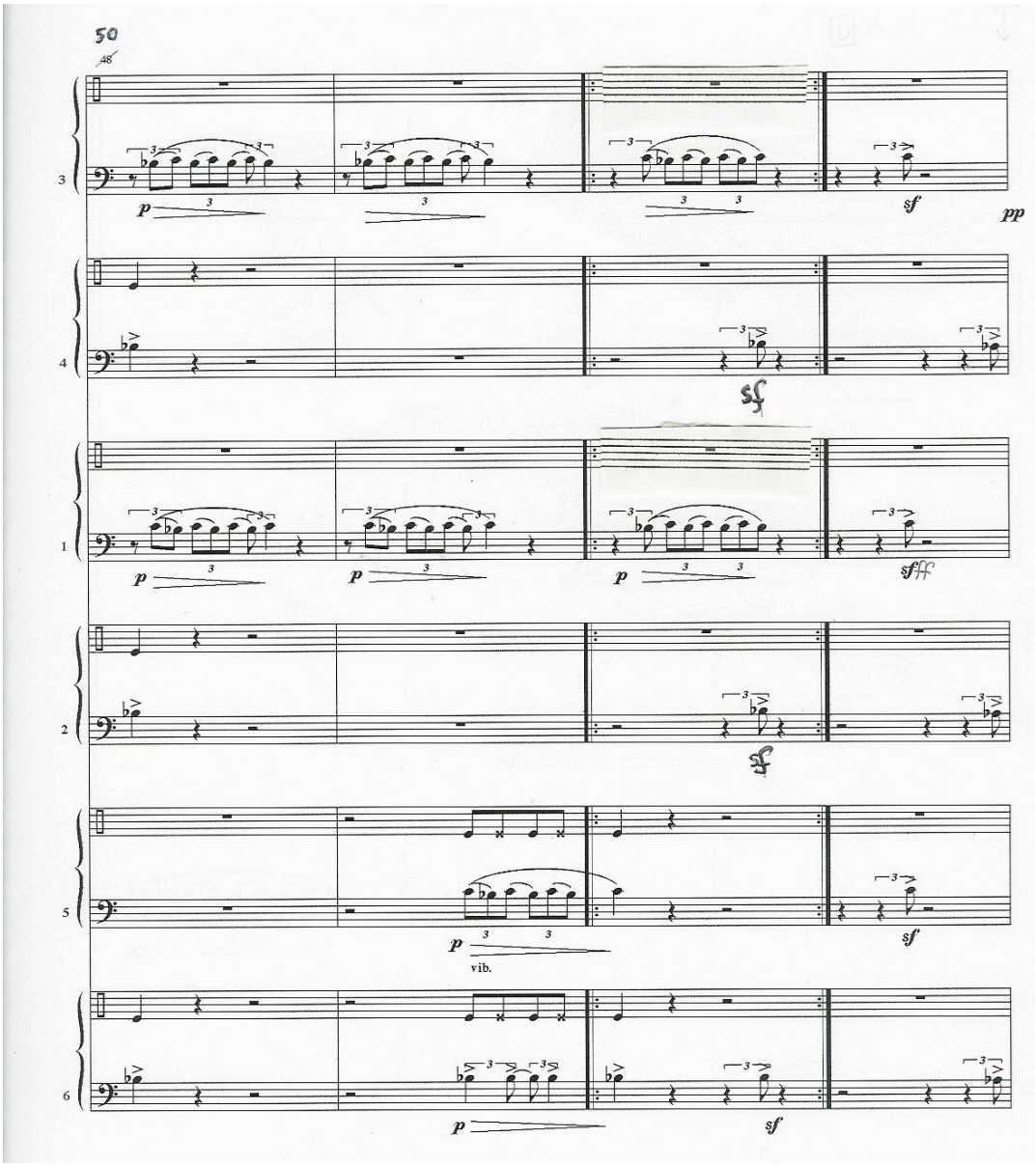


Same measures, 32-35, taken from the score. Again, the upper staff for each part represents the various rates of speed for the open and close of the cabaça against the chest. The attention to detail, with its polyrhythmic language,regarding this important element of performance technique yields something new and beautiful for the berimbau.

From this point on, Noble slowly and consistently expands the pitch compass. The first new arrival is C natural. Only possible on the B-flat instruments, it is the soloist who introduces it in measure 38, accompanied by a B-flat on the A-flat center instrument. The manner of this introduction is subtle. Rather than boldly stated, it oscillates indecisively between C and its B-flat. In this fashion, C seems to emerge from B-flat.

This feeling is aided by the decrescendo and the manner in which the oscillation is executed. The ties indicate a 'hammer-on' technique of the coin, while the larger slur indicates that the wire should be struck on the first note only. The decrescendo, then, is natural and the effect is echo-like. Repeated a total of four times, this figure is then echoed twice more, first on the left then on the right. The echo on the right side in m. 43 is displaced from the echo on the left by one eighth-note triplet, therefore taking the idea of echo one step further. This technique is one that Noble continues to put to use throughout the rest of the piece. It effectively *blurs* or *smears* any given figure across the soundstage. A particularly beautiful, if short, example comes on beat one of measure 49, where the soloist places the figure 'inside' two near-identical figures on the left and right, thus causing a beautiful left-to-right pan that is echoed again in the same measure.

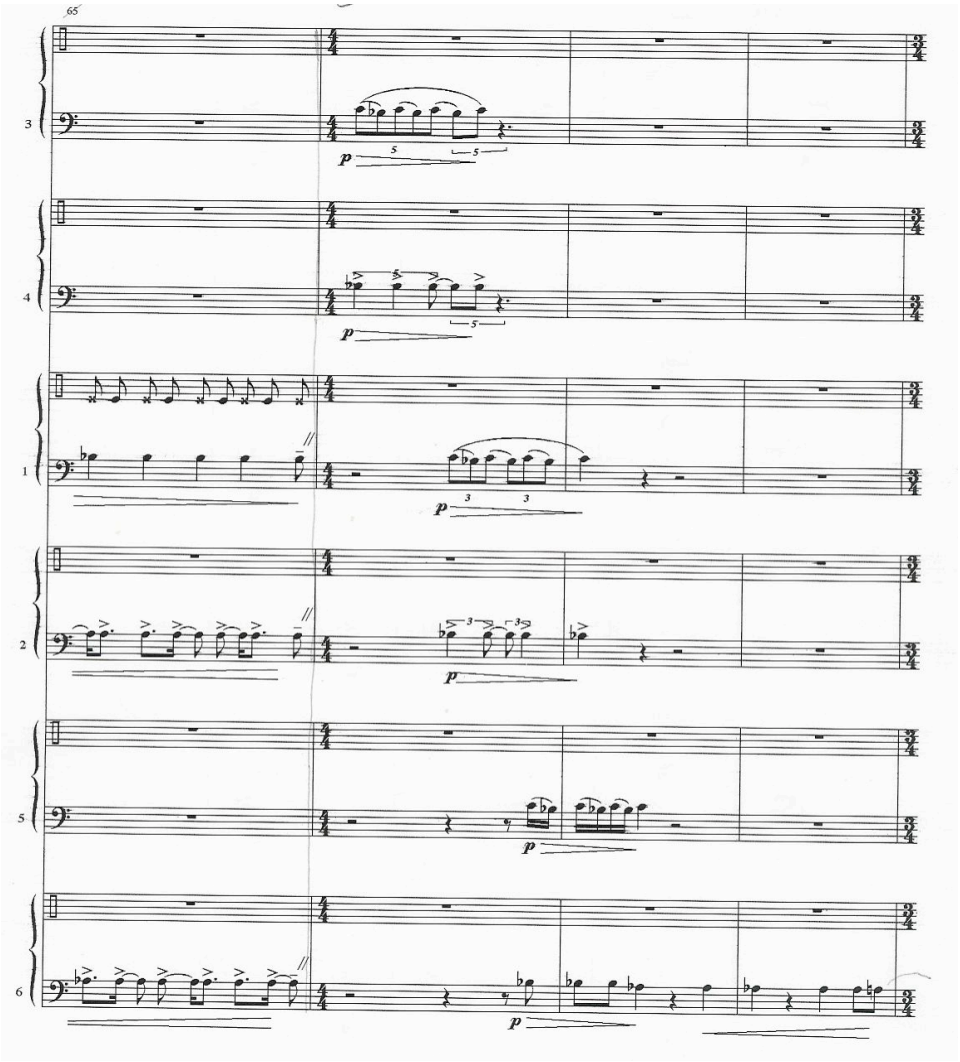
This subdued texture is broken suddenly by a piquant return of the A-flat group striking *sf* B-flats in mm. 52-53. This wake-up call gives fair warning to an incredible further expansion of the compass in measure 54. Here, syncopation adds tension to the effect. When the A-flat group finally is allowed to strike triumphal its open pitch, A-flat, the result is a brief but powerful disorientation of the tonal center. The bottom drops out; rather, it drops a whole step.



Measures 50-54. Note in m. 54 the strong arrival of the A-flat at the very end of the bar. Its syncopated entry combined with new pitch information effectively disorients the listener.

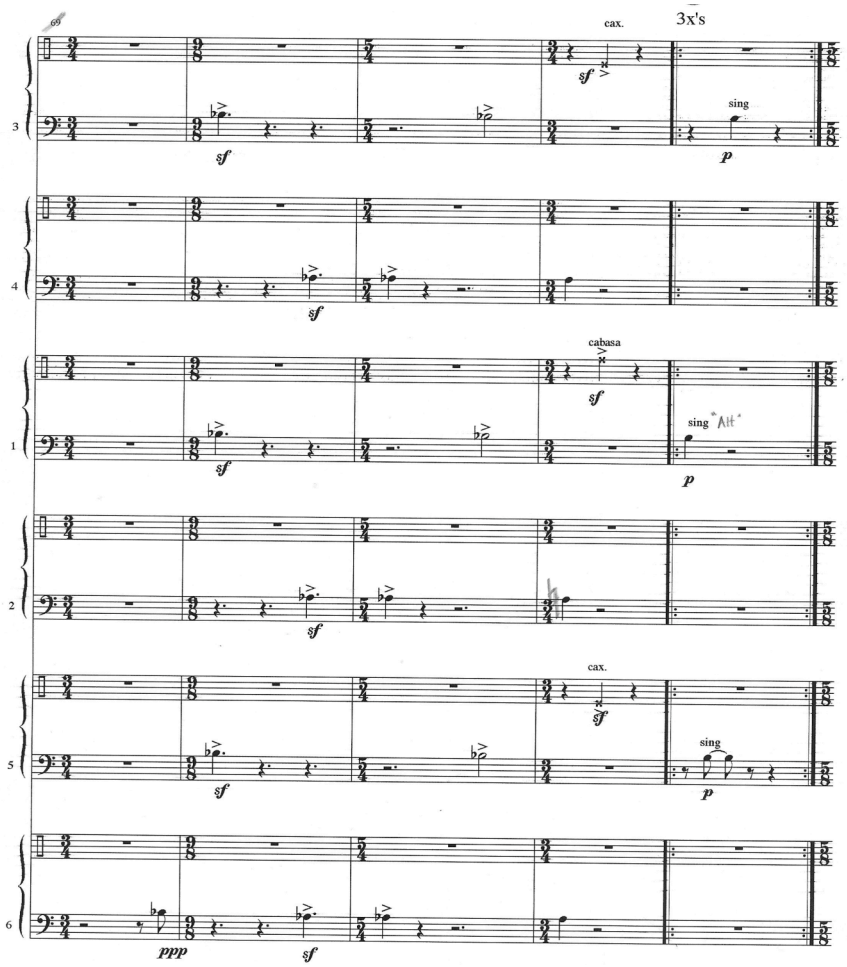
Perhaps to reorient the pitch center, Noble returns to the material heard earlier and does not do much with the A-flat pitch for a number of bars thereafter. In measure 59, however, A-flat reasserts its presence and begins a surge of forward motion that builds in rhythmic momentum for the next ten measures. To aid this tonal shift, the meter also redefines itself to provide a new perspective on the moment. From measure 60 to measure 70, the meter becomes 9/8, with the dotted-eighth note the essential new pulse.

The one- or two-bar long crescendi are indicative that this music is not going to stop. In measure 64, the most incredible element finally arrives as Noble inserts an A-natural pitch center-stage. Doubling the rhythm of the A-flat pitch panned right, the chromatic rub is ominous. The rub creates a white-heat that cannot be sustained forever; its begins in measure 69 to come unwound under its own friction, pulling apart into a rhythmic hocket that pushes this episode into its final moments, when at measure 71 the original C and B-flat oscillation returns. The lower pitches are not forgotten, however, when in mm. 71-73, the sixth part takes a rare moment to solo, clearly outlining B-flat to A-flat to A-natural.



mm. 70-73. Part 6 takes a chromatic solo moment. The A-flat instruments in general serve as the bass voice and therefore as the implied harmonic foundation.

The only chromatic pitch missing in this compass of a major third is B-natural. With a crack of the cabaça that halts everything to a sudden stop in m. 77, this 'missing link' is finally presented in m. 78. It is not played on the berimbau, but rather sung by the soloist and echoed in the pre-recorded material. This unexpected turn came, I believe, through a request of mine to include voice into the piece. So much a part of the historical tradition of musical bow playing in Brazil and in Africa, the entrance of the voice here is jarring but not unknown or unwelcome. The roots of singing while playing musical bow run deep. The vocal presence somehow immediately makes sense with the reintroduction of bow sounds in mm. 82 ff. Moreover, the manner of singing, (i.e. intoning a single pitch in chant-like fashion), is entirely in keeping with Noble's sparse aesthetic.



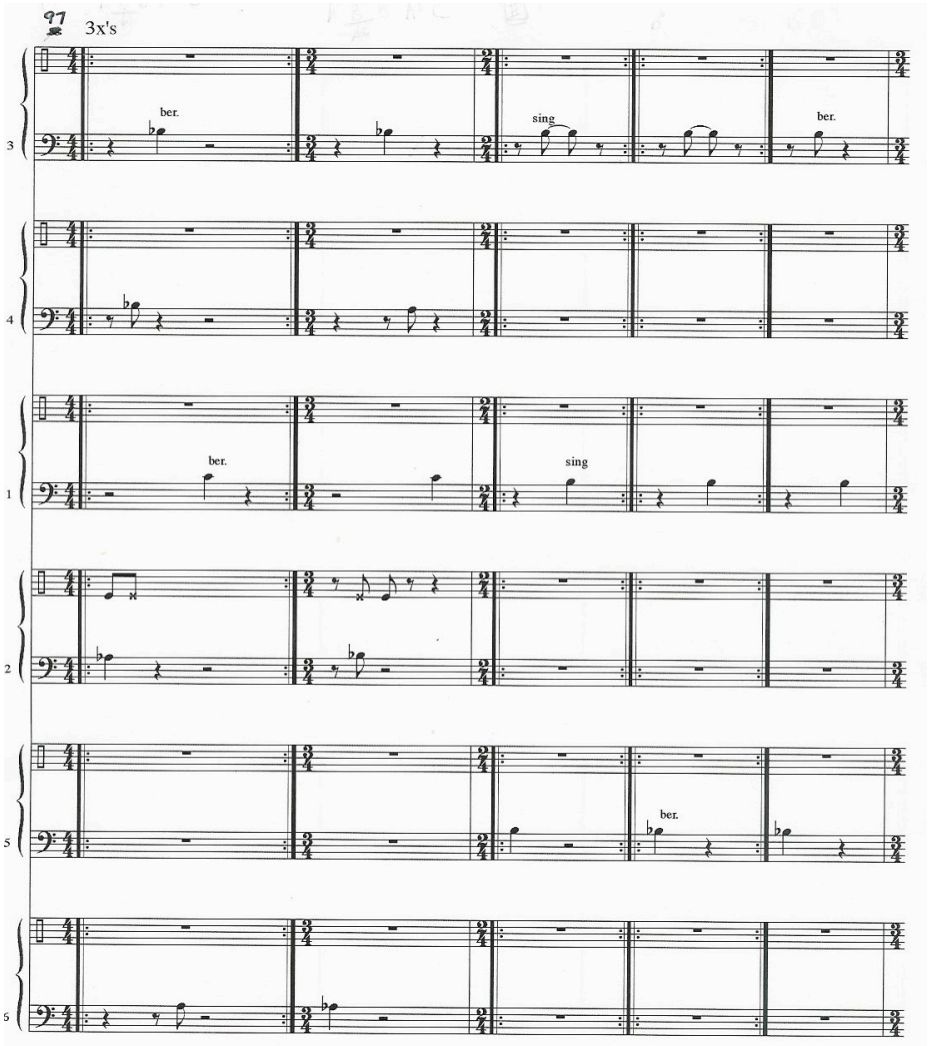
mm. 74-80. The 'crack' of the cabaça in m. 77 opens the game for a new element in m. 78ff., the singing voice intoning B-natural.

The voice remains unchanged throughout, constantly singing B-natural. Its role is almost that of an additional unpitched sound of the berimbau, playing a static role for the remaining minute of the work. Against this pedal point, the pitches of the berimbaus connect the dots of a loosely related melody that develops itself gradually. From measure 91, the A-flat becomes the temporary tonic, continually marking the downbeat of each measure. Over the course of the next five measures the other pitches insinuate what takes full form in measure 96, a most beautiful and unexpected melodic line. Recalling the contrast of two different B-flat timbres in the 'exposition', here Noble puts them back-to-back in a short phrase of five-eighth notes:

A-flat, B-flat, B-flat (played on an A-flat instrument), A, C

In m. 97, the position of the two B-flats switches, and the order of the other instruments accommodate the soloist to play the C natural at the end of the phrase. What is absolutely incredible, though, and completely unexpected, is the sharp contrast of the two B-flats when put into such close proximity. Although when listened to separately the pitches seem 'in-tune', the structure of their overtone distribution is such that they simply do not seem in tune, resulting in a striking 'micro-tonal' effect in this haunting and plaintive tune.

Repeated a total of five times, this melody gives way to the constant B of the voices, and then the B-flat reasserts itself as the true tonic, rubbing against the voice that is slowly whittled away to the voice of the soloist alone at the very end.



mm. 97-105. In mm. 97-100 note the incredible microtonal effect of a melody constructed of chromatic pitches and two B-flats of a very different stripe.

* * *

Andy found the inspiration for the title of this piece in the midst of a conversation with his composition professor at the time, Dr. Nils Vigeland. Vigeland, it seems, put Noble to a question in relationship to this composition:

> Vigeland had asked me in a composition lesson if this piece was indicative of a musical direction I wanted to go in and what my relationship to[the berimbau] and it's traditions was. He cited two examples to clarify this question. The first was Bartok and his extensive research on the subject of Hungarian folk musics; he was a composer for whom having an understanding of a music's traditions and cultures was very important for his own work. The second example was Debussy's Pagodas and its very loose relationship to gamelan. Debussy had heard a performance of this music at the World's Fair, i.e. in passing. Nils likened this approach to a kind of musical tourism. So his question simply put was this: are you planning to stay or are you just visiting? Are you doing field research or reading the book about it? The title is my kind of tongue-in-cheek response.[1]

In a typically humble gesture, Noble chose to name the piece to reflect his own feelings about writing for such an uncertain terrain. From my point of view, however, given the positive feeling I get every time I play the work in addition to the generally enthusiastic response it evokes from an audience, I would say that he succeeded in touching the heart of the berimbau.

[1] Andrew Noble, e-mail correspondence, August 1, 2004.

Alexandre Lunsqui's *Iris* (2001)

To date, this is among the finest works that has been written for the project, *O Berimbau*. Alex and I met through a mutual friend in New York, the friend suggesting to me that he knew someone who might write an excellent piece for berimbau. He was right. Alex, a doctoral composition student at Columbia University, is from São Paulo, Brazil. Although the berimbau hails from Salvador in the Northeast where it is a constant symbol of African roots and traditions, it is not an unknown quantity in the more cosmopolitan southern city. Alex openly accepted the challenge, and we immediately got to the work of collaboration.

I showed him how traditional playing functions, listening to many of the songs of *capoeira* together. The first lyrics from the opening *ladainha* on the Smithsonian Folkways recording, *Capoeira Angola from Salvador Brazil*, relate the issue of falsehood and historical error as told from an Afro-Brazilian perspective.[1]

A história nos engana	**History deceives us**
Diz tudo pelo contrário	**Tells everything to the contrary**
Até diz que a abolição	**Even says that abolition**
Aconteceu no mês de maio	**Took place in the month of May**
A prova dessa mentira	**The proof of this lie**
É que da miséria eu não saio	**Is that from misery I do not escape**

Alex quickly latched onto the lyric '*mentira'* (lie) and we talked about the concept of *malandragem* -- the art of trickery and deception that plays a crucial role in the game of *capoeira*. Its practice is justified given *capoeira's* strong roots in the history of slavery in Brazil, i.e. a slave was often forced to be deceitful in order to survive and eventually escape from slavery. Alex decided he would keep the concept in the back of his mind as he continued to write the work.

We also spoke about the extended techniques that I had created and developed through the work done on Hiller's *An Apotheosis*. Taking the philosophical backdrop of *capoeira*

[1] This is the same song dealt with in its entirety in the chapter on *capoeira*.

and melding it with these techniques, Alex saw an opportunity to make a bold statement. Lunsqui exploited these new ways of playing immensely, and created soundscapes that I had not imagined possible. The development of these new sounds in the context of compelling musical gesture make this piece unique and give it lasting value.

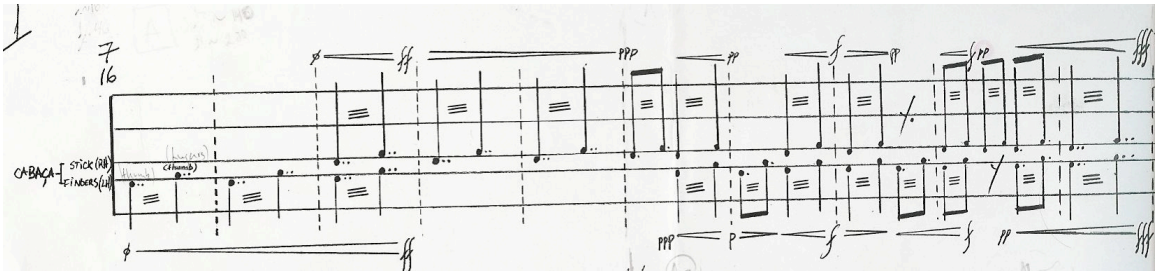
The title, *Iris*, is something of a play-on-words. The berimbau belongs to a family of instruments called musical bows, *arcos musicais* in Portuguese. '*Arco iris'* means 'rainbow' and from that connection Alex distilled *Iris*. The work is in six sections delineated clearly by distinctly colorful musical hues. In an incredibly beautiful and relevant backward glance on the piece, Lunsqui had the following to say relating *Iris:*

> Proposing new ways of playing the berimbau is a form of investigating some of the historical and technical aspects related to the instrument. I wanted to create (and I am sure you too, even more) something 'more complex', something that could escape the traditional use of the berimbau. By doing that, I was being faithful to my musical beliefs as a contemporary composer and to the complex social and cultural issues that accompany this instrument. I also wanted to play with the idea of freedom and/or the lack of it.
>
> That's why I created a solid frame for the piece…the 7/16 measures. Despite the fact that you do not hear them, the 7/16 frame suggests imprisonment and rigidity. Paradoxically, this section has a more ´vaporous´ sound quality. The conflict between the strict frame and the actual sound suggests two things: the contradiction between history and reality (and the **mentira** associated to it), and the complementarity between body and soul. For example, the upward gestures going beyond the wire or the wood (beginning in measure 156) are always trying to escape some kind of predictable linearity. They want to escape the instrument itself, but in fact they give life to it. I think that, at least in the context of this piece, the soul is directly associated to the idea of freedom.
>
> Finally, for me all these things have to do with giving new perspectives to something. The abolition of slavery was a lie and we need to be aware of this and act differently, without any forms of racism and with equal opportunities to everyone. It is a very complex subject, but the berimbau is still alive to make us think about it.
>
> *A história nos engana…Diz tudo pelo contrário…*

We cannot change the past but we can try to change our present.[2]

* * *

The opening music uses the instrument in the extended playing position (see photos in chapter on Hiller), and focuses nearly all its energy upon the cabaça. The left hand does not require a coin or stone. Instead the fingers and thumb articulate frenetic rhythmic figures and agitated tremoli upon the side of the gourd. The right hand remains with the stick and acts as accomplice to the rolling waves of the left hand, at times taking the lead, at others alternating back and forth with the left hand. Most often the hands work in tandem, rising and falling together like waves onto the shore. The quick swish of circular motions of the stick against the side of the gourd are brief tidings of things to come, and at the music's climax the two hands rapidly circle together like crashing surf as the tide comes rolling in.

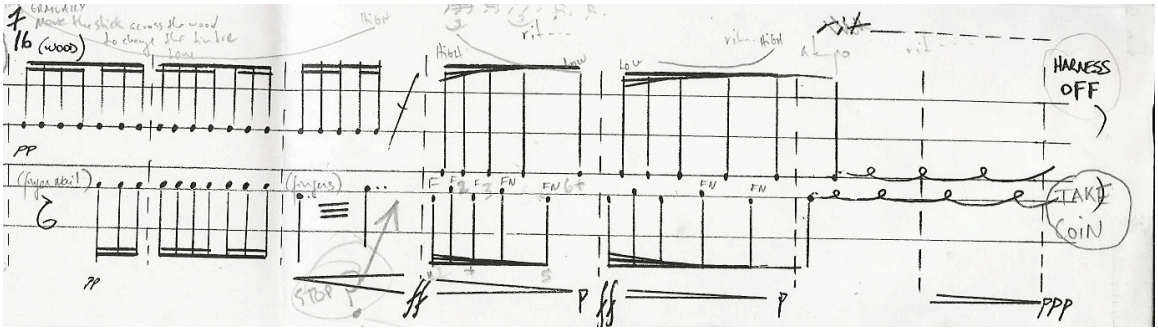


mm. 1-10. On two lines of an unpitched stave, Lunsqui indicates tremoli on the cabaça for both right and left hand. The left hand uses fingers and thumb, while the right holds the stick.

Only twice does the right hand play elsewhere. In mm. 32-33 Lunsqui asks for the delicate, almost tender sound of the stick producing quick tremoli between the stave and the portion of the wire that is below the gourd. The resulting sound is a high-pitched, almost bell-like tone combined with the noise of the stave. In mm. 55-57, the stick articulates full measures of 16th-notes on the stave alone. Here, as elsewhere when the stick plays the stave for an extended length, Lunsqui asks for a gradual shift of the stick

[2] Lunsqui, Alex. E-mail correspondence, January 17, 2004, revised July 16, 2004.

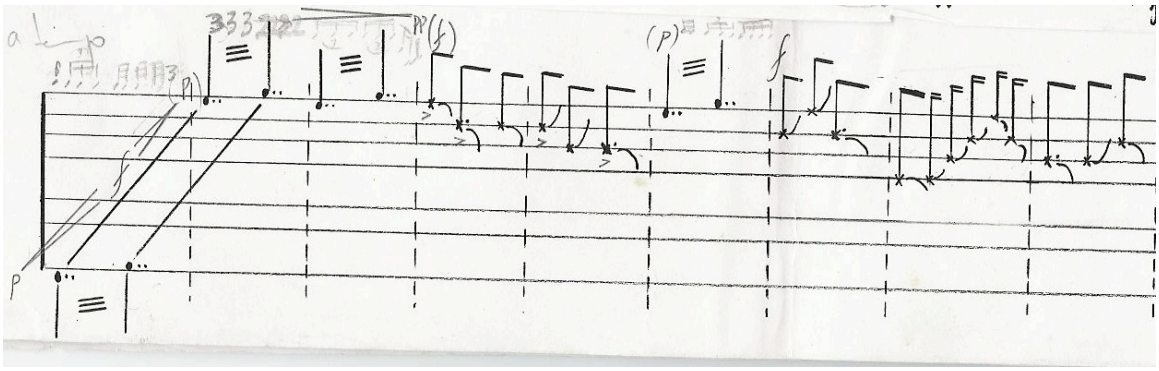
from the tip to the shaft and back. This motion creates a continuous timbral sweep as the gesture plays itself out.



mm. 55-61. A timbral sweep of the stick on the stave is indicated with a faint curved line in mm. 55-57. The last two measures here indicate a rubbing gesture to be played upon the cabaça with both hands.

In the second section of *Iris*, beginning at m. 62, the music concerns itself with two different sorts of material – tremoli between stave and string, and 'pressure-strokes'[3] combined with glissandi. The playing position returns to the traditional (i.e. instrument held vertically). What makes this section interesting is the performer's traversal of the length of the instrument. Alex was just as concerned with the 'look', with the 'theater' of performance, as with the sound. Accordingly, in its notation Lunsqui chose to use an unpitched four-line staff to indicate general loci, from high to low. The effect here creates a visual friction for the audience, because the physical gesture that is required to rapidly move up the instrument suggests a similar dynamic trajectory, yet the instrument itself refuses to conform. The berimbau's curved shape means that wire and wood are closer together at either end of the instrument, making a faster, louder tremolo more easily achievable at either extremity than in the middle of the instrument. Yet Lunsqui's dynamics suggest the opposite, and achieving what he wrote is almost impossible. To give the impression of this dynamic shape requires an exacting control of the speed of the tremolo and of the corresponding energy of the strokes.

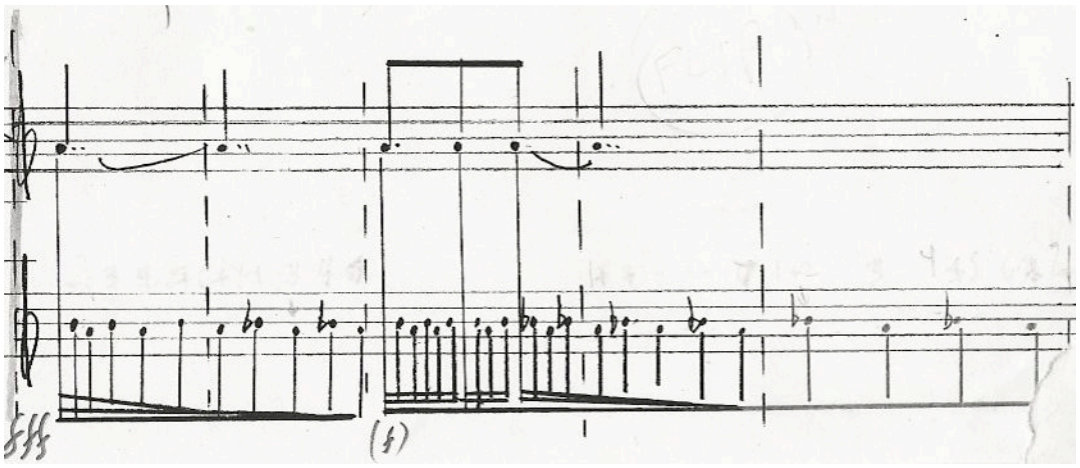
[3] As previously described, 'pressure strokes' refer to the technique of throwing a dead stroke into the wire from behind the wire, i.e. from between the stave and the wire. The first appearance of this technique in this thesis is Vasconcelos's *O Berimbau*, pt. 1.



mm. 62-70. A tremolo between stave and wire begins the second formal section of the work. The upper four lines of the stave here represent areas on the instruments body from high to low (top to bottom). In m. 65 ff, these notes represent 'pressed strokes' into the wire and corresponding pitch bends.

Beginning in m. 76, Lunsqui also calls for ricochet of the stick against the wire. This is accomplished by throwing the middle of the stick loosely at the wire. It can be done at the tip as well, but not with nearly as much effect or control. The melodic line that emerges from the pressure strokes, written in continuously changing, lilting figures over a time signature of 7/16, is very attractive and always fun to play.

The third section of the piece finally introduces the coin into the palate of possible sonic options, and its arrival is a shocking new color. When the tremolo of the last section finally resolves itself with the first triumphal sounding of the open string, the coin immediately follows with a set of rapid-fire movements on and off the wire, gradually slowing down and microtonally sliding down the wire from the whole-step position to the half-step position. Three more shots fire in m. 98, setting off another set of rapid coin oscillations, these too slowly dying away like seismic activity settling after an earthquake.



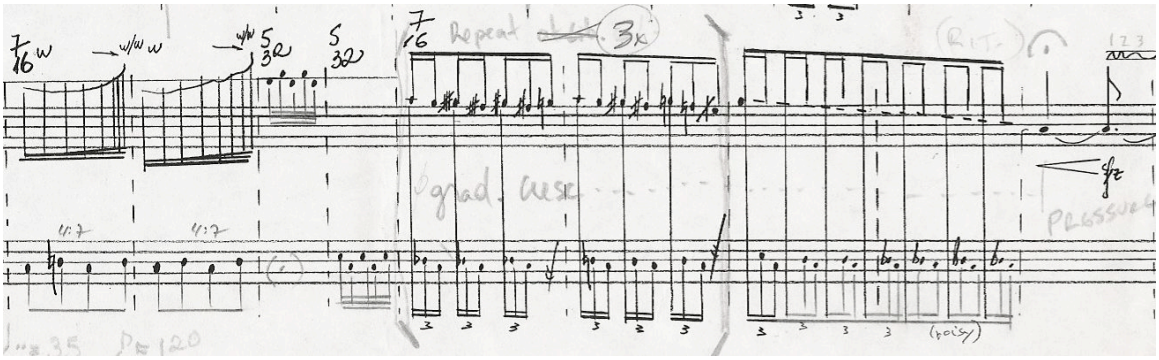
mm. 96-100. The initial entrance of the wire alone, accompanied by rapidfire oscillation of the coin, sliding microtonally from the whole-step position to the half-step.

In m. 101 the music settles into a steady groove, defined by the regular motion of 7/16. Nevertheless, figures overlap and extend past barlines, thereby muddying the typical regularity of a pristine pulse. Here Lunsqui writes the coin activity upon the lower staff, reserving the upper staff for the right hand that moves between strokes upon the open string and a more specifically defined version of the pressure stroke technique introduced in the last section of the piece. Here Lunsqui asks the performer to produce more or less specific pitches with the pressure strokes. This is a technique that is entirely possible, requiring yet another set of 'frets' above the ones already established in Hiller's piece.

Upper set of bands to designate specific pitches achieved with pressure strokes against the wire. Note the 'line' between eye, band and stick.

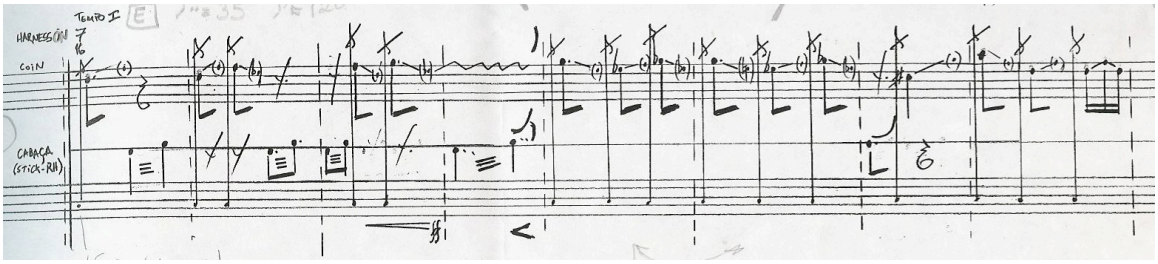
This new set of bands mark the same pitches as the lower bands, but now the instrument is played in the traditional position, the angle of line between wire, stave and eye of the performer being much less acute than that of the previously described technique. In m. 123 and later in m. 136, Alex intends to specify the motion of the gourd to and from the stomach. He does this with a singular wave-like line, showing the gradual deceleration and then (in the case of m. 136) the subsequent and equal recovery. In performance, I found it helpful to shorten and set rhythm to this 'gesture', only because the resonance of the instrument dies quickly. To achieve the accelerando at the end of the gesture requires that there be energy left in the resonance. It dies quickly, so the gesture must happen rapidly. A measure of 4/4 at 60bpm is too long for the sound to sustain itself, so a little cheating of the time is required here to make the music happen.

The fourth section is a continuation of previous materials, but with an exciting and more rapid alternation of sounds. The coin begins this section, establishing an undercurrent of rhythmic counterpoint to the independent material of the stick. The stick is bouncing rapidly between phrases on the wire and on the stave, as if imitating the intertwined movements of two *capoeiristas* inside the *roda*. At m. 156 the *'capoeiristas'* plan their escape in the upward gestures that Lunsqui refers to as the 'soul' of the piece trying to evade the framework of 'predictable linearity'. Although the score makes it look like there are audible polyrhythmic lines coexisting here, and indeed the player is certainly thinking them, due to the soft spoken nature of the coin the audible effect is much more subtle. It is only when, in m. 165, as the speed of coin alternation criss-crosses against the consistent 16^{th}-notes played by stick on wire that an audible polyrhythm comes to the foreground. The next eight measures of music create an exciting build up to the final gesture of the section -- a final heavy stroke on the open string.



mm. 161-173. The first two measures are indicative of the 'escape plan'. At mm. 165 ff the 3-against-2 polyrhythm of the coin becomes clearly audible.

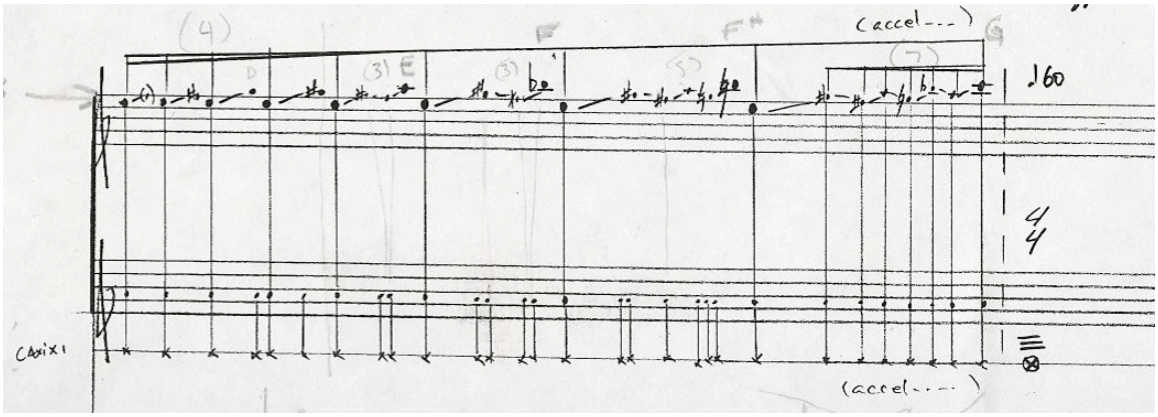
The fifth section sees the return of the extended playing position. Here Lunsqui, like Hiller, writes melodically for the instrument, treating it as if it were a sort of slide guitar. Alex also interjects bits of tremolo on the gourd with the right hand that recall the opening of the work. 'Melodically' might be a bit of a stretch, however, as each pitch seems to have a mind of its own. These figures remind me of Xenakis's musical experiments in imitation of the chaotic movement of gas molecules, each with its own glissando of an individual, specified length.[4]



mm. 175-182. Played in the extended position, this passage makes use of the ability of the coin to slide freely up and down after the attack of the stick.

We say that gas 'escapes'. Is this not yet another image of 'escape' or an attempt at 'freedom'? With cool calculation, the final gestures of this penultimate section launch into the way to the final new element of the piece -- the caxixi. A one-measure caxixi solo tremolo marks the bridge to the final section of the work.

[4] See Xenakis' string parts in a piece like Pithoprakta, for an example of this style of writing music.



mm. 187-8. The final surge to escape and the caxixi exposed.

The piece comes to a close invoking the sounds used in the beginning of the piece, focusing primarily on unpitched, percussive materials. The addition of the caxixi rattle and rhythmic gestures of stick on stave, however, create an atmosphere of agitation and restlessness. Six measures before the end, we penned in left hand gestures to be played in a variety of ways on the gourd, using fingernails, fingertips, side of the thumb. Again I quote Alex:

> Each one of those repeated notes (starting from bottom of page 6 to page 7) can be more 'dramatic' somehow. Each one is trying to 'escape' its own monotony, each one needs to be 'active'. That's why I loved it when you came up with the finger-nail idea, because that provides an acoustic 'escape', it proposes 'another thing' in the midst of predictable gestures.[5]

* * *

We also added a deep inhalation just before the final gesture of the piece, exhaling through that final bar. The breath of freedom? Or instead one of sad resignation? One thing is certain. The sincerity with which this piece was written, and its attempt to subtly cry revolution, will never allow a resigned attitude in performance.

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[5] Ibid.

Bahian Counterpoint (Homage to Steve Reich) (2002)

There is no such thing as 'fusion'…all music ever has been a mix of one or more disparate (and usually at the time of conception, novel) influences…what I have tried to do with my own music is…to reconcile the particular elements of the world that I have found myself living in as a musician…[1]

The process of conceiving, composing, recording, editing, and ultimately performing this piece has been an incredible journey. The idea for it began innocently enough. I had been playing berimbau for perhaps a little over a year, had been to Brazil for the first time, and was completely immersed in the sound of the instrument. Visiting my parents' home in Wisconsin during summer vacation 2001, I was idly shuffling through piles of compact discs that my folks had picked up since the last time I was there and found a copy of *Different Trains*. My mother, who has developed my taste for Pat Metheny, had picked this CD up because of his recording of *Electric Counterpoint* that follows Reich's string quartet work. When I heard this piece, I instantly fell in love with its shape and sound. More importantly, I recognized it. Reich's *resultant patterns* from a single melodic phrase set in interlocking counterpoint sang out loud and clear to me as lines playable on a berimbau. Not just one berimbau, but many. The ideas began to flow as I listened to the piece over and over, allowing its beautiful cascading harmonies to soak in.

As soon as I could, I got a hold of a score to *Electric Counterpoint*. I started to see what I was hearing and also to realize that a true transcription of the work for berimbau would not be possible. At that time my concept of the berimbau could only imagine the compass of a little over an octave, a sound world so limited that it was no match for the four-plus octave range of Metheny's guitar/bass guitar blend. Nevertheless, as a whole-hearted but ultimately unsuccessful first attempt, I did try to make an arrangement of the first movement of the work as an assignment for a course in electronic music at the Manhattan School of Music (an endeavor that kept me in the building until 5:00 AM the night before the concert!). Friend and colleague, Argeo Ascani, heard this performance and offered some thoughts:

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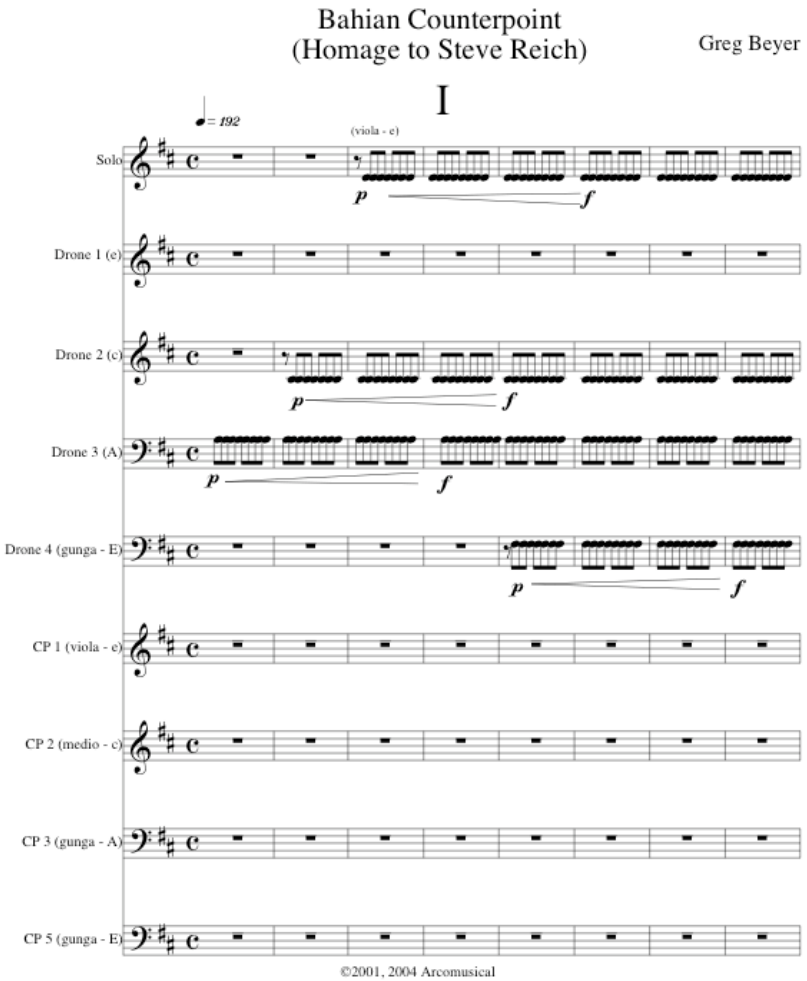
[1] Pat Metheny, *Songbook,* (Milwaukee: Hal Leonard, 2000), 446-7.

> You have spent so much time thinking about the work and trying to transcribe something that doesn't really fit your instrument. Why don't you try to write your own?

To this day I am thankful for that push forward. The very next day I got recordings to *Electric Counterpoint, New York Counterpoint,* and *Vermont Counterpoint* along with their scores. I spent hours sitting at the piano, analyzing formal structure and the musical material in each of these three pieces. I then began to devise plans to make the berimbau come to life inside of that sound world.

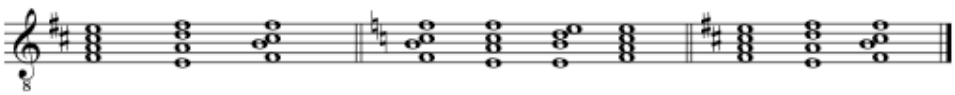
First Movement



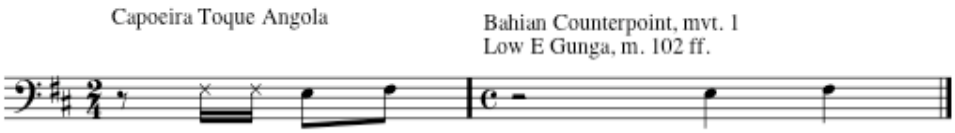
Opening measures to first movement. The 'drones' are parts dedicated to the large harmonic sweeps characteristic of *Reich's* related works for solo instrument and tape.

Admittedly, this movement borrows heavily from the formal construct of the first movement of *Electric Counterpoint*. Essentially, the only different ideas here (besides the obvious one of instrumentation) are the particular harmonies and melodies that I created from the use of multiple berimbaus. Working from the traditional 'family' of instruments (i.e. *viola, médio,* and gunga), I knew that I could create harmonies using multiple instruments at various tunings. I developed a tuning scheme for four instruments, E, A, middle c, and e, and then wrote down all the possible four note chords from this set of tunings. Borrowing the concept of two modes from Reich's music, I separated these chords into two groups that fit the modes E Dorian and F Lydian.[2] Keeping the most interesting of these chords, I developed a progression that would follow that of the Reich.

Harmonic Scheme for part 1 of Bahian Counterpoint, mvt. 1



In part two, m. 110 ff, I wrote melodies using an F# minor pentatonic scale. I wanted to hold onto the identity of berimbau as much as possible, so I utilized a 'stylized' form of the *Toque Angola* from *capoeira* to characterize the opening gesture. This figure is played in the lowest *gunga*, on the pitches E and F#, slowly fading in from m. 102.



This distillation from *capoeira* was intended to bring the berimbau into a world where pitch becomes an essential aspect of the piece. Looking to emulate the purity of sound I was hearing in the Reich, it was crucial to drop the 'noisy' *repique* effects of the snare-like buzzing of the coin against the wire and to leave the caxixi out of this movement.

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[2] With this tuning scheme I was unable to use the pitch G, so these modes are slightly misleading.

Nevertheless, I consider this nod to tradition an important aspect of the movement and of the essence to the piece. Invoking the traditional rhythm brings to the table, albeit subtly, a whole set of motional patterns and cultural associations of *capoeira*. It takes the tradition and extends it beyond its normal scope of expression. When I later showed this movement to my first teacher of berimbau, Cabello, he smiled with satisfaction and replied, "It is beautiful, and you have the *capoeira* in there!"

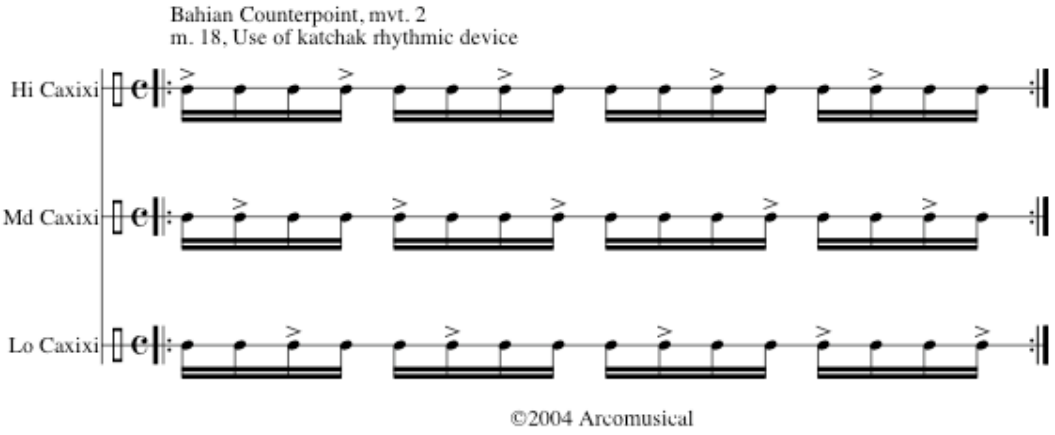
The four melodies that make up the second section of this piece are, in hindsight, intuitive yet misguided attempts at creating a melodic gesture that sounded something like a rhythmic displacement or canon. I wrote four different melodies that retained some common aspects rather than use a single melody and shift it rhythmically to create interlocking canons. The result is mediocre at best, but it was nevertheless a sincere and concerted first attempt at this manner of composing music. One of the most disappointing aspects in this section is the predictability of the entrances for each instrument. I simply brought one instrument in at a time, completely and fully, until all four instruments were creating the single melody in hocket. After receiving some helpful criticism from clarinetist/composer, Evan Ziporyn, I realized that I would need to find a way to resolve this issue. This largely problematic aspect of the first movement I was able to remedy in the third movement.

Once all four hocketed melodies have been successfully deposited into the pre-recorded tracks, the initial harmonic structure returns underneath it all, and the solo part plays the *resultant patterns* for each of the upper three instruments in succession. The progress of these melodic entrances was scaled largely according to *Electric Counterpoint*. This again proved to be problematic in performance. Unlike either a guitarist or clarinetist, I was forced to pick up a new instrument for each figure. The result is a bit of confusion for the audience. In the first two sections I perform entirely upon the highest instrument. Now sudden entrances of other instruments that are no sooner heard than put down again make for visual, if not musical, distraction. This sense of proportion was another issue to be solved in movement three.

Second Movement

The limitations of the berimbau in many ways proved to be useful, as they forced a step away from slavish imitation and asked instead what aspects of the instrument could best be exploited to write new material. In the first movement, the idea is focused on pitch, in both melody and harmony. But the berimbau is primarily a rhythmic instrument, capable as well of a variety of compelling unpitched sounds. Reich's works for both guitar and clarinet take on essentially a classical concerto-form (i.e. three movements in a fast-slow-fast arrangement). Although the idea of writing some new theme, slow and lyrical, for berimbau is not out of the question, it does not seem to suit the instrument in quite the same way. I looked instead to examples of Reich's music that focus on rhythm, specifically the mechanisms behind works like *Drumming*, mvt. 1, *Clapping Music* and *Music for Pieces of Wood*. It was this latter, in fact that seemed most fitting. My second movement would essentially become "Music for Pieces of Wood, Wicker and Gourd".

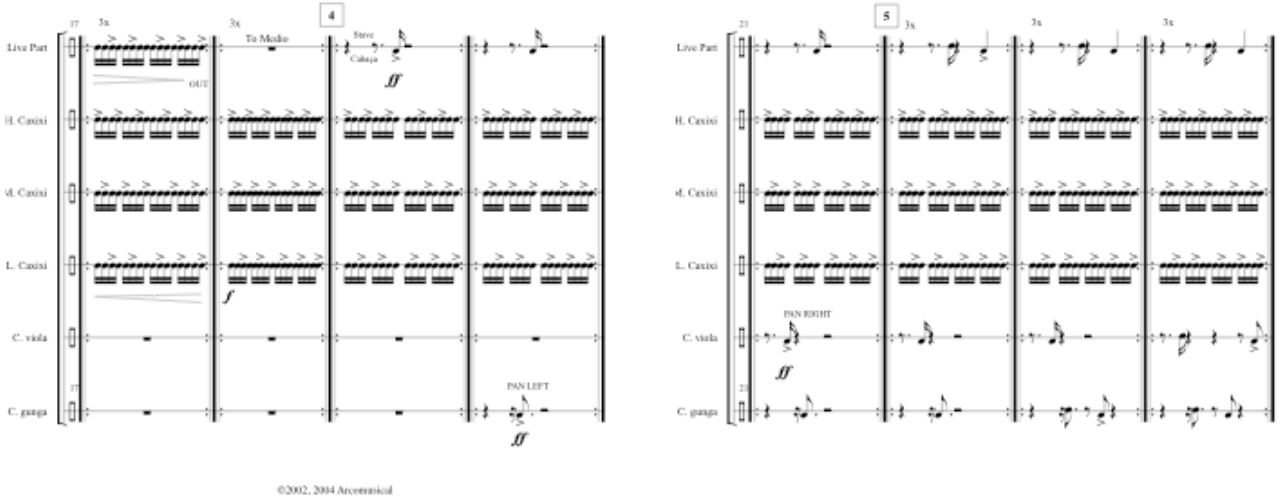
A sudden snap of the stick against the gourd instantly starts the second movement in motion. A small set of pre-recorded caxixi sets the pace, demarking a new pulse subdivided in 16ths. This motional device is common in a lot of Brazilian popular music, especially the *samba*. The soloist picks up the very same set of baskets and alters the flow of the rhythm, marking an accent pattern that is also very common to *samba* or *bossa nova*.



While certainly not unaware of this connection, the inspiration for this pattern came from contact I had in the previous summer with Balinese *kecak* singing at the Bang on a Can

Summer Music Institute, thanks again to Evan Ziporyn. The Balinese have developed a manner of rhythmic hocketing in a singing style that is highly energetic. This *kecak* style is based on the above accent pattern, or segments and variants thereof. In a choir, the idea is that one singer spits out the rhythm of the accent pattern while his or her neighbors must then follow with the same rhythm, but offset either ahead or behind a single sixteenth note. The result is a sound and energetic rhythmic motion that is quite special - a rippling of constant sixteenth notes that shimmers through the choir.

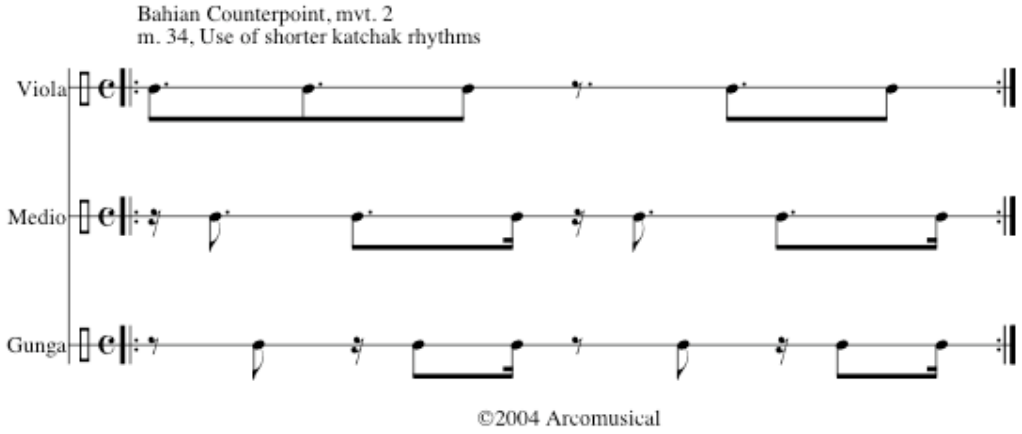
In movement two, after the soloist sets in motion the initial pattern, I slowly constructed the 'neigbhoring patterns' with two larger sets of caxixi, borrowing from Reich the idea of constructing a rhythmic line one note at a time. This additive process slowly spins itself out over the course of a minute or so of music. The studio technique of panning these sounds left, right and center allow the hocketing to be heard quite clearly in the final audio mix of the work.



Movement 2, mm. 17-24. At rehearsal 4 begins the process of building a 'melodic' line through the gradual addition of attacks on cabaça and stave of three berimbaus.

The second portion of this movement incorporates a similar idea of constructing a rhythmic hocket one note at a time with three berimbaus, striking their gourds and staves.

Unlike the three caxixi parts, whose parts each developed in their own time and space, the berimbaus develop together, seemingly creating one rhythmic line between them. At the same time, however, they are also fulfilling their *kecak* roles, taking the shorter segments mentioned above.



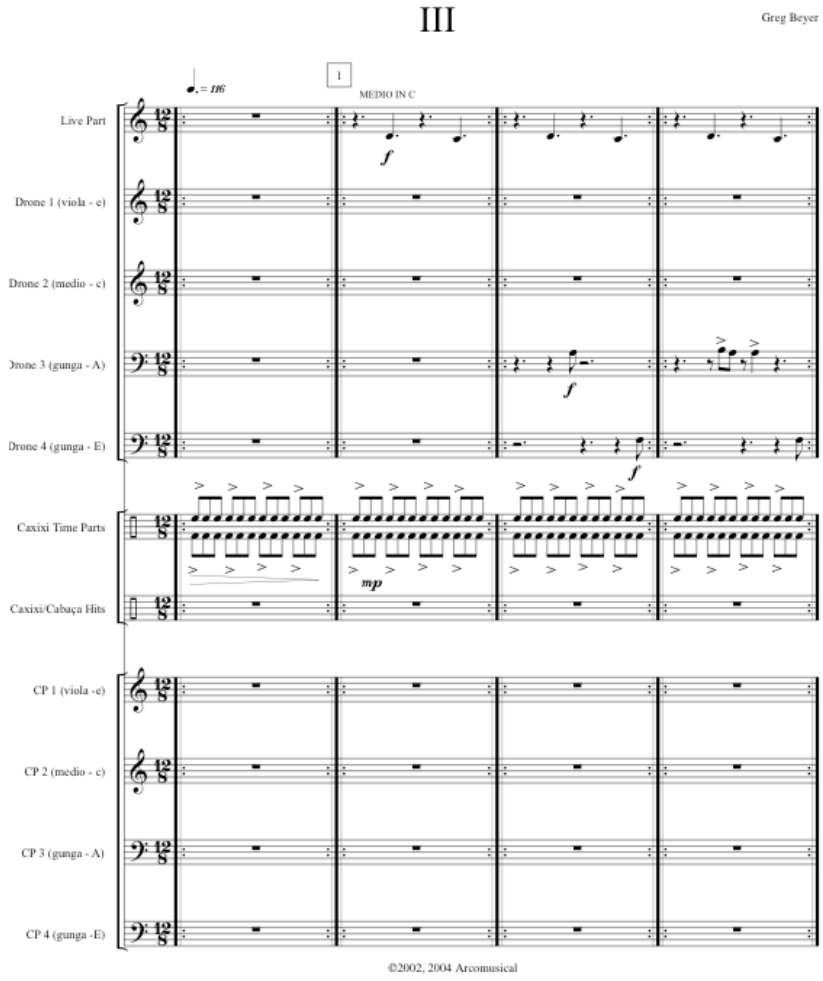
Unlike the classical *kecak* approach, however, this adaptation is again somewhat stylized. In both this case as well as that of the caxixi baskets, I chose to leave out any accent on beat three, the very middle of the bar. I made this choice, informed by my own analyses of numerous canonic conglomerations in the music of Reich himself. In almost every case, there are always a few 'open spaces', giving the phrase therefore a moment or two of pause or of rhythmic relaxation.

In measure 41, I decided to add a beat of pause before establishing the closing cadence leading straight into the third movement. This pause is another stylized adaptation from *kecak* practice, mimicking the manner of the leader of the choir, signaling a pause or a break to a new tempo.

Third Movement

I felt that a synthesis of the sources of the first two movements would create an exciting and effective close to the piece. Hence, I reintroduced pitched materials above a static unpitched rhythmic motor of caxixi. In their third movements, both *Electric Counterpoint* and *New York Counterpoint* utilize the multi-faceted rhythm of 12, and I did not feel it was wrong to adapt that here, either. Reich spent time in Ghana amongst the Ewe, learning their Yoruban style of drumming, much of it in triple meter, i.e. the music falls into the analytical framework of a "twelve-pulse standard pattern". The roots of this rhythm are not foreign to the berimbau, as we witnessed in such Yoruban influences on *Capoeira* as the toques *Cavalaria, Geges,* and *Barravento*.

Confined to the same tuning scheme as in the first movement, I nevertheless intended to cultivate a different sound in the third. Conscious of my earlier mistakes, I developed a single melody in F Lydian, the 'other' mode found in the opening 10 chord progression of the first movement. This melody I developed according to my ears, as opposed to what was easiest for the berimbau, as I had done in the first movement. The result is a much more sophisticated development of the theme, treating the four instruments as a single source of pitch material. At rehearsal number 1, the development of the theme happens gradually, using more than one instrument at a time to make attractive responses to the initial idea presented by the live performer in m. 2. The music of the third instrument develops over two measures, rather than simply entering all at once in a single measure. This integration of the parts amongst themselves defies the listeners ability to pick out a single berimbau timbre, and therefore makes the hocket much more effective and convincing.



Opening bars to movement three. Notice that the melodic entries in mm. 3-4 are divided between two bows, not just one as in the first movement.

Just before the second portion of the movement, the final entrance of the live part at rehearsal number 4 opens up a very prominent cross-rhythmic effect of 6:4. This pull also foreshadows the final portion of the movement, toggling as it does between 12/8 and 3/2. The second section of the movement is a gradual development of the rhythmic motor of the work. The caxixi parts enter one at a time, led by the soloist. A simple canon creates a continuous line of dotted quarters, reinforcing the underlying pulse of the work.

Like the Reich works, I felt it essential to bring back the initial idea of the piece, the beautiful flowing chords reminiscent of *Music for 18 Musicians*. Unlike the Reich,

however, I meant to save this for the final run of the work, rather than in the second movement. Furthermore, to accommodate the switching modes and time signatures that typify Reich's third movements, the harmonic scheme would have to shuffle accordingly. Nevertheless, it was essential that the music end on the final chord of the progression, indicating a final return to the original key of the piece.

Use of Video

From the time of my earliest notions of this piece, the idea had crossed my mind to use video as a means to show clearly the unfolding processes of the music. The impetus to make it reality, however, came after seeing David Cossin perform Reich's *Piano Phase* behind a scrim onto which was projected a moving image of himself playing the 'other' part to the work. His conception beautifully gives a visual impression of the technique of phasing. The audience is capable of seeing Cossin's body phase with itself.[3]

Cossin's stunning performance made me realize the use of video was indeed possible. While my work would not include phasing, nevertheless a tight knit weave of simultaneous or rapidly alternating images would allow the listener to see and track the processes of addition as they expanded slowly in both the second and third movements. I still faced the difficult situation of finding the facilities and the money to be able to produce such a feat. I thankfully arranged for a trip to the Banff Centre for the Arts in Alberta, Canada for the fall of 2002. That wonderful facility in conjunction with an incredibly helpful staff allowed me to realize this work in all of its facets.

Photo taken from performance at San Diego State University, for the 2004 SEAMUS Conference in March. Just behind my leg it is possible to catch a glimpse of the video. The content of the video is made entirely of images of myself playing various prerecorded parts so that the audience can see the rhythmic interplay. This performance was voted among the best on the conference. An audio portion of the work will be included on the forthcoming CD, *Music from SEAMUS #14*.

[3] Segments of this performance can be found at: www.davidcossin.com.

Further Experiments and Final Comments

A stretched string is a thing of beauty, and the laws governing its performance are comparatively simple.[1]

I am grateful to the composers who have written for this project, a group whose number far exceeds those mentioned here. Their thoughts have given fresh and creative perspective to the berimbau, offering performance problems and solutions of great variety. Nevertheless, there is still more to do to further explore the instrument's full musical capacities. With this directive in mind, I would like to detail a few techniques that I have discovered recently that I believe have great potential.

Gourd Placement

This is a subject that is simple to define, but yields an amazing variety of possibilities. As the berimbau is a 'braced' gourd-resonated bow, that simply means that the loop of cord that runs through the gourd and around the staff and wire *divides* the wire into two parts. Among capoeiristas, this division is commonly placed toward the bottom of the instrument. The distance from the bottom is determined more-or-less by the spread of one's pinky and thumb in one hand in a flexed position. This general 'measure' was demonstrated to me by Cabello during my first lessons in New York, and again by Mestre Valmir Damasceno in Salvador. So widespread is this line of thinking that it even shows up in written documents by *capoeiristas.*

> Quanto mais alta a posição do cavalete-cabaça, mais agudo fica o som…Existem um ou dois pontos que oferecem melhor som e afinação. Um palmo de distância entre o cavalete e o fim do berimbau é geralmente a melhor posição (depende muito de quem fez o instrumento). Qualquer outro ponto dá um som de qualidade inferior.
>
> The higher the position of the brace-and-gourd, the higher the pitch. There exist one or two points that offer the best sound and tuning. A palm of distance between the brace and the end of the berimbau is generally the best position (this

[1] Harry Partch, *Genesis of a Music,* (New York: Da Capo Press, 1949, 1974), 100.

> depends a lot upon who made the instrument). Other points provide a sound of inferior quality.[2]

This seems to be the current theory in capoeira circles. Yet others report a variant on the matter of gourd placement. Gerhard Kubik notes:

> The string…is fixed to the two ends of the bow following a different system on each side. A loop is then used to attach the large calabash, dividing the string into two sections. The relationship between the two parts should be 4:1, so that the shorter section sounds two octaves higher than the longer one. The shorter section's function is to give sympathetic resonance; it is not played upon except in demonstrations of all the sounds inherent in the berimbau. The percussionist Nana [sic] from Recife, who often performed with jazz musician Don Cherry, is a master in these techniques.[3]

The 'Nana' Kubik refers to is, of course, Naná Vasconcelos.

In my experience, *capoeiristas* DO make subtle use of the shorter section of the string. Often, in the *toque Angola* for example, players will lightly tap the lower portion of the string to mark the downbeat of the groove, where otherwise there would only be pause. This technique can be clearly heard in track 22 of the Smithsonian/Folkways *Capoeira Angola* recording, and is shown clearly in my accompanying transcription in the chapter on *capoeira*.

Furthermore, given the typical length of staff used among *capoeiristas*, a palm's length from the end to the gourd yields a ratio that is closer to 6:1. This yields a pitch two octaves and one perfect fifth above the fundamental pitch of the longer section. The average size of most of my berimbaus, (obtained from *capoeira Mestre* Valmir Damasceno in Salvador), is 1.5 meters. The *average* distance from the bottom of the staff to the tuning noose of the gourd works out to around 21-2 centimeters, a measurement

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[2] Déo Lemba, *Meu Berimbau Instrumento Genial,* (Salvador, Bahia: Independent Publication, 2002), 10.

[3] Gerhard Kubik, *Angolan Traits in Black Music, Games and Dances of Brazil,* (Lisbon: Junta de Investigações Científicas do Ultramar, 1979), 32.

that is very close to the spread of my outstretched palm. Twenty-one multiplied by seven (i.e. 6:1 is 6 + 1), yields 147.

Size does matter, however, and that may very well be a variable here. The specimen Kubik describes as a tourist model purchased in Salvador's famous *Mercado Modelo* does indeed look much shorter than instruments of current make among *capoeristas* in Salvador today.[4] A palm's length may very well be close to 4:1 on that instrument.[5] Elsewhere, regarding a certain *hungo* from northern Angola, Kubik notes:

> The division of the long bow of Miguel Francisco dos Santo Kituxi (b. 1941) which had a staff of 1.7 meters, was 8:1.[6]

Kituxi's 'sympathetic resonance' would register, therefore, three octaves above the main note of the longer part of the string.

In my research for pre-existent repertoire for berimbau, I discovered Arthur Jarvinen's, *The Paces of Yu* (1990). In his copious, detailed performance notes he requires that:

> …the gourd should be positioned so that the lower part of the string (below the gourd) sounds two octaves higher than the upper portion of the string.[7]

This is another example of a bow divided at 4:1. With all this information, I began to see patterns and possibilities. This was further fueled by reflections upon the *xitende* of Mozambique, whose gourd is positioned more centrally upon the staff. A systematic discovery of various interval relationships exploring various whole-numeric ratios would be not unlike the work of Harry Partch's creation of a micro-tonal system based on such Pythagorean constructions.

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[4] Ibid, 32, 66.

[5] My very first instrument was a smaller version intended for the tourist trade, and therefore may be similar to Kubik's specimen. Its size is 1.3 meters.

[6] Gerhard Kubik, "Angola," *The New Grove Dictionary of Music and Musicians,* ed. Stanley Sadie, 20 vols. (London: Macmillan, 2000), I:677.

[7] Arthur Jarvinen, *The Paces of Yu,* (Sylmar, California: Leisure Planet Music, 1990), i.

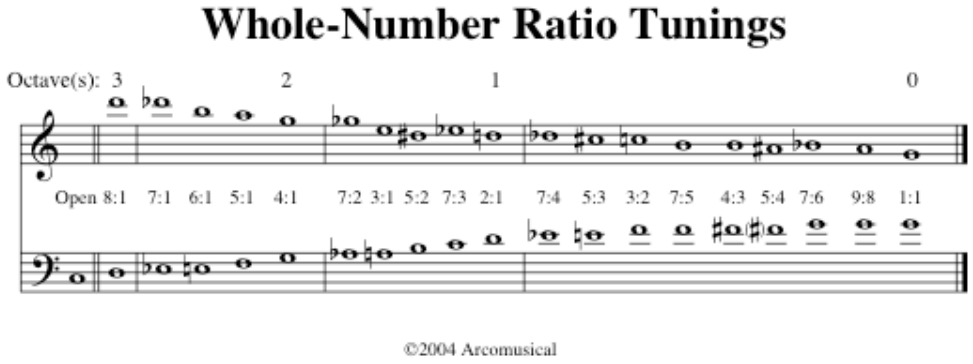
From the *xitende* through the *berimbau* to the *hungo*, stopping everywhere in between, a chart of resulting pitches can be produced. The berimbau, then, becomes ersatz monochord.

Taking one of my instruments as a test case, I generated the following list. The instrument in question is 148cm long. Its open string, without gourd attached, is tuned to C below middle C. Each row in the list is defined by the whole-number ratio in the first true column. The second column shows the calculation made to 148 to yield the exact location of the gourd-brace. As the brace itself is a piece of rope with a diameter of about one-half of a centimeter, it is unpractical to attempt such an exact location along the string. Instead I opted to round the value out to the nearest whole number, and put the gourd-brace at that location. Without fail, very clear intervallic relationships revealed themselves from one side of the brace to the other. The only location where I did not bother to enter pitch and interval information was at the ratio 6:5. The pitches and distances there are so close to the ratios on either side of it, 5:4 and 7:6, that the result of the interval would be a slightly different version of either a major or minor third.

Bow Length	Ratio	Calculation	Value	Rounded Value	Pitch	Interval
148 cm	8:1	/9	16.44	16	D-d2	3 Octaves
(tuned to C)	7:1	/8	18.50	19	Eb-db2	2 octaves, m7
	6:1	/7	21.14	21	E-b1	2 octaves, P5
	5:1	/6	24.67	25	F-a1	2 octaves, M3
	4:1	/5	29.60	30	G-g1 (flat)	2 octaves
	7:2	/9*2	32.89	33	Ab-gb1	1 octave, m7
	3:1	/4	37.00	37	A-e1 (sharp)	1 octave, P5
	5:2	/7*2	42.29	42	B-d#1 (sharp)	1 octave, M3
	7:3	/10*3	44.40	44	c-eb1	1 octave, m3
	2:1	/3	49.33	49	d-d1	1 octave
	7:4	/11*4	53.82	54	eb-db1 (sharp)	m7
	5:3	/8*3	55.50	56	e-c#1	M6
	3:2	/5*2	59.20	59	f-c1	P5
	7:5	/12*5	61.67	61	f-b (sharp)	A4
	4:3	/7*3	63.43	63	f#-b (flat)	P4
	5:4	/9*4	65.78	66	f#-a#	M3
	6:5	/11*5	67.27	67		
	7:6	/13*6	68.31	68	g-bb (flat)	m3
	9:8	/17*8	69.65	70	g-a	M2
	1:1	/2	74.00	74	g-g (sharp)	Unison

Figure 1. Pythagorean tuning chart for a berimbau of 148cm, tuned to C below middle c.

The musical ramifications of this experiment, especially for someone who until this point had firmly believed that the berimbau had a range of about one-and-one-half octaves, are staggering.



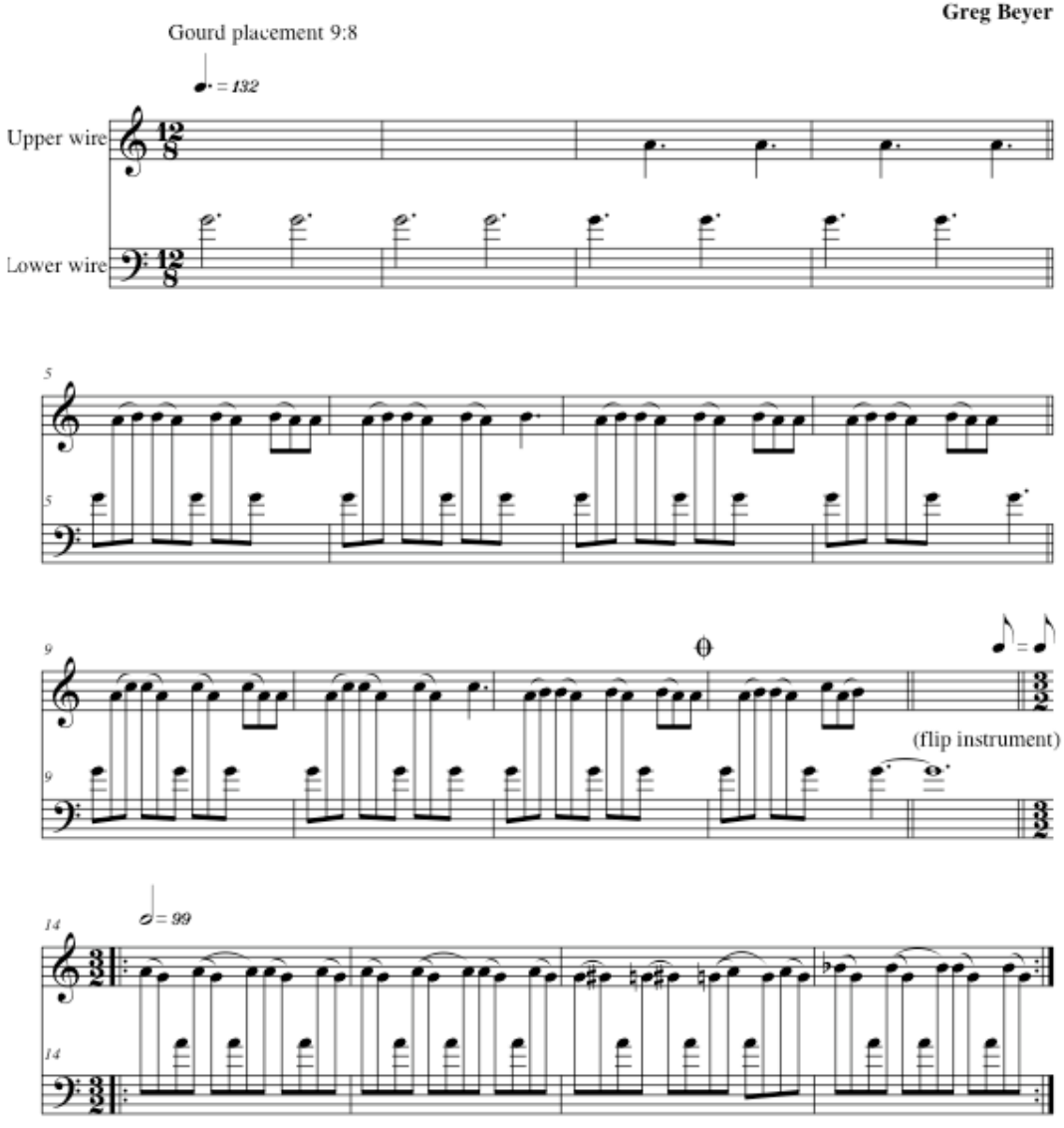
The ratios were derived utilizing all non-duplicitous whole-number ratios using the numbers 1-7. Only once did I go beyond this point, in the case of the 9:8. This exception I felt justified upon the fact that the gourd placed at this ratio produces a fairly true major second. The various placements of the gourd, then, on an instrument tuned to the same open pitch, is now capable of an octave-and-one-half in terms of its open pitch played on one side. However, it is an easy matter to simply flip the instrument over. Playing on these upper pitches opens the compass up to about two full octaves. It is possible to go further still, but the quality of tone really starts to thin out past a certain point.

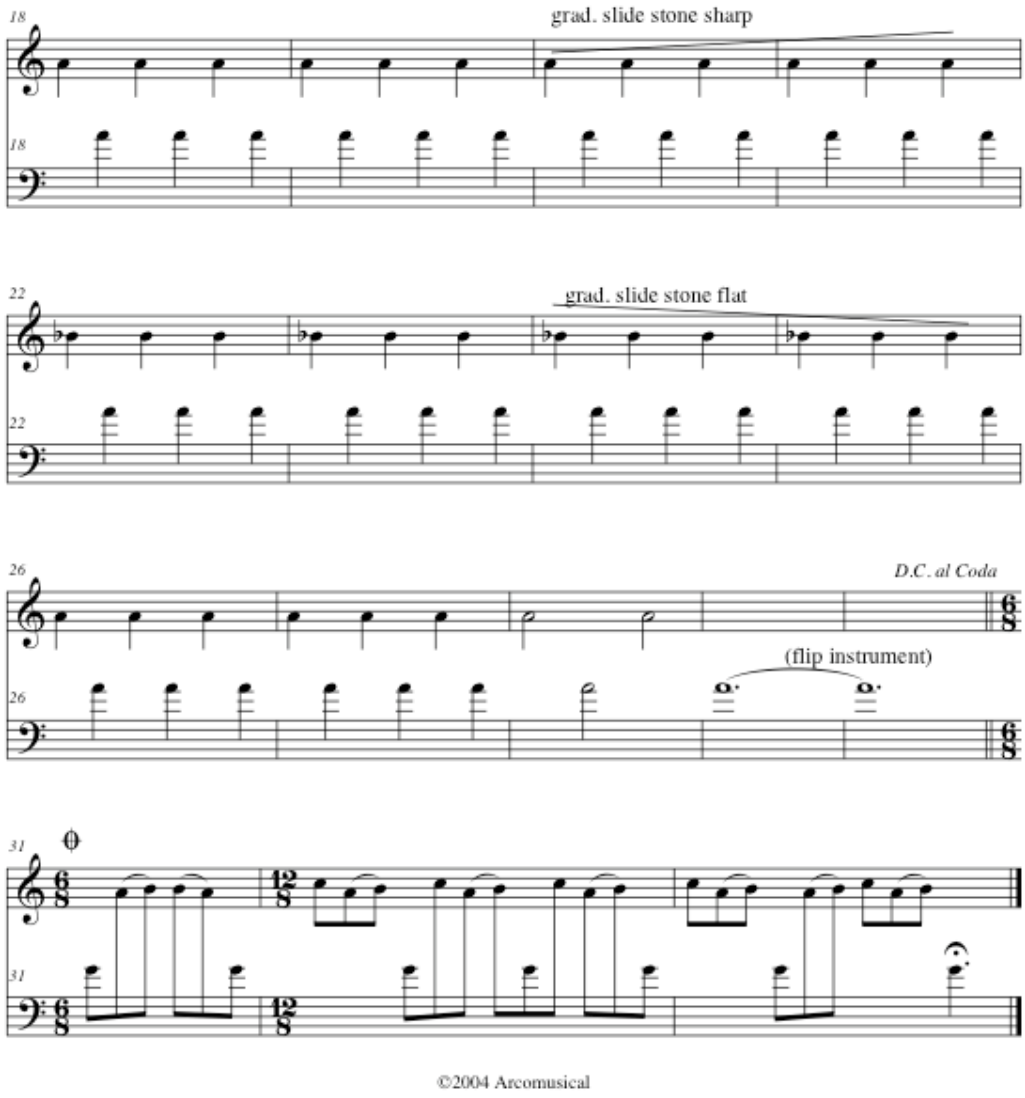
The tunings that reach below an octave between the two sides of the bow are most promising. The tension on both sides is more equal, and so the quality of sound produced from one side to the other is more homogenous. Furthermore, in such tunings the potential for melodic playing is an entirely new possibility.

To demonstrate this, I have written a short ‘tune’ based on the gourd placement 9:8, yielding the pitches g and a above middle c.

Home-ing

Greg Beyer





A couple of notes on this piece may help clarify what is new about the technique. First, the employment of two clefs is meant to indicate upper and lower sections of the string. The upper part is always on the first staff, while the lower part of the string is on the second staff. The notation attempts to reflect the playing technique. The pitches themselves will shift according to what direction the bow is held. At m. 13 and again at 28-29, the player needs to turn the instrument over and prepare to play on the other side of the instrument. The playing technique is exactly the same; only the side is different. What this allows is a whole different set of pitches for the coin or stone to explore.

Because the gourd is placed in the center of the instrument, the length of both segments of wire is much shorter than the normal length of the upper segment of the wire on a typical berimbau. The result is that the coin is able to grab intervals large than the usual major second. In this case, a minor third is possible, as well as the major and minor seconds. In the first half of the piece, then, the available pitches are the open G and A, and with the coin above the A segment, B-flat, B, and C. In the second half of the music, the available pitches are again the open pitches G and A, and with the coin operating on the G segment, A-flat, A and B-flat. What is striking about the figure in m. 14 is the use of the same pitch on both sides of the wire. This *bisbigliando* effect, or 'timbral trill', is similar to that of the phenomenon discussed in Andy Noble's *Just Visiting*. In this case, however, the two different versions of the pitch A are on the same instrument. Along the same line of thought, another aspect of playing becomes possible. On either side of that same A, the coin is capable of micro-tonal slides above and below this pitch. This technique is explored briefly in mm. 18-25.

Two-Stick Playing

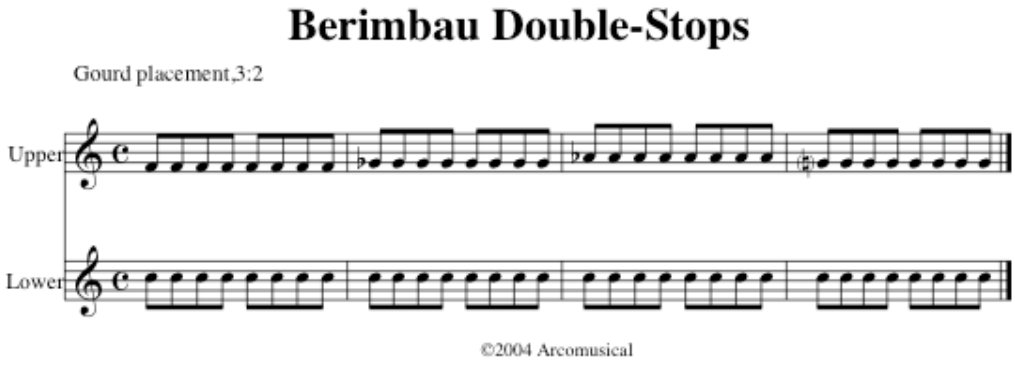
This technique is not of my own invention, but rather something written about in great detail in Luiz A. Da Anunciação's manual on the berimbau from 1990. In a dedicated section of nearly fifty pages, Da Anunciação explicates this two-stick technique, including various photos, explanations, thirty exercises, and a duo written for berimbau and guitar. The basic technique he espouses strikes me as an attempt to translate the independent four-mallet grip of Leigh Howard Stevens developed for the marimba. Da Anunciação goes to great lengths to show the benefits of independent strokes with each of the two sticks. Although the grip has a similar appearance to the Stevens, it unfortunately does not provide an adequate way to produce separate strokes of equal strength with both sticks.[8] The angle of the sticks in the hand simply do not function cooperatively with the natural physiology of the hand and arm to make independent strokes work. That said, this two-stick technique is *extremely* useful in the creation of

[8] Luiz A. Da Anunciação, *A Percussão dos Ritmos Brasileiros – Sua técnica e escrita,* volume 1, "O Berimbau", (Rio de Janeiro: Editora Europa, Escola Brasileira de Musica, 1992), 88. See this and other photos in this section of the book.

new sounds, for with it double-stops are possible. Da Anunciação shows a variety of ways to use the two sticks to create interesting simultaneous sounds between the gourd and the wire, the gourd and the staff, the staff and the wire, or both sticks on any one of these sources in a quick tremolo. He mentions striking the wire in various regions, including between the coin and the bridge, (*antes do cavalete)*, and below the bridge, *(depois do cavalete)*. He goes on to mention, however, that these sounds are 'short and of little vibration' because of the short length of the wire in either of these two places.[9]

While he is certainly correct about the sound of the wire between the coin and the brace, if the placement of the gourd moves toward the center of the instrument as per the above discussion, the 'lower' section of wire *depois do cavalete* is a very musical sound to be made use of.

The combination, then, of this technique so thoroughly explained by Anunciação and various gourd placements yielding two pitches an octave apart or less, creates the very real possibility for the berimbau to play dyads that imply harmonic motion.



In a closing sentiment, Anunçiação states that the discovery of different manners of playing the berimbau will always exist due to the fruit of individual creativity and

[9] Ibid, 86.

inventiveness.[10] While this is certainly the case, it also should be said that no one creates ideas without inspiration from others. The above example is good illustration of ideas colliding to create greater possibilities or newer manners of playing.

Fortunately, the berimbau has become an instrument known the world over, and many people are creating new paths, new manners of playing. N. Scott Robinson, in a recent encyclopedia article about the berimbau in popular music, cites an incredible list of innovators and composers for berimbau. This list includes art music composers Mario Tavares, Luiz Augusto Rescala, and Gaudencio Thiago de Mello; Brazilian popular music composers and performers Baden Powell, Astrud Gilberto, Gilberto Gil, and Caetano Veloso; and percussionists Dom um Romão, Guiherme Franco, Airto Moreira, Naná Vasconcelos, Paulinho da Costa, Djalma Corrêa, Papete (José de Ribamar Vianna), Luis Agudo, Onias Carmadelli, Okay Temiz, Bill Summers, Ray Armando, Curt Cress, Alan Lee, Marta Contreras, Seichi Yamamura, Peppe Consolmagno, Dinho Nascimento, Rosario Jermano, Paolo Sanna, Frank Colon, François Malet, Mataro Misawa, Tim Aquilina, Alex Pertout, Joca Perpignan, Nuno Rebelo, Tim Hurley, Richard P. Graham, and Richard Goodhart.[11] While the degree of exploration that each of these artists give to the berimbau may differ, the point here is that there is an active culture working with the berimbau in an attempt to make it function above and beyond the realm of traditional capoeira playing.

> Through the process of reinterpretation, the increased range of diverse performance techniques [comes] to better fit the needs of musicians [using] the berimbau in new contexts, and this [facilitates] the use of the instrument outside of capoeira and beyond Brazil.[12]

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[10] Ibid, 130.

[11] N. Scott Robinson and Richard P. Graham, "Berimbau," *Continuum Encyclopedia of Popular Music of the World, Volume 2: Performance and Production,* ed. John Shepheard, David Horn, Dave Laing, Paul Oliver, and Peter Wicke, (New York: Continuum, 2003, 348.

[12] Ibid, 349.

Epilogue

On January 29th, 2004, while in Bahia, Brazil on a fellowship from the Sacatar Foundation, I put on a concert at the School of Music of the Federal University of Bahia. The program was a strong representation of the works that have been discussed in this thesis. I included annotated program notes for each section of the concert, to help give a sense for the context of each piece for the audience.

O BERIMBAU:
Novas explorações com velhos instrumentos
Dia 29 de Janeiro de 2004 às 16:00 horas.
Escola da Música da UFBA, Sala 102.

Para introduzir o berimbau, escolhi iniciar o concerto com uns pequenos exemplos que revelam este instrumento num contexto bastante brasileiro. O berimbau pertence à família dos instrumentos musicais denominada *arcos musicais*. Chegou ao Brasil através escravos angolanos, estabelecendo-se nesta cidade do Salvador. Na Angola, o instrumento ainda existe, pelo nome *hungo*. Quando *hungo* foi introduzido no Brasil, adquiriu a denominação, em português, de *berimbau*. A prática da capoeira foi o grande motivo para que ainda perpetue esta forte tradição do berimbau no Brasil. Segundo a análise do grande berimbauísta, Déo Lembá: *sem a capoeira, talvez o arco musical fosse um instrumento inexpressivo e tivesse desaparecido, como ocorreu em muitos estados brasileiros, onde não existem registros sobre seu uso.*

Naná Vasconcelos é um dos grandes mestres da percussão reconhecido no Brasil e mundo. Através de suas músicas e as gravações pude conhecer o instrumento nos Estados Unidos. Desde então, fiquei completamente encantado com o instrumento, e encontrei várias maneiras de se obter sons diversos do berimbau, aliado a umas aulas para que pudesse desenvolver uma boa técnica. Talvez isso tenha sido o mais importante, embora tivesse transcrito muitas músicas de Naná para aprender essa linguagem musical.

Começo a programa, então, com uma ladainha bem tradicional contextualizada na capoeira, uma louvação de Zumbi, o Rei dos Palmares. Logo depois, entro tocando a terceira parte de *O Berimbau*, que Naná gravou em ano 1980, num disco intitulado *Saudades*. Eu adquiri minha própria técnica, baseada em música tradicional e também progressiva, mas, uma vez, numa aula particular com o capoicirista e percussionista que reside em Nova York, apelidado de Cabello, ele disse uma coisa inesquecível: *pronto, está tudo bem que você sabe tocar como Naná Vasconcelos, mas você não pode SER Naná. Tem que achar seu caminho próprio com o berimbau.*Fiquei pensando: 'como posso achar um caminho com este instrumento, que não faz parte da minha própria cultura? Talvez eu posso tentar introduzir o berimbau dentro do meu contexto musical, a música contemporânea clássica. Desde os últimos quatro anos, eu continuo com os meus trabalhos nesse estilo.Comecei perguntando aos meus amigos compositores se eles gostariam de escrever uma peça para berimbau solo.

Just Visiting (2001) **Andrew Noble**
Através da colaboração nesta peça, eu e Andy nos tornamos grandes amigos, fato este que eu espero seja óbvio pela execução de hoje. Ele teve muito sucesso escrevendo uma peça linda para seis berimbaus (cinco deles pré-gravados). A atmosfera criada pela música é assombrosa, como se fosse um ritual dos primeiros dias do arco musical no mundo. Relata a magia mística do poder de uma simples corda sozinha a vibrar.

Íris (2001) **Alexandre Lunsqui**
Como *arco-íris*. Alex, um paulista que mora em Nova York, muito amigo meu, sendo que esta amizade ficou forte pelo processo dos nossos trabalhos conjuntos nesta peça. Alex teve a inspiração na idéia da 'mentira', encontrada nas letras das músicas de capoeira. Ele disse isto sobre nossos trabalhos: *propor novas maneiras de tocar berimbau é propor liberdade. Não posso compor qualquer música que fica somente engraçada e gozada; compor nova música para o berimbau é fazer uma declaração cultural e política. A libertação dos escravos foi uma mentira; a única coisa que podemos fazer é agir diferentemente agora, sem racismo, com igualdade de oportunidades. É um assunto complexo...*"A história nos engana…Diz tudo pelo contrário" *Não podemos alterar o passado, mas podemos tentar mudar nosso presente.*

An Apotheosis of Archaeopteryx (1979) **Lejaren Hiller**
***Participação especial*: Lucas Robatto**
Outra maneira de desenvolver um trabalho com berimbau foi pesquisar o que já foi escrito pelos outros. Entre vários outros, encontrei este *duo para piccolo* e berimbau. No ano 1979, deve ter sido a única peça para o berimbau escrita no campo da música erudita nos Estados Unidos. Foi encomendada por um flautista para completar uma gravação das músicas para *piccolo*. O disco é chamado, *For the Birds*, e o Hiller brincou com esta idéia na título da peça. O *archaeopteryx* era o primeiro pássaro do mundo…um pássaro arcotípical, um dinosauro com penas. Isto tem a ver com idéia do berimbau como instrumento musical arcotypical. Hiller não sabia bem as tradições do berimbau, e isto foi uma coisa boa, porque escreveu uma música que não é possível com a técnica tradicional do berimbau. Eu tive que desenvolver uma nova técnica para encontrar todas as notas. No fim das contas, a parte do piccolo é muito mais complicada do que a parte do berimbau, então neste momento eu quero agradecer a Lucas Robatto, excelente flautista e grande companheiro.

Bahian Counterpoint (2002) **Greg Beyer**
(Hommage à Steve Reich)
A primeira vez que ouvi a peça de Steve Reich, *Electric Counterpoint*, escrita e executada para o guitarrista famoso, Pat Metheny, fiquei encantado. Naquela época já estava tocando berimbau, e intuí que deveria fazer uma música parecida para o berimbau. Era uma encomenda do Steve Reich e eu achei impossível naquele momento concretizar essa idéia…tinha então que compor minha própria peça e foi o que fiz. Tive a boa sorte de estrear o primeiro andamento, no verão de 2002, no Festival *Bang on a Can*, com o Steve Reich, em público. Foi bastante elogiada, e esta afirmação incrível me incentivou a continuar. Agora a peça tem três andamentos e no segundo e terceiro também são utilizados material do vídeo. Quero agredecer a Evan Ziporyn, que me ensinou as estruturas musicais de *katchak* de Bali. O segundo andamento é para ele. Quero também agradecer ao *Banff Centre for the Arts*, na Canadá, pois sem o apoio deles esta peça nunca teria sido completada. Obrigado.

Program from my concert at the Federal University of Bahia.

Beyond the simple love of playing, I must admit I had an agenda behind this concert. I wanted to know how people would react to the work. Influenced to a large degree by the writings of Steven Feld, I wanted to discover whether or not this project seemed in any way fraudulent, patronizing, or appropriative to this group of musically-minded Brazilians. Feld has written extensively on issues of globalization in music. While he makes the effort to objectively compare and contrast the 'celebratory/contentious' dialectic that surrounds musical globalization, he ultimately posits an 'anxious' concern for the negative impact on musical and cultural diversity as a result of first-world exploitation of third- and fourth- world sources.[1] To act upon these concerns, he has taken on the role of an international 'private detective', making phone calls and sending letters of inquiry to various members of the music community, just as often representatives of the music industry as musicians themselves. He attempts to point out where appropriation through digital sampling and recontextualizing has taken place and to force the question of true property rights. "Whose music is it?"[2] This sort of question becomes most relevant when artists who are members of the incredibly powerful corporate musical world use materials of third- and fourth- world musicians as a basis for their own mega-hits. The enormous amount of revenue generated in such scenarios is almost never returned in any small percentage to these 'original sources'. The responses that Feld uncovers typically reflect the imperial attitude of someone in control and authority.

In what sense can my project be seen as an example of musical globalization trends? Is my use of the berimbau as a catalyst for the creation of new music simply a gimmick or a career-shaping device? Does it smack of appropriation and reflect a model of exploitation without returns?

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[1] Steven Feld, "A Sweet Lullaby for World Music," *Public Culture*, (12, 1, 2000), 145 ff.
[2] Steven Feld, and Charles Keil, *Music Grooves*, (Chicago: University of Chicago Press, 1994), 238.

At the end of the program, I was elated and perhaps a bit relieved to discover that the work was received enthusiastically. I received a standing ovation, in fact, for my piece in particular, and perhaps for the concert as a whole. Many different people approached me, all stating how delightful they thought the presentation was and that it was a sincere, respectful work for the berimbau. Many of the percussionists in attendance wanted copies of my score and CD, and many of the composers wanted my contacts to be in touch regarding future collaborations. Indeed, in the two weeks that followed, I got together with various composers to show them the berimbau more up close.

* * *

A couple of weeks later, on February 14th, I had the pleasure of spending time with Naná Vasconcelos. I was mostly concerned with showing him the transcriptions of his work that I had done, but I also wanted to let him listen to and watch a bit of *Bahian Counterpoint*. Again I was happily surprised to hear him exclaim his excitement and make statements of acclaim and beauty. He became genuinely excited:

> How did you tune them? My God, how beautiful! Wow, you need to write more now. You are really into simple pulses here (referring to the opening of the first movement) but now try to add some rhythm to it! And change the tuning! But this, no don't touch this piece, this is perfect…write a new one![3]

* * *

It was additional confirmation to read Feld's own statements about his recording project, *Voices of the Rainforest*, as he struggled through the complex web of ethical concerns as related to himself. This project, the representation of years of his own field work among the Kaluli of Papua New Guinea, was produced for Mickey Hart's series, *The World*. Co-opting the techno-activist stance of Hart himself, Feld took on the work of recording the sounds of the Kaluli rainforest home with all of the most advanced technological resources. He additionally used the multi-track studio environment to enhance the depth

[3] Taken from personal conversation on February 14, 2004. My translation.

of his recordings as he imagined the Kaluli themselves experience this setting. His work was done with passion in the firm belief that this highly successful commercially available recording would positively impact the Kaluli.

> Let me state the stakes more bluntly and personally. I find the sound world in Bosavi to be powerful and unsettling; more important, it can still be heard. Because my role in Voices of the Rainforest is equal parts researcher and sound artist, I feel a need to amplify that world unashamedly, in the hope that hearing it might inspire and move others as it has inspired and moved me.[4]

Sentiments of powerful inspiration rang true to my own conception of *O Berimbau*. However, Feld ends his discussion this way:

> I must acknowledge that my passion for sharing what I've been privileged to experience cannot mask my complicity with institutions and practices of domination central to commodifying otherness.[5]

That Feld registers weighty concern about his position as a prime mover in the commodification of something he loves and respects is indicative of someone with a deep sensitivity. His thoughts and writings clearly display a strong awareness of "self" and "other" and the dynamic interplay between the two. His artistic choice to create an hour-long sonic journey through a full day's worth of sounds rested upon *years* of direct contact with and intense study of the Bosavi and their natural surroundings. He did his homework.

* * *

My project, focusing as it does on the berimbau in the context of the Western new music tradition, by definition falls into a historical line within the canon of Western art music, that of "experimental Orientalism," or more tongue-in-cheek, of "contemporary

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[4] Steven Feld, *Music Grooves*, (Chicago, Univ. of Chicago Press, 1994), 286-7.
[5] Ibid, 289.

chinoiserie."[6] John Corbett defines "chinoiserie" as the appropriation of "exotic sounds, textures, instruments, voices and shapes of non-Western music…for use in a new-music context."[7] Although the term has obvious negative connotations, John Corbett makes the case that Orientalism in the experimental tradition is an inevitable aspect of global culture, a looking-glass upon the other and at the same time a mirror upon the self.

> Though we should not avoid the fact that there can, indeed, be a sinister side to the practice, it seems relevant to try to fully think through these issues before lumping all such borrowings together, bundling them up and tossing them overboard. Even if such dismissal or dressing-down were desirable…utopian separatism just is not feasible.[8]

From Cage, Cowell, Harrison, Partch, to Reich, to Jon Hassell, Brian Eno, to improvisers David Toop, Paul Burwell, and Clive Bell, to John Zorn, Corbett intelligently traces a lineage of western composers who have actively borrowed from or been inspired by the music of other cultures to create their own aesthetics. He also recognizes, just as Kubik did regarding the African-Brazilian-African transmission of culture during the era of the slave trade, that cultural transmission is not a one-way street. Writing about composers such as Takemitsu and Tan Dun, Corbett states:

> The deep complexity of neo-Orientalist strategies is revealed: an Asian composer in the West uses techniques devised by a Western composer inspired by Asian philosophy—the work is played for an Asian audience which hears it as an artifact of the bizarre West. Orientalism is reflected back-and-forth like a musicultural *mise-en-abyme*.[9]

* * *

My own story, I feel, is another facet of this very same complexity. This dissertation is a product of my own immediate, visceral engagement with the berimbau itself. I love to

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[6] John Corbett, "Experimental Oriental," in *Western Music and its Others*, ed. Georgina Born and David Hesmondhalgh (Los Angeles: University of California Press, 2000) 172.

[7] Ibid.

[8] Ibid, 163.

[9] Ibid, 180.

play it. My interest in the music of Reich is not just a response to Reich. The first time I heard *Electric Counterpoint,* I heard the berimbau *inside the music*. My close connection to the *instrument* allowed me to perceive Reich's music in an arguably unique way: a performer/composer in the West, deeply inspired by the sound of an instrument from Africa/Brazil and by direct contact with its culture, finds familiar territory inside the music of another Western composer whose music is guided by non-Western rhythmic processes, via the soundworld of the instrument in question.

Reich fought back temptations to use African instruments in his music, opting instead to co-opt non-Western structures and processes. The use of such sounds, Reich felt, would be put-on, would be cheap imitation. While Corbett points out examples of such superficiality, from my vantage point I can comfortably disagree with Reich's sentiment. My commitment to developing a virtuosic skill level on the berimbau and my dedication to the study of its history and culture refutes any notion that I'm "*just visiting",* that I am a musical tourist on an "overdetermined cruise ship"[10] headed south. I hope to have shown that the berimbau is something beautiful, an instrument with an undeniable performance history and tradition, and with an open-ended future. I hope to have illustrated that the berimbau is capable of a complexity of musical expression that is worthy of pursuit in its own right.

[10] Ibid, 163.

Glossary

Agogô. A double-bell made of iron or zinc, typically used in Brazilian popular music, especially *samba*. The two bells are held together via a curved flexible metal rod. Such flexibility allows the two bells to be clacked together, and this is often done rhythmically 'in-between' the notes that are struck on the bell with a stick. Its origins are Yoruban, not Bantu, and as such is typically a feature of *Candomblé*.

Atabaque. A single-headed barrel drum very similar to a Cuban conga. Its typical uses are in ***Candomblé*** and ***capoeira***.

Baião. A popular rhythm from the northeast of Brazil. Before the creation of *bossa nova*, it was a largest influential rhythm from Brazil known in the rest of the world. In an oversimplification that works for the purpose of this thesis, it is typified by the following 2/4 ostinato: dotted-eighth, dotted-eighth, eighth.

Bandeirante. Portuguese term for a bounty hunter or free-lance soldier.

Batá. An hourglass-shaped double-headed drum from Cuba with Yoruban roots. In, Cuba it is typically played in groups of three, thus bearing a certain cultural relationship to the playing of berimbau in Capoeira Angola.

Bate-bate. Lit. "strike-strike" or "hit-hit". A northeastern Angolan musical instrument that consists of a large and lengthy piece of hollowed bamboo that is struck with a stick. Its musical role is something similar to the role of the *timbale cascara* in Cuban popular musics, for example, i.e. it beats out the musical timeline around which the rest of the music flows steadily along. The issue of musical timelines in African music is substantial, and it is characteristicly Bantu that the instrument responsible for this function is wooden or vegetal, as opposed to metal, more commonly found in Yoruban culture. See ***agogô.***

Berimbau. A musical bow of Brazilian origin with clear ties to African instruments, especially the Angolan ***hungo*** and ***mbulumbumba.***

Berra boi. Another name for the largest member of the 'berimbau family', the *gunga*.

Bisbitgliando. Italian term for a "timbral trill" on a musical instrument. Such an effect is typically generated by playing the same pitch in two different manners, e.g. on a flute with different fingerings; on a harp with two different strings. In the case of the musical bow, this becomes possible when the gourd is placed toward the center of the bow so that the two divisions of the string are similar but not exact. The coin, stone, or other implement then makes up the difference on the longer of the two sections of string, so that the pitch gotten on both portions of the wire is as close to identical as can be gotten.

Bossa nova. "A new way of doing something". A style of Brazilian samba developed in Rio de Janeiro in the 1950's, characterized by a slow tempo and jazz-inspired harmonies.

Bumba meu boi. A comic dramatic dance and popular celebration common in the interior regions of Brazil, Humberto de Campos for instance, where cattle hearding is a common form of agriculture.

Cabaça. The gourd resonator that acts as the sound-box for the berimbau**.** It is made from natural vegetable material, a dried squash of a particular variety.

Caixa. Literally "box". A common name for a small, double-headed high-pitched drum with snares, commonly used in Brazilian popular musics, especially ***samba***.

Calabash. See ***cabaça***.

Cavalete. The 'bridge' of a braced gourd-resonated musical bow. It is the point where the ***tuning noose*** contacts the string. *Antes do cavalete* literally means "before the bridge", while *depois do cavalete* means "after the bridge"; 'above' and 'below' respectively.

Candomblé. The syncretized religion with Yoruban and Catholic components. Developed by African slaves in Brazil as a means to maintain their religious traditions under the guise of practicing Catholicism.

Capoeira. The Afro-Brazilian martial art developed by African slaves brought to Brazil. It has strong connections with Angolan culture. It is the traditional context for berimbau playing in Brazil. There are two principal forms of this game, *Regional* and *Angola*. The latter is considered the more traditional form, and it is in *Angola* where the berimbau is played in a family of three instruments. *Regional* is largely influenced by other martial arts, and in this form the athletic aspects of the game are by far more enhanced, while the music takes a lesser role. Only one berimbau is played in a *roda de Capoeira Regional*.

Capoeiristas. Practicioners of capoeira.

Cavaquinho. A four-stringed, very small member of the guitar family. Its accompaniment is very commonly heard in Brazilian popular musics, especially *samba*.

Caxixi. The wicker and gourd rattle that acts as the traditional accompaniment to the berimbau, especially when played for ***capoeira***.

China cymbal. A cymbal with a flanged edge, designed to create a sound with a large white-noise component.

Chipendani. A mouth-resonated musical bow of Zimbabwean origin. There is a very nice picture of a *chipendani* player on the front cover of the paperback edition and accompanying CD to Gerhard Kubik's *Africa and the Blues*. Unfortunately, however,

there is no *chipendani* playing on the CD, nor is there any mention of it in the book. Kubik, well aware of this misleading representation, informed me that it was a decision of the publisher, not of his doing.

Choro. Brazilian style of music created in the late-nineteenth century in Rio de Janeiro. It combined Brazilian and African rhythms with melodies inspired by European popular musics and forms. The rhythmic feel is typically 2/4, marked by 16th-note melodic phrases and a sentimental pathos.

Chula. The second of three song forms of *capoeira Angola.* The *chula* is a call and response type of song in which the chorus repeats verbatim the short phrases of the soloist. These phrases are standard and forumulaic, usually singing praise for one's teacher, or to God, etc. It is always the signal the the game inside the *roda* is about to begin. (*É hora, é hora!* "Now is the time, now is the time!")

Corridos. The third of three song forms of *capoeira Angola*. These songs take the form of call and response, but the chorus has a standard response for each song. The soloist makes the particular song clear, but then may take the freedom to expand the lyrics in the moment to fit the context of the game inside the *roda*. The standard phrases of these songs, however, already are meant to relate to the game at hand, at times asking the players to speed up the fight, at others asking the game to come to an end.

Dikanza. Northeastern Angolan term for a bamboo scraper. See ***reco-reco.***

Dituika. Musical style from northeastern Angola, very similar to the *semba*.

Djembe. An goblet-shaped drum from Senegal and surround regions in Western Africa. Its shell is typically carved from a tree trunk and to this is fastened a goat skin.

Encostada. See ***repique.***

Frevo. A popular music from the northeast of Brazil, with roots in military band music from the turn of the 20th Century.

Hungo. A musical bow commonly found in the northern regions of Angola. An important ancestor of the berimbau.

Ladainha. "Litany". The first of three song forms used in a *roda* of *capoeira Angola*. The *ladainha* is a solo type of praise song, singing respect for God, or for great historical players of *capoeira*, or praising heroic figures in the Afro-Brazilian consciousness, like Zumbi.

Malandragem. The art of trickery and treachery that is an integral aspect of a well-played game of *capoeira*. It clearly reflects *capoeira's* history, having grown out of the Afro-Brazilian experience of slavery, when truth, trust and fair-play were relative terms not to be counted upon.

Maracatú. An Afro-Brazilian semi-religious parade-like procession that occurs with most force at Carnival time in Recife, the capital of Pernambuco state in the northeast of Brazil.

Mbira. One name of many for the lamellophone instruments that come from sub-Saharan Africa. *Mbira* specifically refers to one particular lamellophone from Zimbabwe.

Mbulumbumba. A musical bow common to the southeastern regions of Angola. An important ancestor to the berimbau.

Médio. "Middle" or "medium". The second of three in the berimbau family. The gourd size is 'medium', larger than that of the *viola* but smaller than the *gunga*.

Mestre. A term of respect, lit. "master", used in capoeira for those who have become respected masters of the game, and typically who have started schools of their own.

N'golo. An Angolan fighting game associated with ceremonies concerning puberty and rights of passage from childhood to adulthood. This is, according to a theory popular among *capoeiristas*, the ancestor of capoeira. It is a contest between two boys that imitates the fighting between male zebras during rutting season. Consequently, the zebra is an important icon of *capoeira Angola.*

N'goma. Bantu term for "drum".

Nordeste. Literally, "northeast". Refers to the northeastern region of Brazil. Salvador da Bahia, the home of *capoeira*, and Recife, the birthplace and current residence of Naná Vasconcelos, are both located there. It is a region with rich African traditions and strong folklore.

Orixás. The pantheon of gods and goddesses that are the central figures of *Candomblé*.

Pandeiro. A Brazilian tambourine, distinguished by its convex sets of jingles.

Quilombo. The name for runaway slave colonies in Brazil that were numerous during the 18th and 19th centuries. Slaves living there came to be known as *quilombolos*.

Reco-reco. A scraped percussion instrument. There are various forms in Brazil, but the one most commonly used in *capoeira* is a 2-3 foot length of bamboo, hollowed out and serrated on one face so that a stick may be rubbed against the instrument to create rhythmic scraping. Similar to the Cuban *guiro*.

Repique. The buzz-tone of the berimbau, produced by loosely holding the coin or stone against the wire while striking the wire with the stick. Also known as ***encostada.*** Also an alternative name for ***repinique,*** a high-pitched double-headed marching drum without snares, commonly used in Brazilian popular musics, especially the ***samba.***

Ribbon crasher. A metallic percussion instrument of fairly recent invention, consisting of one or more thin metal 'ribbons', that are suspended freely and struck with a stick to generate a sound with a strong white noise component.

Roda. Lit. "wheel". The circle inside which games of capoeira are played.

Rumba. An urban secular folkloric rhythm, dance and song style from Cuba. Its most common forms are *columbia, guaguanco,* and *yambu*. It is largely influenced by African drumming, singing and dancing, but the lyrics are almost exclusively in Spanish. This is not to be confused with the dance craze of the 1930's known as *rhumba*, a style much closer to another popular Cuban ballad rhythm, *bolero*. In any case, Kubik's reference to *rumba* in the case of Virasanda's bow song refernces the *tresillo* clave pattern inherent in many forms of Cuban popular musics.

Samba. The most popular rhythm and songstyle of Brazil. Its rhythmic feel is 2/4, with an accent on the second beat. It has strong musical and linguistic ties with a popular music and dance from Angola, ***semba.***

Surdo. A large and low-pitched double-headed drum, commonly used in Brazilian popular musics, especially ***samba***.

Tamborim. A very small one-headed drum commonly used in Brazilian popular musics, especially *samba* and its derivatives. It is one of the instruments chiefly responsible for outlining the timeline of the music.

Tate-kulu. The Luhandan term for God.

Terreiros. The 'houses of worship' for *Candomblé*.

Toque. Generally translated to mean "rhythm", this word refers to specific rhythms with names that designate their specific function within a game of capoeira, or their cultural connection with African cultural elements in Brazil. This term is also used in Afro-Cuban musical culture.

Tostão. An antique Brazilian coin no longer in circulation as currency. Perhaps one of the first substitutes for a stone while playing berimbau.

Tuning noose. Term for the cord that connects the gourd to the stave and wire of a 'braced' musical bow, like the *berimbau, hungo, xitende*, or *mbulumbumba*. Because it puts a great deal of tension upon the string, it has the capability to change the resultant pitch of the string, thereby 'tuning' it. The size of this cord loop or 'noose' is directly responsible for the degree of tension it puts upon the string. This is one important aspect to consider when tuning a 'braced' musical bow.

Udu. An earthenware percussion instrument of West African origin.

Ugubhu. Unbraced, gourd-resonated musical bow from eastern South Africa. This name is the Zulu name for the instrument; it is known as ***uhadi*** among the Xhosa. The primary exponent of this instrument was Princess Constance Magogo kaDinuzulu (1900-1984).

Uhadi. The Xhosa equivalent to the Zulu ***ugubhu*** musical bow.

Umakwheyana. A South African bow of more recent vintage than the older, more traditional *ugubhu.* This Zulu instrument is said to have been borrowed from the Tsonga further north, there known as the *xitende*.

Urucungo. An older Brazilian term for the berimbau no longer in common use, although still understood by *capoeiristas.* Linguistically it has clear Angolan ties.

Viola. The smallest and highest-pitched member of the berimbau family in *capoeira Angola*. Its rhythms are highly improvised, and it is considered the small and playful child of the berimbau family.

Xichaya. Tsonga term meaning music performed by one person only, i.e. a solo.

Xilombe. Tsonga term for a wondering minstrel or solo musician. The *xitende* is a popular instrument for many *xilombe*.

Xitende. A gourd-resonated bow from the southern region of Mozambique, played by the Tsonga tribe. It is very similar to if not the same as the South African *umakwheyana*. Like the berimbau, the string is typically made from a filament of metal like steel; however, unlike the berimbau the general placement of the gourd along the length of the stave is toward the center, thereby dividing the string into two near-equal parts. The resultant tuning of this instrument is radically different than the berimbau.

Xizambi. A mouth-resonated scraped-bow of the Tsonga from southern Mozambique. The string is made of a thin strip of cane and is held up to the mouth. The lips of the performer surround one end of the cane, and by making the smallest of adjustments to the shape of the oral cavity, selected partials are amplified and thereby melodies are created. The sound itself is generated by rapidly scraping a stick along the serrated edge of the stave of the instrument. The stave is much smaller than a berimbau, typically between 30-40 centimeters, and along one side are a series of notched grooves. The instrument, then, is something of a hybrid between musical bow and scraped idiophone. For detailed information, see Thomas Johnston's detailed article on *xizambi* in *African Music* IV(4, 1970) 81-95.

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