Key Factors In The Evolution and Globalization of The Berimbau: How the Brazilian Musical Bow Overcame Social and Musical Limitations and Became a Global Icon of Music, Culture and Spirit.

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KEY FACTORS IN THE EVOLUTION AND GLOBALIZATION OF THE BERIMBAU: HOW THE BRAZILIAN MUSICAL BOW OVERCAME SOCIAL AND MUSICAL LIMITATIONS AND BECAME A GLOBAL ICON OF MUSIC, CULTURE AND SPIRIT

By

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Musical instruments, many of them in the percussion family, are among the cultural goods brought across the Black Atlantic during the periods of colonization. As New World cultures and traditions developed, these instruments developed their own identities and stories within these new social contexts. This study seeks to show how several key factors surrounding the berimbau—a Brazilian musical bow of African origin and modest beginnings—situated it as a global musical and cultural phenomenon. It also establishes a need to reframe the berimbau’s codification in music as an instrument of creativity and virtuosity, and a need to reframe its representation as a spiritual symbol, a tactile embodiment of a resistance movement, and a global commodity of Afro-Brazilian blackness. Finally, this study suggests the berimbau’s story as a framework for Afro-diasporic percussion instruments as symbols/commodities that applies to other instruments of African origin (the *conga*, *atabaque*, *batá*, *pandeiro*, *marimba*, etc.).
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Chapter 1 – Introduction and Literature Review

Introduction

Music is both a transmitter and mediator of culture and identity for every social group and subgroup. The way we produce, experience, and discuss music touches every node of academic thought: artistic, political, social, economic, literary, even scientific and engineering. We exert great, and much deserved, intellectual effort in understanding and questioning music’s role, and our role in music. To a lesser extent, we raise questions about the specific musical instruments that help carry this cultural significance: how old instruments make a new entrance into repertoire, be it folkloric, popular, or art music; how we reinvent them and give them new roles in new musical contexts; how we endow with extra-musical significance and how they gain new socio-cultural meaning over time.

This thesis seeks to put these questions to the Brazilian instrument the berimbau. It examines the ways in which the berimbau grew into what it is today, and all the socio-cultural iconography, mysticism, and repertoire that are attached to it. It posits that the berimbau was an unlikely candidate to become an international icon with a foothold in folkloric, popular and art music but that a confluence of several key socio-historical circumstances made that status a reality. While this work does not document the history behind the prevalence of a “myth of exclusivity,” the tendency to compartmentalize the berimbau as merely an appendage to the Brazilian tradition of capoeira, it challenges that idea by showing its growth and expansion across genre and geography. Lastly, it seeks to re-conceptualize the instrument as a repository of culture, identity, and heritage and
points to a need for musicians and scholars to recodify the way we discuss it in academics and notate it in music.

The *berimbau* traces its roots to African musical bows that were brought by the slave trade and re-created in Latin America. According to researchers, the *berimbau* had all but disappeared by the 1930s. In spite of this, the performance of the *berimbau* somehow transcended geographical and cultural boundaries, and, along with other African-derived instruments like the *pandeiro* or the *atabaque* drums of the *candomblé* religion, became as early as the 1970s, “one of the most prominent symbols of individual, collective, and national Brazilian identity" (Galm 2004, 30), while other instruments of African origin (the *agogô*) remained in the background or, like the *marimba*, became essentially extinct in Brazil.

For most of its existence in Brazil, the *berimbau* was a marginalized, peripheral instrument. It overcame social and organological barriers to become a multinational and versatile phenomenon. Some of these barriers this study addresses are: exclusivity of performers who used the *berimbau*, its narrow early repertoire and its limited “technical” musical versatility¹. When compared to other percussion instruments, it was a more limited instrument, at least in parameters within a popular or art musical paradigm. A review of academic and journalistic literature together with a review of samples of recorded music are used to show how the *berimbau* became a symbol of cultural identity,

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¹ Early models only had one tone and only one hand manipulated the instrument to make sound, which limited the density or velocity of notes to be played as well as the option for more than one layer of rhythmic patterns. Older performance techniques to change tone were limited and allowed the performer to produce either the fundamental tone, or a muted tone by dampening the cord with its fingers.
a versatile and global modern musical instrument, and to shed light on the nature of its exclusivity, or lack thereof, to the Brazilian tradition of *capoeira*.

**Literature review**

In his 1997 book *Fiddling for Norway: Revival and Identity*, Chris Goertzen raises the question of what an instrument can signify to the identity of a culture. The author delves into the repertoire and the cultural economy that surrounds the Norwegian fiddle tradition to show the ways in which the fiddle became and remained a repository of cultural identity in various regions of Norway. Much of Goertzen’s methodology falls out of the scope of this work and by his own account did not prove very fruitful (Goertzen 1997, 167–69). Nevertheless, it was a theoretical launching point for the premise of this thesis, in positing that a musical instrument can undergo a revival and become a tangible repository for cultural or national identity. David Beard's book *Musicology: The Key Concepts* is an informative reference guide to various theoretical and analytical topics, with an overview of each including citations of key academic contributions to each topic. I use his section on narrative to discuss the berimbau as a cultural symbol and a narrative archetype of an instrument as a medium of cultural transmission, preservation and promulgation.

There is little published academic work specifically related to the *berimbau* and its existence outside of capoeira. Eric Galm’s work constitutes the most in-depth research of any single scholar on the subject of the instrument itself. He offers thorough history and insights into what the berimbau was and has become. He has compiled and cited a number of historical records and paintings from his field research in Brazil that were key to the formulation of this work, which draws upon his book, *The Berimbau: Soul of*
Brazilian Music, and an article he published in the Luso-Brazilian Review titled “Tension and ‘Tradition’: Explorations of the Brazilian Berimbau by Naná Vasconcelos, Dinho Nascimento and Ramiro Musotto.” Galm also has done extensive research on those three berimbau performers, their repertoire and contribution to redefining the berimbau.

Henry Balfour published The Natural History of the Musical Bow: A Chapter in the Developmental History of Stringed Instruments of Music in 1899. This volume includes an encyclopedic description of dozens of musical bows arranged geographically. It helps corroborate some of the posterior research done, and posits with some evidence that these musical bows derived from weapons. Another scholar who provides invaluable insight into the early berimbau and its early stages of evolution is Richard Graham. His article “Technology and Culture Change: The Development of the ‘Berimbau’ in Colonial Brazil” gives descriptions of how the instrument was made, played, and portrayed that are supported by early accounts and depictions. He also expounds on the morphology of the term ‘berimbau’ and tries to link the current day instrument to various African predecessors. Some of these claims, specifically related to the morphology and linkage to African musical bows, are reinforced by Gerhard Kubik’s work, Angolan Traits in Black Music, Games and Dances of Brazil and Kazadi wa Mukuma’s Contribuição bantu na música popular brasileira. These sources are helpful in understanding the appearance and function of the early models and predecessors of the berimbau. Also, while Kubik and wa Mukuma disagree on the categorization of instruments, together they show the musical linkage between the modern berimbau and African musical bows. Kubik and wa Mukuna approach categorization from almost opposite directions. The former seeks to place the berimbau in a genealogical hierarchy
that overlooks social context and values; the latter refutes the berimbau as an African instrument but does not clarify how it differs from African musical bows.

Maya Talmon-Chvaicer’s book *Hidden History of Capoeira* is thorough in its treatment of capoeira, and within this research are insights into the relationship between police and capoeiristas, citing police and court records. This helps set the stage for how Getúlio Vargas used capoeira and by association the berimbau in the *Estado Novo* (1937-1945). Laurence Robitaille problematizes the globalization and commodification of capoeira in “Promoting Capoeira, Branding Brazil: A Focus on the Semantic Body,” and argues that the body of the performer is the site of cultural transmission. He provides a framework for how Freyre's theory of racial democracy affected capoeira. He also gives some historical perspective on the difference between *capoeira angola* and *capoeira regional*, a distinction that came about during the *Estado Novo* mentioned above.

"Carisma e poder" is a textbook-style summary of the main dates and figures in Getúlio Vargas' political career, and Mauricio Drumond's article "Sport and Politics in the Brazilian Estado Novo (1937–1945)" seeks to show how Vargas influenced sport in Brazil. I include these to corroborate these broad picture details and provide historical background to this thesis' claims about the impact the Vargas administrations had on the berimbau and *capoeira*. Both lack in-depth details and examination beyond a recitation of key political parties, organizations, and dates of pivotal events in the change of power at the national level.

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2 A nation-building program instituted by Getúlio Vargas, who was at various times from 1930-1954 President or Dictator of Brazil.
Kay Shaffer published a more didactic work on the berimbau, akin to a method book, which offers details on the construction and playing technique, but also includes some information on the history of the instrument and its name. Of particular value is the notation system used by Shaffer and its accompanying explanation. Regine Allgayer-Kaufmann and Galm created or explained the other notation systems cited in this work. The creation of notation systems provides concrete evidence of the berimbau’s entrance into modern musical genres, especially art music and genres typical of the concert hall. In “A Carioca Blade Runner, or How Percussionist Marcos Suzano Turned the Brazilian Tambourine into a Drum Kit, and Other Matters of (Politically) Correct Music Making,” Frederick Moehn writes about the revolution and revitalization of percussion in Brazilian popular music, principally of the pandeiro. He bases his arguments on repertoire and interviews by Marcos Suzano. This thesis uses Moehn’s article to situate the revitalization of the berimbau in relation to other Brazilian percussion instruments, using the pandeiro as a point of reference.

Larry Crook’s book titled *Brazilian Music: Northeastern Traditions and the Heartbeat of a Modern Nation* is an encyclopedic work on the music of the northeast region of Brazil. While Crook focuses on the musical genres, he does give some cursory information about the berimbau. Of most value to this work were his insights on pushback against capoeira—and by association the berimbau—by police and government entities, and the hybridity of Africa/Europe/Indigenous Brazil that is quintessential to the identity of modern Brazil. This hybridity is discussed in regards to religion and music from Brazil’s northeast region, and the same principles apply to the berimbau as it relates to the identity of Black Brazil. Timothy Taylor's article "The Commodification of Music
at the Dawn of the Era of 'Mechanical Music' attempts to provide depth to the concept of commodification using the piano roll players as an example. He approaches the debate from a Marxian perspective, so his critique of the theoretical depth of commodification centers on economics and does not touch on other problems within this topic. It is a useful starting point to discuss to what extent the berimbau as a souvenir affects the berimbau as a cultural artifact.

Robin Moore's book *Nationalizing Blackness: Afrocubanismo and Artistic Revolution in Havana, 1920-1940* deals with the evolution of Afro-Cuban music, dance, and theater through the lens of cultural appropriation and nationalization. Moore problematizes these topics in the context of race relations in Cuba, and compares them to similar themes in the United State. It proved particularly useful as a reference on these issues within Latin American music, and in showing how the berimbau diverges from Afro-Cuban instruments in the ways they were appropriated or assimilated into the broader social fabric of Brazil.

Along these key sources, several musical recordings and newspaper articles give scope to the extent to which the berimbau has become used throughout the world and in different genres from classical to rap to folkloric music. Chronologically, the song “Berimbau” by Brazilian guitarist Baden Powell is referenced as the berimbau’s beginning in popular music and mainstream culture. Caetano Veloso’s “Triste Bahia” is a later example, but referenced in similar fashion to Powell’s composition. “Berimbau blues” by Dinho Nascimento is used as an example of twentieth-century changes to performance techniques.
Chapter 2 - History and Construction of the Berimbau

Its appearance, use in folkloric, popular and art music

The modern berimbau has grown from a Brazilian phenomenon into worldwide reputation and fame. A fixture in folkloric music throughout most of the twentieth century, the berimbau was incubated in the Bahia region of Brazil and is an Afro-Bahian cultural icon. A descendant of African musical bow instruments, it is made from a long shaft of wood, usually four feet or longer, with a cord attached to either end that is struck with a thin stick to produce its tone. A resonator called a cabaca (occasionally referred to as a calabash) is made from a dried out hollow gourd, and is suspended by a string around the shaft and cord (see Figure 1). The weak hand supports the weight of the bow with the fourth and fifth fingers wrapped underneath this string.

Figure 1 - A berimbau
Performers over the years have used various methods to fret or dampen the cord to produce a limited variety of tones (Galm 2004, 33–37). The loop that attaches the cabaça to the shaft divides the cord in two; its placement should be approximately one-quarter length from the bottom of the shaft, this gives a 4:1 ratio between the short and long sections of the string “so that the shorter section sounds two octaves higher than the longer one…the corporal pitch of the calabash should be in unison with the string. To tune it the musician cuts off carefully some material from the orifice” (Kubik 1979, 32). The dobrão (Figure 2) is a small smooth rock or coin held between the thumb and forefinger of the weak hand—the same that supports the weight of the bow—and applies or releases pressure on the cord to change its pitch; the dobrão came into use after the musical bows were already established in Bahia.

Figure 2 - From upper left to bottom: a caxixi, dobrão, and stick (in Portuguese a baqueta or vara)

The modern berimbau is an integral part of a capoeira music ensemble. Capoeira is a martial art/dance/game that originated from Bahia. Two jogadores (players) are surrounded by an ensemble consisting of atabaque drums (hand drums similar in
construction to congas), *agogô* (two different-sized cowbells connected by an elbow joint), *pandeiro* (a hand-held frame drum with a goat-skin head and jingles embedded in the frame), and three berimbaus who play an interlocking call-and-response rhythmic melody. The *jogadores* engage in an intricate sparring match that is part dance, part fight and set to the music played by the ensemble.

Capoeira represents the musical and social context most often associated with the berimbau. The instrument has benefited in terms of exposure from this association. Observers and participants from around the globe can play or identify the berimbau based solely on that context. While gaining recognition and exposure, the ubiquity of the berimbau/capoeira union has created a myth of exclusivity. Both the *Encyclopedia of Latin American Popular Music* (Torres 2013) and the *Encyclopedia of Percussion* (Beck 1995) include the berimbau as a footnote in their sections on capoeira. Galm notes a common sentiment that both capoeira and the berimbau were tools that slaves used to escape and fight against the slave owners, and that the berimbau doubled as a weapon (Galm 2004, 50), which gives rise to the idea that the berimbau originated as a capoeira weapon that was later repurposed as a musical instrument. As stated in the introduction, this work seeks to disprove this myth that the berimbau is exclusive to capoeira, while acknowledging the importance of capoeira in its history and development.

**Origins and etymology**

Research of the early models of the berimbau indicates that the African instruments that were most likely the ancestors of the berimbau were “…from an organological pool that included several related Kongo/Angolan musical bows. The berimbau truly owes its origins to a number of these African prototypes, some
organologically, to others perhaps indirectly, through the virtue of cultural reinforcement" (Graham 1991, 1). Kazadi wa Mukuna makes the distinction that the berimbau is not an African instrument, rather a Brazilian derivation of African instruments. He does, however, note that some of the African musical material has survived in a similar form and “adapted” to a new function:

"Não deve ser demasiado enfatizar no momento que o berimbau, como é conhecido hoje no Brasil, não veio da África, mas extraiu seu modelo dos vários arcos musicais populares na área bantu, onde a escravidão foi praticada. O que é mais interessante é a sobrevivência do material musical que foi adaptado para uma função diferente” (Mukuna 2000, 165).

Among these likely candidates, the principal organological influences on the modern berimbau were the *hungu* from Luana, and the *mbulumbumba* from southwestern Angola. Richard Graham found descriptions of Angolan/Kongo musical bows from the 1800s that closely match the berimbau, as well as other musical bows from Peru (Graham 1991, 205). Kubik also believed the *mbulumbumba* and *hungu* to be the principal ancestors of the berimbau, even stating that “these instruments are virtually identical with the Brazilian *berimbau,*” and they “…are identical in the construction and the playing technique, as well as in the tuning and in a number of basic patterns played. The mode of attachment of the calabash, the division of the string 4:1, and most significantly, how the player holds it with his left hand are all identical” (Kubik 1979, 34). Mukuna also indicates the *mbulumbumba* as the African prototype most similar to the berimbau, although he does note that the *mbulumbumba*’s resonating gourd is tied near the middle of the bow, which is held diagonally (Mukuna 2000, 161, 165–66).

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3 “It cannot be over-emphasized at the moment that the berimbau, as it is known today in Brazil, did not come from Africa, but extracted its model from various musical bows popular in the Bantu area, where slavery was practiced. What is more interesting is the survival of the musical material that was adapted to a different function” (translation by author)
Oliveira Pinto agrees with these other researchers that there is congruence between the Brazilian berimbau and the African *mbumbumba* (Pinto 1996, 22).

In colonial Brazil, there were many variations on names and words, especially of African or indigenous origin. Shaffer included a table of names and the corresponding person who used that name. He explains that some phonemes were frequently exchanged, which he suggests explains some of the variations and similarities between names (i.e. *mbumbumba, m'bolumbumba, bucumbunga, bucumbumba*) (Shaffer 1977, 10–16). Some of the other African musical bows brought to Brazil were differentiated by where the resonating gourd was placed (sometimes in the middle as opposed to the lower fourth of the string), or how it was held (horizontally rather than vertically). There were also some differences in playing technique. Kubik commented on these differences, but did not believe they had much import: “Though the Angolan players whom I recorded held their instruments obliquely and not vertically like the Brazilians, this is a less significant trait, as it can easily change” (Kubik 1979, 34–36). To him, the most significant difference between the berimbau and similar African instruments is the use of the *caxixi* (a hand-held woven shaker that is discussed in later sections) in Brazil. He believed that it too was an African instrument, but was unsure of its origins. He notes many possible prototypes from various regions throughout Africa, but cannot definitively point to one single rattle instrument as the principal predecessor of the *caxixi*. Balfour did shed some light on what could be an ancestor of the *caxixi*, recording descriptions of bows in South Africa and Madagascar: the *zensilava* and *dicilavy*, respectively. They were both constructed of a wooden shaft, with a gourd tied around shaft and a fiber cord, held in the left hand against the performer’s chest. In the right hand the performer held a
stick and a rattle, similar to how a berimbau player holds a *baqueta* and *caxixi* (Balfour 1899, 1:34, 40). This description is the most congruent with the Brazilian berimbau of the 19th century, but makes no mention of any links between these instruments and any Brazilian predecessors to the berimbau, or the peoples of these areas and black populations in Brazil.

At some point in the nineteenth century, the various African models began to homogenize into a single musical bow, first known in Brazil under the name *urucungu*. The earliest recorded use of the term "berimbau" that I found came from an 1817 account by L.F. Tollenare:

> In 1817, L. F. Tollenare recorded in his Notas Dominicaes: "A cord of distended gut stretched across a bow and placed over a cavity formed by a gourd. I didn't observe if the music served to dance, and I say the same about the berimbau."… This is our first reference to the Brazilian musical bow with resonating gourd as a "berimbau" (Graham 1991, 7).

The term berimbau eventually replaced *urucungu*, which had become ubiquitous. The Portuguese term *berimbau de barriga*, where *berimbau* originally referred to a Jew's Harp, became the widely used term for all of the variations on the Afro-Brazilian bows. It is not clear why the term berimbau was used both for a musical bow and a Jew's Harp, although some African musical bows were held near the face, and used the performer’s mouth as a resonating chamber which is reminiscent of the Jew's Harp. The different “berimbau” (including harps and bows) were differentiated by the body part involved with resonating: *berimbau de boca* (berimbau of the mouth) for the harp and bows held up to the mouth, and for the bow held against the torso: *berimbau de barriga*, the Portuguese word for belly (Graham 1991, 5–7). Kubik is another scholar who believes the term berimbau derived from the Jew’s Harp, although he refers to the latter
instrument as a guimbarde (Kubik 1979, 33). Gunga is another early name for a musical bow that continues to be used today, usually to specify the berimbau of lower register among a capoeira ensemble.

Despite the consensus between these two researchers, there is another interesting possibility regarding the etymological origins of “berimbau.” Kazadi wa Mukuna believes the term berimbau to be derived from the quimbundo word mberimbau, which seems plausible although he does not indicate the meaning of the quimbundo word. He does propose that the “enigma de sua adaptação ainda tem de ser desvendado⁴” (Mukuna 2000, 115–16), suggesting perhaps that the significance of an etymological relationship between mberimbau and berimbau is a stretch.

Regardless of its origin, Graham believes that “the new blanket term 'berimbau' helped to relax Afro-Brazilian interethnic resistance to the technology sharing which eventually produced a single, pan-African musical bow” (Graham 1991, 6). This is an interesting claim, and it would be interesting to show how this unity of morphology had an effect on the social resistance against it, and also allowed the berimbau to develop instead of becoming obsolete, although I have not as yet found other opinions or sources to support it.

Early accounts and depictions of musical bows in Brazil also give insight into the context in which they were played. Research shows that slave performers used the musical bows most often as a solo instrument. Slaves were often sent to public marketplaces to sell goods, and would often play music to attract buyers. Accounts and

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⁴ “The enigma of its adaptation has yet to be uncovered” (translation by author)
drawings depict the music bow in this type of marketplace setting as early as 1814 (Graham 1991, 6–7). Also, early accounts show that the musical bows also provided an accompaniment for dance:

"In French chronicler Ferdinand Denis’s diary written between 1816 and 1819, he reveals a moment in which the musical bow is used to accompany dance during an impromptu interaction between a berimbau musician and a passing pedestrian" (Galm 2010, 21).

While the musical bows were incubated in Bahia, their influence reached at least as far south as Rio de Janeiro. “From other historical illustrations of the early 19th century particularly the pictures of Jean-Baptiste Debret…and Lieutenant Chamberlain…it is evident that the gourd-resonated musical bow was popular as a solo instrument at that time in Rio de Janeiro” (Kubik 1979, 30). This also confirms that the bows were a common solo instrument in the early nineteenth century.

There are also hints that the bows may have been used in ensembles with other drums or Lamellophones as much as seventy years before their association with capoeira (Graham 1991, 7–9), which would place these ensembles in the early nineteenth century. It is difficult to find details on the nature of such ensembles and where or what they would have performed.

As stated in the premise of this work, a myth surrounds the modern berimbau—that it is the offspring of the capoeira martial art. In arguing that the berimbau has become a global cultural icon, and attempting to show how it reached that status, it is important to establish the falsity of that notion. Graham is also in favor of putting that myth to rest, based not only on its history but on the merits of its modern stature,
"Because of its musical versatility and global mobility, the perception of the berimbau as a traditional instrument in the fixed social context of the capoeira game now seems dated, and in a sense is unhistorical" (Graham 1991, 17).

Aside from the similarities in appearance and construction between African and Brazilian musical bows, researchers have drawn notice to similarities between the musical patterns played by musical bow performers in Africa and Brazil. Pinto Oliveira presented “two recordings of José Virasanda's performance on the mbulumbumba...to musicians in the Recôncavo Baiano region,” and based on his observation agrees with Kazadi wa Mukuna that there is congruence between the repertoire of the Brazilian berimbau and the African mbulumbumba (Pinto 1996, 22). Mukuna also writes that Gerhard Kubik observed rhythmic patterns on musical bows in Angola that are similar to those played in Bahia by the capoeiristas (Mukuna 2000, 165). This suggests that not only does the instrument predate the practice of capoeira, but the music which accompanies the game predates it. This further dispels the idea that the berimbau (and many of its common rhythms) are exclusive to capoeira.

**Organological evolution**

Essential to allowing the berimbau to endure and grow into a global musical and cultural icon were several modifications or evolutions in its construction that happened during the nineteenth century. These expanded the capabilities and range of what the instrument was capable of and how many people it could reach. The modifications also coincided with the consolidation of the various African musical bows into the Brazilian model and they mark the earliest model recorded that is easily recognizable as the same instrument played today.
As recorded in the earlier reference to L.T. Tollenare (Graham 1991, 7), the early musical bow models used a cord or string made from gut. Possibly the earliest and among the most important organological development was the use of the metal *arame*\(^5\) that is still common practice today. The difference in durability and volume between gut and metal would be significant enough that this likely opened up possibilities for larger audiences to hear a berimbau performance. The metal *arame* also enabled newer methods of fretting or muting the string that are discussed later in this section. The metal material and these fretting methods opened up a new layer of textures and tones to what was previously a monotone instrument.

In the Museum of Anthropology of Berlin, Oliveira Pinto found what he believed to be the earliest reference to the Brazilian berimbau. Recorded by Ignaz von Olfers in 1818, he detailed that a metal *arame* (cord) was struck by a wooden *baqueta*, and that a hollowed-out gourd—the *cabaça*—acted as a resonator and called the instrument a "cunga," which Oliveira Pinto notes is phonetically proximate to "gunga," a term still in use today. Oliveira Pinto uses this example to demonstrate the importance of quality in documentation. This particular example shows that today's berimbau “proper” (bow and cord) existed in a functionally equivalent version as early as 1818 (Pinto 2001, 264–65), a full 70 years before the abolition of slavery and the estimated beginning of the berimbau/capoeira association. The next earliest account of a bow strung with a metal (brass) cord came in 1824 (Graham 1991, p. 8). These accounts that describe a musical bow with a metal cord, gourd resonator, struck with a stick and called a *gunga*, the

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\(^5\) The metal wire or string that is the vibrating and sounding element of the berimbau.
modern term for the largest of a trio of berimbaus, are a convenient marker for the advent of the distinction between the Brazilian berimbau and its African predecessors.

An 1832 painting and description by Johann Emanuel Pohl is the earliest instance found by Graham of the cord being strung over the top and bottom ends of the bow and secured by cord, as done on the modern berimbau (see Figure 3 and Figure 4 below). The other depictions show the cord tied directly to the bow near the top, which would have been looser, produced much softer volume and a lower pitch. The tension of this new securing method fit well with the new metal strings being used, and probably led to the phasing out of various "pinching" techniques used in the left hand, as the harder and tauter strings would blister fingers used to fret the cord by pinching (Graham 1991, 12). While it was certainly possible to tune several berimbaus to different pitches prior to this development, this certainly made it easier to get an ensemble of complementary pitches such as we see in capoeira ensembles today, as this method allows the cord to be strung with much more tension, increasing the range of the instrument.

Figure 3 - Cord strung over top end
Two other technological/organological advancements in the 1800s were the adaptation of the caxixi and dobrão (see Figure 2 on page 9). The caxixi appears to have become a part of the standard berimbau apparatus as much as thirty years before the documentation of the berimbau within the context of capoeira (Graham 1991, 13–15). It is a small shaker made from dried seeds encased in a woven basket. The woven basket is made with a loop on the top. This allows the player to hold the caxixi with one finger (usually the fourth) in the same hand that holds the baqueta (stick) which strikes the cord (Figure 5). The performer can sound the caxixi as they simultaneously strike the cord, or they can sound it alone. This gives the performer another layer of sounds, and even approximates an extra “voice” to the instrument.
While the addition of the *caxixi* changed the musical versatility, the *caxixi* itself is an African instrument that has gone largely unaltered (Mukuna 2000, 110–11). If this adds nothing aside from the musical enhancement of the instrument, it is an interesting linkage to the African roots of the berimbau.

The documentation of the use of a *dobrão* to fret a berimbau is much vaguer. One of the influential capoeira teachers of the early twentieth century, Mestre Pastinha, as recorded by Querino, recalled seeing it used as a youth at the turn of the century, but little else that is definite was found from any earlier sources (Graham 1991, 15–16). It is in essence a small coin or stone held between the index finger and thumb of the weak hand, which holds the frame of the bow and *cabaça*, and extended or retracted to fret or loosen the cord. The difference between the lower (unstopped) and higher (stopped) sound is roughly the equivalent of a major 2\textsuperscript{nd}. This tonal difference, of course, depends on the

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**Figure 5 - Grip, including *caxixi* and *dobrão***

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[Image of grip with *caxixi* and *dobrão*]
placement of the *dobrão* on the cord, which can be affected by the size of the hand and length of fingers.

Early accounts hint that performers in the early 1800s used their left fingers to fret the cord in various places, a technique that is not standard today because the range of motion is very limited as the left hand is also supporting the brace. Naná Vasconcelos has used his right fingers to fret the cord, but the left maintained the grip on the string and *dobrão*. Graham suggests that further research may provide more insight into how this technique was executed (Graham 1991, 10–11). In spite of the earlier practice of fretting or muting the cord, the use of the *dobrão* was an important development in the ability of the berimbau to produce a wider range of tones and timbres.

Shaffer rejects, albeit without much supporting research, the idea that fingers were ever used to stop or fret the *arame*, arguing that it is impossible to create any sound this way (Shaffer 1977, p. 24). Based on my own experiments with this technique the limitations are restrictive beyond dampening the cord to producing a muted sound. The fingers are unable to apply enough force to change the pitch and still let the longer section resonate. Another common technique among modern performers is to rest the *dobrão* against the cord lightly enough that the pitch is not altered, but the cord creates a buzzing sound as it vibrates against the stone or coin.

These principal organological enhancements: stretching the cord over each end of the shaft and fastening it with a string on the top, using the *caxixi* in the dominant hand, and the *dobrão* in the weak, allowed the berimbau to move beyond a monotone instrument to a multi-tonal—at the very least three tones discussed above, open string,
fretted string and the buzzing effect. Add to this the contrasting sound of the *caxixi*, and the palette of sounds is noticeably enhanced. The performer may also retract or extend the *dobrão* after striking the cord to bend the pitch, although this is not traditionally notated.
Chapter 3 – Association and Sponsorship

Association with capoeira

While one aim of this work is to show that the berimbau existed and today exists outside capoeira, this expressive form played a vital role in making the berimbau a global icon of Brazilian and Afro-Brazilian culture. Without the status as an essential member of the capoeira ensemble and ritual, the berimbau would likely not be performed outside of Brazil or even outside of northeastern Brazil. Such is the case with other African-influenced musical bows from other countries, like the *burumbumba* from Cuba (Graham 1991, 7). The integration of the berimbau into capoeira is one of the factors that set its history apart from those of other African-derived musical bows in the Americas.

The art/game/dance of capoeira also comes from the state of Bahia, and began during the nineteenth century. Writes Larry Crook

"Capoeira originated among Afro-Brazilians as a mechanism of both direct and indirect resistance to the oppressive controls and violence of Brazil's slave culture in the country's colonial area." (Crook 2005, 181)

While Stephens and Delamont posit that "…capoeira was illegal in Brazil for 200 years" (Stephens and Delamont 2006, 318), this statement does not appear to be entirely true at a national level. There is, however, evidence that it was marginalized, repressed, and in some cities outlawed for a time by local government authorities. Crook writes of eighteenth-century urban areas, although he was likely referring to nineteenth-century urban areas,

"Government authorities and the urban elites of Brazil considered capoeira a plague on the country's civilized citizenry. In their view, capoeira was a
barbaric African practice among vagrant gangs of black urban thugs who perpetrated violence and other criminal activities on the general population…The city council of Recife passed ordinances in 1831 aimed at restricting various public ‘nuisances’ associated with the city’s black population, including a restriction on capoeira, an offence subject to a penalty of two to six days in jail for free blacks and twelve to thirty-six lashes for slaves.” (Crook 2005, 183) [See also The Mansions and The Shanties, p. 261 by Gilberto Freyre]

Around the last quarter of the nineteenth century, the berimbau began its role as a participant in the capoeira ensemble. Prior to this, the game was accompanied by hand drums and hand clapping,

“A revealing 19th century depiction, illustrated with a picture…is found in Johann Moritz Rugendas, 1835, under the title: ‘Jogar Capoëra ou danse de la guerre’…The drummer seen in the picture obviously communicates with the two opponents, by giving them orders with his talking drum. His eyes are fixed at one of the fighters. No other instruments, such as are used in present-day capoeira, are drawn or mentioned by Rugendas. The accompaniment…consisted of drum and hand-clapping” (Kubik 1979, 28).

The advent of the berimbau in capoeira seems to revolve around the abolition of slavery in Brazil. Writes Crook, "During the nineteenth century, the one-stringed musical bow called the berimbau (an instrument derived from African models) assumed a dominant role in capoeira's musical accompaniment" (Crook 2005, 182). Galm is more precise in his estimates, and pinpoints the abolition of slavery in the year 1888 as the turning of the tide, both of capoeira moving toward the modern ensemble—including the three berimbau voices—and also " when capoeira slowly began to change from a combative fight into a non-contact game." (Galm 2010, 21)

By some accounts, the incorporation took form even later. “It appears that the musical bow was integrated into Capoeira about the same time when it changed to become an ‘acrobatic wrestling dance game’; that was at the turn of the century” (Kubik
1979, 30). So, one can reasonably assume that sometime between 1888 and 1900 the berimbau became a full participant in the capoeira experience. Later sections will discuss the importance of capoeira to the identity of the modern berimbau, which cannot be overstated. It is important to note that the berimbau existed independently decades prior to becoming a participant in the martial art/dance.

Aside from its common context as a martial art accompanied by music, capoeira was also performed in a musical context where the martial art/game was ancillary. In Recife "music making occasions..., especially the parading of the music bands, appear to have been the favored public contexts for capoeira"; Crook describes other musical groups accompanied by berimbau in Recife's public parades, but does not indicate a date range when those parades would have occurred (Crook 2005, 183–84). This is important because it shows that the berimbau was not always an appendage to capoeira, at least not in all social or musical contexts.

Shaffer posits that only in Bahia were capoeira and berimbau eventually joined together. In the other areas of Brazil they remained separate and both phased out under social and state pressure (Shaffer 1977, p. 30-31). The studies cited above certainly illustrate just how much state and social pressure came against these two cultural agents in the late nineteenth and early twentieth centuries, and further illustrates the theory that the berimbau was a marginalized cultural agent for much of its existence in Brazil. The observation that the two cultural agents could only survive in the state of Bahia merits further thought and research. Perhaps it is simply that a larger Afro-Brazilian population afforded more insulation, or Bahia’s reputation as spiritual center that lent itself to the preservation of these traditions.
As a member of the capoeira ensemble, the status of the berimbau grew in importance by assuming a leadership role in the music, acting as a sort of conductor or referee to the game, "...the berimbau that is held by the oldest mestre⁶ must be obeyed and respected by all participants. This respect moves to a deeper level when the berimbau is perceived as a musical instrument that brings spiritual forces of the past and future together in the present" (Galm 2010, 29). This spiritual identity will be discussed in later sections, and is conceptually similar to other traditions in Brazil, mainly candomblé in the sacred realm. Downey wrote of two interesting anecdotes in his observation of a capoeira master. First, he observed that even beginner berimbau players were encouraged and taught to improvise in the rodas de capoeira and also that the mestre used the music played by the orchestra (principally the berimbau) to teach learners how to time their attacks. They were to listen for opportunity, rather than watch their opponent (Downey 2002, 497–502).

Beyond setting the pace and tempo of the game/dance, the berimbau can also referee by interrupting, "...whoever is playing the gunga may interrupt the game by tapping loudly on the base of the instrument or by placing the berimbau in between the two players in order to break up their play. In this sense, the gunga represents the ultimate authority over how the game is to be played" (Fuggle 2008, 211). This command over the dance’s participants elevated the berimbau in stature above the other instruments in the ensemble.

⁶ Literally, master; this term refers to a capoeira group’s teacher or leader
The berimbau and capoeira developed independently, but their union enabled them both to survive through the early twentieth century. The berimbau went from being played in the marketplace to an integral part of capoeira (Galm 2004, 82). During the first half of the twentieth century, it was through capoeira that the berimbau gained access to larger and more diverse audiences, gained presence in the social consciousness in Brazil, and was exported as cultural commodity around the globe. In 2014, the *roda de capoeira* entered UNESCO’s Representative List of the Intangible Cultural Heritage of Humanity, demonstrating its cultural diversity and importance to Brazil's past and future (ONU Brasil 2014). The berimbau is not mentioned by name in UNESCO’s description of capoeira (“Capoeira Circle - Intangible Heritage - Culture Sector - UNESCO” 2017), another example of the myth or perception of its exclusivity or subordination to capoeira. However, this recent development is a sign that the instrument continues to benefit from its role in the art form.

The unity of these two cultural treasures also paved their own way out of the periphery of cultural and musical consciousness. Berimbau and capoeira alone were social outcasts; together they forged a national identity that empowered them to survive, and gain upward mobility and inclusion (Galm 2004, 255). Attaining this status as an icon of national identity via capoeira was essential to the continuity of the berimbau as a musical instrument.

**State sponsorship**

During the first half of the twentieth century, capoeira—and the berimbau by extension—transitioned from marginalized cultural traditions that local government authorities perceived as threats, or at best vulgar, into a state-sanctioned national pastime
While capoeira retained some residue of its perception as a vulgar or lesser cultural expression well into the late twentieth century, this marks a significant milestone in the growth in the amount of practitioners of the martial art, and of the berimbau.

In Rio de Janeiro, as early as the 1870s, capoeiristas were at odds with the police. While technically not illegal, many practitioners were arrested and imprisoned. During this time, two developments helped situate capoeira for the pivotal change in policy during the *Estado Novo*. One was a gradual emerging trend of young aristocrats and social elites training in capoeira. Alongside this, police officers in Rio de Janeiro began training in capoeira as an infiltration tactic. Talmon-Chvaicer recounts two fascinating anecdotes involving Police Commissioner Sampaio Ferraz (Talmon-Chvaicer 2008, 74), who was bested at capoeira by the governor’s secretary when the two argued about the imprisonment of the secretary’s brother on “charges of capoeira.” In the other anecdote, Ferraz was approached by his capoeira informant who informed the commissioner that there were no more capoeiristas left in Rio de Janeiro. Ferraz corrected him/her by pointing out that two remained at large: the two of them. Ferraz then arrested the informant and sent him/her to prison with the rest of the detainees.

Capoeira’s infiltration of the police and military appears to have spread into the early twentieth century. Influential voices came out in favor of capoeira as a tool of combat and physical education, and there was at least one instructional manual on capoeira published by a “high-ranking officer in the Brazilian army” (Talmon-Chvaicer 2008, 111–13). Alongside this growing support, the first capoeira schools were established in Bahia in the 1920s, Mestre Bimba and Mestre Pastinha being the founders.
of the two principal schools, who also began the separate *regional* and *angola* traditions of capoeira, respectively.

Mestre Bimba used elements from other martial arts (karate, judo, and jiu-jitsu). The distinguishing factor of his *regional* school which Talmon-Chvaicer points to is the "incorporation," organization, professionalization, codification of capoeira; turning it into a course and subject to be studied whereas it had previously been an oral or informal tradition (Talmon-Chvaicer 2008, 122). Meanwhile, Mestre Pastinha claimed his *angola* style was the pure form of capoeira, brought from Angola. It did not gain great popularity in Pastinha's lifetime, but in the 1980s gained traction in Salvador as capoeira became a part of the tourism economy (Talmon-Chvaicer 2008, 125–27). The difference between the two styles is subtle; the action in *angola* is slower in its development and appears more dance-like. *Regional* uses more quick and violent motions, and the influence from other martial arts is apparent. Both styles do draw from the same musical tradition and repertoire.

It was in this climate, when Freyre’s theory of racial democracy was also gaining popularity that Getúlio Vargas capitalized on the growing popularity of the dance/game/sport as a tool in constructing a national identity. Talmon-Chvaicer recounts that “Vargas himself met with Mestre Bimba, shook his hand, and called his art ‘the only authentic Brazilian national sport’.” Along with public support, the Vargas regime also saw capoeira taught in academies and schools as a means of self-defense and cultural expression.
Some of this incorporation of capoeira into established state institutions that began under Getúlio Vargas continues today, and Livio Sansone points out a significant difference between the representation of the two main schools of capoeira in state institutions versus popular schools,

"Capoeira regional has become a standard part of army and police training, and is often taught in sports schools together with other martial arts. Interestingly, the Angola, which has a much smaller, select following in Brazil, is overrepresented among the capoeira schools that have been opened abroad by a new generation of black Brazilians. Such schools can be found all over the US, 9 in Germany and the Netherlands." (Sansone 1999, 23)

This thesis’ research did not yield much commentary on the musical aspect of capoeira during this time frame, so it is hard to say definitively how the performance practice of the berimbau shifted between 1888 and the 1960s. It is important to note, however, that through this state-sponsored incorporation and re-branding, playing the berimbau became an acceptable practice for people of all cultural backgrounds in Brazil, and this triggered the growth of many capoeira schools across Brazil and served as a precursor to its exportation across the globe.

**Appearance in other genres**

As stated earlier in this thesis, the incorporation of the berimbau into the musical ensemble of capoeira was a great milestone in its path out of obscurity. It does, however, problematize its perception in the greater musical and cultural structure by confining it to that single social space. Even as late as the turn of the twentieth century, the African scholar Mukuna wrote that "Atualmente o berimbau tem sido exclusivamente associado com a capoeira, embora alguns músicos populares, como João Melo e Codo, estejam tentando incorporá-lo ao cenário da orquestração popular" (Mukuna 1999, p. 117).
“Recently the berimbau has been exclusively associated with capoeira, although some popular musicians, such as João Melo and Codo, are trying to incorporate it into the popular ensemble scene”]. I believe the reach into popular and art music is much broader and older, even as early as the 1960s—almost forty years prior to the publication of the Mukuna book cited.

The first berimbau appearance in popular music in Brazil came by way of imitation, a musical quotation when “…bossa nova composer Baden Powell adapted the berimbau’s melodic rhythms to the guitar, resulting in the internationally successful composition, ‘Berimbau’” (Galm 2010, 17). In the introductory passage, Powell uses two chords separated by a major second to imitate the interval between the berimbau’s stopped and unstopped tones. The rhythm also approximates a common berimbau pattern,

![Figure 6 - A transcription of "Berimbau" by Baden Powell (2005)](image)

The recording of the song was released in 1963 and quickly became part of the standard repertoire of bossa nova and jazz artists. Many artists have since covered the song in styles and ensembles as diverse as salsa, samba reggae, hip hop/R&B and string quartet. The Portuguese text sings of capoeira and berimbau, as spiritual forces bringing messages to the singer.
Another song from the popular Brazilian music (MPB) genre imitated the berimbau, albeit in a more obscure recording. Similar to how Powell mimicked a berimbau using the guitar, Caetano Veloso used a very similar pattern in both the guitar and bass line of “Triste Bahia” (Caetano Veloso, n.d.). This song also includes patterns played on an actual berimbau at the introduction and again later in the song. The electric bass picks up the rhythmic melody of the berimbau after an introduction that features voice and percussion. The berimbau plays through the introduction, in an unmetered cadenza and re-enters the ensemble, acting as harmonic (more so than rhythmic) accompaniment. The single tone of the berimbau acts as the common thread between the varying harmonies of the guitars and bass (which are all imitating berimbau rhythmic melodies) and unifies the dissonance into a rich “roda de capoeira.” A call and response chorus mimics a common capoeira ladainha7 to complete the “roda” effect.

While “Triste Bahia” is one of Veloso’s more experimental creations, he is certainly a mainstream figure within Brazilian popular music, and Baden Powell’s “Berimbau” is perhaps the most mainstream reference to the berimbau, evidenced by the sizeable repertoire of interpretations. These two songs certainly make reference to capoeira, while simultaneously signifying the beginning of the re-emergence of the berimbau out of the confines of capoeira and into broader cultural artistic expression.

7 Ladainha translated literally is “litany”, and this term refers to any of the traditional songs that the musical ensemble performs to accompany the capoeira game/dance. Aside from the instruments (berimbau, agogô, pandeiro, atabaque) it features a solo vocalist, who can also play one of the berimbau, and a choir formed of the all the other performers and observing group members. The soloist and choir engage in call and response toward the end of the ladainha, a common element in many Afro-diasporic musical traditions.
As a major focus of his work, Eric Galm profiles "three individuals within Brazilian popular music…: Naná Vasconcelos, Dinho Nascimento, and Ramiro Musotto. Vasconcelos brought the berimbau from Brazil into a global jazz marketplace and, through his recordings, inspired the Bahian Nascimento and the Argentinean Musotto to follow his ideas for developing new concepts.” Galm uses their work to address “issues of globalization, tradition, and transformation” (Galm 2010, 17). This thesis discusses the work of these virtuosos in more depth later, as it relates to developments in performance practice and technique.

Their artistic production expanded the role of the berimbau in Brazilian popular and jazz genres. Its role expanded in terms of quantity—there are a significant number of recordings from these three artists that feature the berimbau—and nature, as their new techniques and virtuosity turned the berimbau from an accompanying to a featured, solo role. This repertoire reinforces the inclusion of the berimbau in the broader Brazilian musical context, and “…the incorporation of these raw musical traditions into this newer musical framework was designed to restore a national-popular authenticity to the song of political protest, against the imported, ‘Americanized’ culture which bossa nova and increasingly rock, were held to represent” (Galm 2010, 37). This authenticity is a component the berimbau brought to popular music by virtue of retaining an African identity, while becoming something quintessentially Brazilian and coming from a context of social protest via capoeira.

After these pioneers, a number of artists incorporated the berimbau into more modern popular music, influenced by R&B, hip hop and electronic music. The group Berimbrown describes their music in their promotional material as “a mixture of’ Afro-
Mineiro⁸ sound sources,' which include the *congado* (processional dances that feature themes of royalty and coronation), *capoeira*, and the *folia de reis* (groups that play religious music in the streets in December and January), along with international pop rhythms such as 'funk, soul music, rap and reggae.' Berimbrown titled this new composite sonority musical genre, *congopop*. This genre contains everything from 'mineiro regionalism to African universalism,' produced by musicians inspired by the *bailes do funk* (funk dances) who have soul and funk music 'impregnated in [their] DNA.' The principal icon of Berimbrown’s identity is the berimbau, which they believe is a 'symbolic instrument with the capacity to make a lot from a little,' thus enabling them to “‘mine art with [their] hands’” (Galm 2010, 71). The group also draws on the music of James Brown, referring to the African American icon in the name of their group, and using many similar styles of interplaying syncopation and ensembles highlighted by horn sections. They also include what appear to be sound samples from James Brown’s own music (n.d.).

American funk preceded Berimbrown as a cultural expression of blackness in Brazil. What is intriguing about their music is the juxtaposition of the imported American music that was iconic as an expression of race and protest in the 1960s and 1970s with traditional Brazilian folkloric instruments and patterns. I would not characterize Berimbrown’s music as primarily music of protest, but propose that this juxtaposition seeks to build on a concept of solidarity and shared experiences between diaspora communities and embodies a broader transatlantic black consciousness.

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⁸ This refers to African-influenced music from the Brazilian state of Minas Gerais
A prime example of this “transatlantic juxtaposition” is Berimbrown's "Melô do berimbau." It uses lyrics, rhythms and melodies from a *ladainha*—a traditional musical introduction to a *capoeira* game—as well as from the aforementioned "Triste Bahia" by Caetano Veloso (Galm 2010, 75–80). The song incorporates these capoeira elements by quoting or imitating these rhythms and melodies, and it uses berimbau in the instrumentation as well.

Berimbrown’s music is an apt model for placing the berimbau, performed in a more traditional approach, in modern popular repertoire and using it as a voice of Brazilianiness in music and in the social consciousness of race and heritage. Other artists have used the berimbau in samples taken from other recordings. Derek Pardue writes of a movement of hip hop artists that seek to inform the concept of *negritude*, or blackness, "In their attempts to articulate hip-hop identity to a complex set of histories and cultures indexed in the term ‘afro’, Thaïde and DJ Hum acknowledged both the fairly recent *negritude* of Rio/São Paulo soul movement (1970s and early 1980s) via the brass horn samples and the long-standing negritude of Brazilian slavery resistance by sampling the distinct sound of the *berimbau*, the characteristic instrument involved in *capoeira*" (Pardue 2004, 268).

Pardue proposes that the berimbau acts as a metaphor for slavery and its legacy in *negritude* today. This relates, but also contrasts, to what other scholars claim, that the berimbau is a voice of freedom and resistance against slavery, rather than a remembrance of that legacy itself. This poses a question worthy of further discussion. How broad is the cultural meaning attached to this particular instrument and which aspects of *negritude* can one confidently ascribe to it?

In 1994 “...the rap group Potencial 3 from Diadema, another suburban city within the São Paulo metropolitan area, produced an album using the *berimbau*. The
introductory cut, ‘In3ducão’ frames the album and the group's ideas as a ritual experience" (Pardue 2004, 268–69). The entire track plays like a *roda*, with at least two berimbau playing interlocking rhythmic melodies interjected with improvisational embellishments. This ensemble accompanies a vocal soloist and chorus who engage in a call and response similar to the capoeira *ladainha*.

As recently as 2014 (*Targeted News Service* 2014), the American fusion group Matuto has performed their fusion of “Brazilian music mixed with Appalachian roots and bluegrass” (Howell 2012). The group features a regular line up of Brazilian instruments, including *alfaia*[^9], *pandeiro*, *agogô* and berimbau (Zaretsky 2013). The berimbau is most prominent on the recording *John the Revelator* from Matuto’s self-titled album (Matuto 2012)—a gospel blues in which the berimbau is the only pitched instrument setting the tonal foundation for the vocalist, and *Drag me down* from their “Devil & The Diamond” album (Matuto 2013). These modern examples in popular music showcase how artists use new and creative ways to incorporate the berimbau in new contexts and genres.

Parallel to the entrance of the berimbau into popular music was its emergence in art music compositions. The challenges of incorporating these instruments are greater in art music than in popular music, as Galm notes “…because orchestras have encountered difficulties obtaining the actual instruments as well as musicians who know how to play them (and are able to read music), both within and outside Brazil” (Galm 2010, 121). The first art music composition featuring the berimbau encountered in this research is *Ganguzama*, composed by Mário Tavares in 1959, and premiered in 1963. This is

[^9]: The *alfaia* comes from northeastern Brazil and is similar in size and range to a rope-tension bass drum
according to Eric Galm, whose comments are based on non-commercial recordings he transcribed (Galm 2010, 123–29). I found no published scores or recordings of the piece. Galm describes it as a symphonic-choral poem in three scenes portraying the death of Zumbi dos Palmares, the legendary leader of the Palmares quilombo (colony of escaped slaves). The berimbau plays a call-and-response dialogue with a bass vocalist in the second scene, and according to Galm’s research (Galm 2010, 130) this piece was the impetus behind the development of formal notation systems for the berimbau.

Berimbau samples have been used in other art pieces. De Souza gives background on the composition of “Concerto for Computer and Orchestra.” The composer used recordings from a berimbau performance and modified them electronically (compressing or time stretching, pitch shifting). The composer also took berimbau sounds and traditional rhythmic and melodic patterns and “displaced them to other instruments in the orchestra,” serving as a motif. De Souza also mentions the berimbau was used in the composition of “Corda e Cabaça” (De Souza 2005, 32–34), but to this point I am unable to find more details or recordings of the piece. Among African-derived percussion instruments, the berimbau joins a select group to be featured in orchestral compositions.

Ney Rosauro is a Brazilian born composer and percussionist who spent much of his career in the United States, many of whose works incorporate elements of Brazilian folkloric music. Rosauro's Cadência para berimbau is orchestrated for solo berimbau, with accompaniment by a trio of marimba, congas, and surdo or bass drum. The surdo/bass drum, typically associated with the traditional samba-enredo\(^\text{10}\), plays a

\(^{10}\) This style of samba is featured in the Carnaval parade and festivities. The samba-enredo ensemble can reach several hundred musicians and dancers, and is called a “samba school”, or escola de samba. The escolas de samba from Rio de Janeiro are the most well-known.
hemiola rhythm (two dotted eighth notes and one eighth note) borrowed from the *baião* music genre which originates from northeastern Brazil--often associated with Pernambuco and surrounding states. The *surdo* part is written to imitate the sound of the *zabumba* (a two-sided bass drum played by a mallet in the dominant hand and a stick the weak hand) by calling for the third (the non-dotted eighth) note of each permutation to be played on the rim or shell of the drum (“Cadência para berimbau: para quarteto de percussão (berimbau solo, marimba/xilo, congas e surdo)” 1993). The juxtaposition of rhythmic and melodic elements from baião and the berimbau suggest the possibility of a new cross-genre with intriguing textures. By orchestrating the berimbau as the featured solo instrument, it gives the berimbau a place in the niche repertoire of percussion solo and ensemble literature.
Chapter 4 – The Berimbau in Social Context

Status as a symbol of social movements and consciousness

The berimbau has added social meaning in terms of “Afro-Brazilian identity and resistance,” and it has “retained its original identity of an African-derived musical bow” (Galm 2010, 160). Brazilian music, and its instruments, have had a long history of informing social identity, movements and consciousness. Larry Crook writes, "recent scholarship has emphasized--and sometimes over-emphasized--the element of resistance embedded in forms of Afro-Brazilian expressive culture...Black Brazilians have a long and proud history of effectively manipulating even the direst of situations in their country by using artistic/cultural expressions to construct their identities and to socially mobilize confrontations, diversions, and resistance within society" (Crook 2005, 108–9).

Academic writers have constructed the notion of a ‘symbol bank’ and applied it to the collection of cultural commodities and traditions that relate to race and identification in Brazil. Sansone defines the phenomenon,

Africa is used as a ‘symbol bank’ from which symbols are drawn in a creative way… At the same time, black culture is also, to a great degree, interdependent with western urban culture. In fact, as Paul Gilroy had suggested, black culture and identity are created and redefined through a triangular exchange of symbols and ideas between Africa, the New World and the black Diaspora to Europe. For example, ideas of negritude, blackness and pan-Africanism created in the New World have always been inspired by either African intellectuals and struggles for independence, or by images of what African societies were prior to European colonialism. This process of making black cultures has also created the contours of a transnational, multilingual and multi-religious culture area, the Black Atlantic. (Sansone 1999, 6)

The berimbau serves as both an image of what African society was prior to colonialism, by virtue of its physical and functional proximity to the African musical
bows from which it originated, and also a symbol of struggle for independence, equality and respect, by virtue of its role in the capoeira fight/dance. Claiming both sides of this imagery and symbolism "demonstrates how the berimbau and capoeira are components of an expansive symbol bank that is used for the construction of a pan-African identity among young black Brazilians" (Galm 2004, 257).

Though early researchers have not documented a relationship between the berimbau and the quilombos of the nineteenth century, at least as far as its use or presence in the colonies of escaped slaves, and it did not become a part of capoeira—the art of resistance—until after the abolition of slavery, the symbolism constructed around it is similar in how it captures the spirit of resistance associated with the quilombos, “…the berimbau has become a metaphor for constructed notions of tradition, blackness, and Brazilian nationalism. These elements coexist in multiple planes, in proximity to each other, and can appeal to people of different social classes and ethnic backgrounds. The berimbau’s identity embodies a connection with its African roots. It is also inextricably linked with the African-descended dance, capoeira" (Galm 2010, 6). As stated by Galm, the berimbau also served as a transmitter of these constructed notions of blackness to communities outside of black Brazil. Indeed, people of many ethnicities and countries all over the world have participated in black Brazilian pride via the berimbau.

In reference to the religious music of Candomblé, and an "imposed orthodoxy" of rhythms used in its ceremonies, Crooks writes that "drum rhythms can be quite important in this struggle to define Africa in Brazil" (Crook 2005, 111). The berimbau operates in a different musical context, but it and its rhythms have also played a role in defining Africa in Brazil. The berimbau achieved its status as a transmitter of black culture and ideals
largely through its association with capoeira, but in the last fifty years has expanded this identity through participation in modern and popular music. More than just broadening the musical footprint of the instrument, it has broadened its own portrayal of constructed notions of blackness to include both traditional and contemporary expressions of “blackness, resistance, and change” (Galm 2010, 17). Expanding into modern popular music also gives a duality to its representation, as it “…continues to portray notions of tradition and history via capoeira, while simultaneously signifying aspects of modernity by its participation in cutting-edge musical trends” (Galm 2010, 65).

Sophie Fuggle draws an interesting comparison between capoeira and parkour—the modern art/sport of climbing and scaling urban landscapes, which suggests that capoeira has expanded its cultural footprint. She claims, "both capoeira and parkour are concerned with questions of freedom, agency and resistance" (Fuggle 2008, 218). If the berimbau can draw its own identity from this constructed identity of capoeira, then it represents more than resistance in the black Brazilian context, but freedom in a broader sense. This is a fascinating juxtaposition against its organological nature, which in the early models was restrictive in what it allowed the performer to execute. In this sense, the berimbau embodies resistance against the restrictions imposed by its own organology, the societal expectations of that organology, and the freedom of expression that accompanies breaking and rejecting those expectations and limitations. By embodying this dichotomy, the berimbau as a metaphor has embodied a part of the identity of the black Brazilian experience. Referring to analysis of form in tonal music, Beard writes that "musical figures are imbued with both anthropomorphic status and functional identity." (Beard 2016, 152) This idea is in the context of mapping narrative archetypes to the structure of
musical sound, and if we extend that same conceptualization to the instrument we can better frame its cultural significance. The berimbau is an embodiment of musical elements surrounding *capoeira* and African legacy in Brazil, a tactile narrative of Afro-Brazilian's struggle and liberation. Framing this instrument as a narrative imbued with cultural meaning is an approach that we can apply to other instruments, especially Afro-diasporic percussion instruments. These often have double sacred and secular roles and link these new world traditions to African legacy via their organology and repertoire, as is the case of the berimbau.

**Globalization and commodification**

In addition to becoming one of many agents of social change for black people in Brazil, the berimbau as a symbol of black pride also became a cultural commodity as the sale of the instrument increased. Writes Sansone:

> In the past, Bahia exported ‘black objects’ that were held as key objects of traditional Afro-Bahian culture...Items associated with capoeira, such as the string and percussion instrument berimbau and photos of the game, also belonged to this traditional stock of ‘black objects’ which were sold, mostly to travellers, anthropologists and tourists (Sansone 1999, 31)

This social status propelled the spread of the berimbau, concurrently with the growth of capoeira schools, throughout the globe and among new socio-economic and academic groups. As the purchase of the berimbau increased, as an instrument of music, capoeira, or even as a souvenir, it exposed this cultural artifact to reinterpretations from outsiders. It also raised awareness of the culture and people that created it.

Timothy Taylor argues that the concept of "commodification" of music is one that lacks theoretical depth. He does not problematize the cultural ramifications of music being bought and sold, but rather claims that the polemic around music as a commodity is
insufficiently explored. Taylor proposes that commodification of music is not the production and sale of music, but the Marxian idea of leveraging enterprise forces to generate "surplus value." (Taylor 2007, 281–83) In this sense, we can argue that the berimbau has yet to be “commodified”, as the process of constructing it has not been industrialized or modernized with its increased popularity.

One of the cultural ramifications of globalization and commodification is appropriation. Robin Moore presents the case of folkloric Cuban *rumba*, an Afro-Cuban tradition that was controversial to white and elite social classes through the 1960s, due to its sexualized choreography and association with lower-class and black Cubans. Havana authorities regulated rumba as early as 1888, in many ways similar to prejudice regulations against capoeira and in the same time period. Where social elites in Havana were uncomfortable with rumba's sexuality, Brazilian elites were leery of capoeira's physical aggression. Both sought to marginalize black cultural expression through legislation and intimidation. Where the histories of these two expression diverge noticeably is in appropriation.

In Cuba, alternative versions of *rumba* appeared in venues more accommodating to the dominant class, demeaning to the Afro-Cuban people, and in styles and forms altered to their European tastes (Moore 1997, 169–70). These Europeanized reinterpretations played a large role in the globalization of *rumba*. In Brazil, although police authorities and social elites learned capoeira as an infiltration tactic or a hobby, the Afro-Brazilian class still produced the art and maintained its style on their terms.
Moore points to a "tendency to appropriate black street culture while doing little or nothing to rectify existing social inequalities between the races," and quotes Cristóbal Díaz Ayala saying white Americans and Cubans "buy the product, but abhor the producer [of said culture]." (Moore 1997, 218). He makes a compelling case for this sentiment in Cuba, and shows the human cost of appropriation and commodification that accompanied rumba’s globalization. A counter to this could be that positive social change from globalization and even commodification—in the sense of exchanging cultural artifacts or practices rather than industrializing or altering them for streamlining purposes—is delayed, even generational. It would be interesting to compare sentiments of dominant or white class regarding folkloric rumba, capoeira or the berimbau from the 1920s versus the 1960s and the 2000s. The berimbau and capoeira do show another side of these issues. Because the representation of the berimbau and its repertoire as well as its production followed the forms established by Afro-Brazilians, its globalization as a cultural commodity raised awareness of, and allowed outsiders to connect to, the community and tradition that originated it.

**Straddled sacred and secular social spheres**

Part of the continued growth of the instrument’s reputation is an evolution of its spiritual authority. Some capoeira practitioners consider the berimbau a spiritual item with power to help a spirit move to another realm, and the ability to facilitate communication between the living and spirit realm (Galm 2010, 29–31, 262–63). This is a common theme among African heritage religions in the Americas that applies to the berimbau in spite of the instrument not having an official role in Brazilian religion such as candomblé, macumba, umbanda or quimbanda.
A common term used among capoeira *rodas* is *mandinga*. Its definition is somewhat elusive, perhaps intentionally so—in keeping with other untranslatable phenomena of Brazilian lexicon: *saudade, malandro, jeitinho*, etc. The concept of *mandinga* is steeped in mysticism, once described as “a cosmological force that provides knowledge, protection, and guidance to a practitioner's life,” which “becomes visible through bodily acts of deception and trickery” (Varela 2013, 6–7). Talmon-Chvaicer simply described it as “a core of witchcraft (mandinga) in capoeira,” and further claims that “some think it has to do with the berimbau” (Talmon-Chvaicer 2008, 127). The link between the berimbau and the spiritual/mystical concept of *mandinga* is based on the encapsulation of the “logic” of capoeira in music, and also the transmission of energy (*mandinga*) from one person to another via music (Varela 2013, 13). Through this shared ownership of the power of *mandinga*, the berimbau has achieved a status of cultural/spiritual artifact, beyond its functionality as an instrument.

Though not an official agent in traditional sacred ceremony, through this "… concept of a berimbau functioning as an active agent bringing spiritual realms together is extended to national identity, the berimbau can then become a symbolic tool that helps to bring diverse geographical regions together as a means to unify an expansive developing nation" (Galm 2004, 83). The berimbau even serves to unify culture organized religion. Galm details "…recent examples demonstrate how symbolic associations of the berimbau are utilized to incorporate elements of Afro-Brazilian culture into Bahian Catholic and evangelical religious services" (Galm 2010, 31). These examples are unique evidences of how far the berimbau’s influence reaches in multiple areas: musical, social, cultural and spiritual.
Galm describes these examples—four in total, although Galm writes that there were three. The first example took place in 1990 Rio de Janeiro,

A black Pentecostal church began formally practicing an 'inculturated' or 'Afro-Mass,' developed from ideological models in preceding decades. This movement later spread to some of Brazil’s other large cities, and in 1997 the Archbishop of Salvador, Dom Lucas Moreira, announced that an Afro-Brazilian Pastoral would be composed as a part of Brazil’s 500th anniversary celebration, with the aim of introducing Afro-Brazilian cultural traits into the Catholic Mass. He states, 'The berimbau and other Afro-Brazilian cultural instruments can be incorporated into a diocese that embodies this type of influence, such as in Bahia.' In the year 2000, during the commemorative celebration, an individual Catholic church held a mass to ask forgiveness for its association with colonial Brazilian oppression. The African component of this mass included a berimbau, which was played in the church as a part of the service. During the March 2001 inauguration of the evangelical sanctuary of Mãe Rainha e Vencedora (Victorious Queen Mother), a group of adolescents brought altar offerings of berimbauas, Bahian fruits, and flowers, which complemented the traditional offering of bread and wine (Galm 2010, 31) 

There are other percussion instruments of African heritage with religious significance throughout Latin America and the Caribbean, some—such as the atabaque in Brazil, and batá or conga in Cuba—that are traditional participants in ceremonies of syncretic or African sects. It would be interesting to discover other instances where these instruments act as a unifying element between black religious communities and mainstream Christian institutions, and where the berimbau fits chronologically among instances of this form of synergy.

These synergetic percussion instruments lend themselves to syncretism; they are focal points of artistic and spiritual collaboration between Africa and America, Christianity and Afro-American religions, sacred and secular. The berimbau, like the other instruments mentioned above, possesses a role of communication within the African-American spiritual consciousness. Each of these are grouped in ensembles of
three—batá in santería, congas in bembe, atabaque in candomblé, and berimbau in the ladainha of the samba de capoeira. The trio grouping carries great significance in Christian religions as it represents the Trinity, and this homage (perhaps unintentional) to Christian deity coupled with the attribution of linking practitioners to African deity makes percussion an integral piece of Afro-American syncretism. What differentiates the berimbau from others is that it approaches synergy from the secular into the sacred, and in limited instances from Afro-American into mainstream Christian, as illustrated by the examples shown in this section. The use of the term ladainha also sets it apart, as it borrows from Catholic vernacular (litany) to describe the African-derived secular music of its roda de capoeira. This borrowing is a window into how the berimbau is a node where all of these distinct groups, values and ideals meet or interact to create music, art and community.
Chapter 5 – Modern Music

New performance techniques

In the earlier section devoted to the evolution of the organology of the berimbau, we discussed some of the early changes that revolutionized the instrument and were crucial in carrying the instrument’s practice into the twentieth century. The early changes that altered the way performers used the instrument were the addition of the caxixi and dobrão. Many of the iconic berimbau sounds of capoeira and in popular music could not be executed without them. They also expanded the vocabulary of sounds enough to enable twentieth century performers such as Luiz D’Anunciação, Naná Vasconcelos, Dinho Nascimento and Ramiro Musotto to execute virtuosic pieces. D’Anunciação, Vasconcelos and Nascimento began their careers in the 1970s, and Musotto—from Argentina—began playing the berimbau professionally in Brazil during the mid-1980s.

From the advent of these additions in the early nineteenth century until the 1960s, the performance practice and technique of the berimbau remained largely unchanged. Even during the growth and institutionalization of capoeira schools during the Vargas regimes, there is little evidence in this research that berimbau performance changed. The artists mentioned above are often grouped together as the most influential actors that “…pioneered new boundaries for the berimbau within the context of Brazilian popular music" (Galm 2011, 80) from the 1970s until the present day. Their contributions are monumental in the spread of the berimbau beyond capoeira, and in its mobility from the background to the foreground of musical ensembles.
The berimbau is not alone among Brazilian percussion instruments that underwent a twentieth-century revitalization. The *pandeiro* is a frame drum similar in appearance to a tambourine. It differs in construction mainly by three metal jingles (rather than two), and features a tunable head (Figure 7). It was a mainstay of the *bateria*\(^{11}\) for samba, *baião*, *choro* and other Brazilian musical styles of the early and mid-twentieth century. It steadily gained mass popularity in Brazil throughout the twentieth century, initially on the back of the *samba de enredo* and the spectacle of Rio de Janeiro’s *Carnaval*. Later, in the 1990s, through work of artists like Marcos Suzano, the *pandeiro* underwent an identity shift. A commonality of the identity shifts of instruments like the berimbau and *pandeiro* was a balancing "of continuity and change within music cultures includes tensions between adhering to established 'traditions', along with the incorporation of new features that point towards new 'modern' adaptations" (Galm 2011, 79).

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\(^{11}\) The term *bateria* refers to the percussive component of a musical ensemble, whether a single drum set player or, in this case, a larger group of percussion instruments.
Suzano partnered with artist Lenine in 1993 on “Olho de peixe,” a landmark in rejuvenating the role of the pandeiro in popular music. The pivotal aesthetics on this album were putting the pandeiro in the foreground of the mix, using a mixture of tones (high and low) to create polyrhythmic patterns not unlike a drum set, using progressive recording techniques to achieve the desired recorded sound (Moehn 2009, 278). Ramiro Musotto began his berimbau career in earnest in 1984, and his work paralleled that of Suzano’s in many ways. A virtuoso in the mold of Suzano, Musotto also blazed his own trail largely by the methods he used to record and amplify the berimbau, and by incorporating it as a foreground instrument into a blend of capoeira, African, and funk styles (Potts 2012, 42–56, 65)—sometimes within the same song, as in “La Danza del Tezcatlipoca Rojo” from his Sudaka album (2003). Rather than make his gourds from calabash, he used a thinner substitute cuité, giving his berimbau longer sustain. He used a saxophone microphone inside the gourd, and used multiple berimbau whose size and tonal range, differed significantly more than standard sizes (Galm 2010, 110–15). One area where the berimbau differs from the 1990s pandeiro resurgence is precedence; by the time Suzano and Musotto were redefining Brazilian percussion instruments, the berimbau had already been through several decades of revitalization.

In the 1970s, Luiz D’Anunciação and Naná Vasconcelos began experimenting with different sounds on the berimbau. It was during this time that D’Anunciação developed a two-stick technique, in lieu of the caxixi, for berimbau that he would use on chamber art pieces for berimbau (Galm 2010, 137–40). Using the stick to scrape or scratch, rather than strike, various parts of the berimbau including the gourd and wooden shaft, Vasconcelos created an even larger array of tones. He also used multiple-bounce
strokes with the stick, similar to a drum set player. By alternating these with *dobrão* touches, he was able to produce much quicker and flurried rhythmic patterns.

Vasconcelos also pressed and held the stick against the shaft or cord at various places to produce more pitches, exemplified in his song “Africadeus” (1992)—a *tour de force* of all these techniques combined with using his voice as a complementary noise-making instrument.

Another illustration of such boundary breaking is the song “Berimbau Blues” (1996), performed by Dinho Nascimento. In it, he supports the berimbau by resting it against his torso, rather than holding it in his left hand. This allows both hands to move freely. In lieu of a *dobrão* he uses a slider in his left hand, the same used in blues music on guitar and diddley bow, to fret the *arame*. Moving the slider vertically across the length of the *arame*, Nascimento produces a full melody. The song itself is a Brazilian twist on American Deep South blues, and the creative approach to performing technique enabled the berimbau to be the main melodic voice.

Other developments in performance practice and technique of the berimbau are electronic manipulation of recorded sounds. Electronic manipulation was discussed earlier in some of the orchestral works that feature the berimbau, *Corda e Cabaça* (1999) and *Concerto for Computer and Orchestra* (2000). Musotto, another of the modern berimbau pioneers in popular music, in his album *Sudaka* “…fuses berimbau, cuica, Pro Tools, and such to a children's chorus, a bottle man's cry, authorized secret recordings of a warrior tribe, and several helpings of Candomblé” (Christgau 2004, C90). These changes in technique may seem minor, but they fundamentally changed the musical versatility and capability of the berimbau to be able to stretch into different genres and
different musical roles. Similar to the advent of the *caxixi, dobrão* and the metal *arame*, these techniques enabled the berimbau to perform a wider variety of music and complexity of sounds. This was crucial in the expansion of the berimbau into the musical contexts discussed earlier.

**New notation systems**

Visualization is essential to scholarly research and is a major factor in the success of science (the telescope, microscope, camera, ultrasound, x-ray, and so on). "Visualization takes part in didactic and heuristic processes" (Allgayer-Kaufmann 2010, 417), and the visual notation of music in this instance is a philosophical crossroad between the berimbau’s African heritage, where music is traditionally transmitted orally, and the Western tradition of musical notation systems.

If it is possible to do so without criticizing the value, cultural or artistic, of an oral tradition, I believe that the visual representation of the berimbau’s sounds was an essential step in the globalization of the berimbau and its music. If nothing else, these notation systems allowed modern global scholars and musicians to discuss and learn about the instrument, and its repertoire, in familiar pedagogical contexts.

Some of the earliest notation systems for the berimbau were developed by Schaeffer (Shaffer 1977, 41), D’Anunciação, and Galm later developed his own variation on these systems (Galm 2010, 130–36). They created these systems for use in pedagogical materials and for compositions featuring the berimbau. The earlier methods from both Schaeffer and D’Anunciação use a single un-pitched staff line, with note placement and distinct note-head shapes to indicate how to apply the *dobrão*, position the
cabaça (away from or next to the torso) or whether the performer was to sound the caxixi alone. D’Anunciação revised his scheme to include 3 single lines grouped together, one for the caxixi and the cord, a second for the dobrão and the last for the position of the cabaça (Galm 2010, 134). In Cadência para berimbau, composer Ney Rosauro created a notation system similar to D’Anunciação’s later revision. In this scheme, Rosauro added a fourth line to indicate when the outside of the cabaça should be struck with the baqueta.

These notation schemes present a pragmatic approach to berimbau notation; they cover the basic mechanics and are not too difficult for a new learner to assimilate. It would be cumbersome to notate the more nuanced possibilities, such as playing multiple strokes on the fretted arame. These would need to be jointly notated with redundant dobrão notes, perhaps all tied together to indicate that the dobrão is not to be released and pressed for each succeeding note. Where these practical systems also fall short is they fail to capture the subtleties of sound the berimbau can produce. For an instrument with limited sound options—though improved from the early models—the more detail a notation can convey, the more musical possibilities are opened to performers, composers and song writers.

Tiago de Oliveira Pinto used a TUBS system of notation (originally developed by James Koettig in 1970) to transcribe the kinesthetic motions of playing the berimbau (see Figure 9 on page 56). Oliveira Pinto believed it necessary to go beyond representations of sound to a deeper structure. The notation of motion was an effort to transmit this "deep structure" (Allgayer-Kaufmann 2010, 422–25). Koettig developed the "time-unit-box" notation for West African drumming, which Oliveira Pinto later applied to berimbau.
This notation is intended to transcribe the motion of playing the instrument, as well as the sounds produced (Pinto 1996, 24–25), as explained by Allgayer-Kaufmann: "The purpose of writing kinetic symbols in a time unit box system (score) is not to explore a complex matter; instead it is to illustrate or simply to visualize. This visualization is for the purpose of providing evidence or communicating results that were obtained by other means" (Allgayer-Kaufmann 2010, 427). As musicians do not use this system on a large scale, it is difficult to verify if indeed there is greater insight to be gained from a representation of the kinesthetic. It stands as more of a philosophical tool, rather than practical.

Below are figures representing each of the systems discussed in this section. In the first figure are the four that use the common staff, in the second is the TUBS system developed by Oliveira Pinto. I have tried to notate the diverse representations of six basic sounds (each sound repeated twice, so each “measure” begins a new sound). None of the notations schemes accounts for representations of all six sounds, which illustrates a need for more comprehensive schemes. For schemes that do not have a representation for one of the sounds, I have left the corresponding measure blank. The first sound is the low pitch of the stick striking the loose cord, with the gourd pressed against the body. The second is the high pitch of the stick striking the taunt cord (dobrão applying pressure to the cord), while the gourd is held away from the body. The third is the caxixi being sounded alone. The fourth is the buzzing sound (repique) of the stick striking the cord with the dobrão resting lightly against it, while holding the gourd against the body. The fifth represents the dobrão creating a buzzing effect by touching the cord alone, without striking with the stick. The sixth and final is the stick striking the outside of the gourd.
In Shaffer’s system, the letters “F” and “A” indicate the placement of the gourd, the triangle note head indicates the *caxixi* solo, the “X” note head indicates the buzz (*repique*) effect, and the circled “x” indicates the *dobrão*. In D’Anunciação’s 1971 system, the “>” and “<” symbols indicate placing the gourd against or away from the body, respectively. Rosauro’s system has a line for the *caxixi*, the striking of the gourd with the stick, the striking of the string, and a separate for the *dobrão* (independent of what the performer is doing with the other hand); it does not however differentiate between the raised pitch and the buzz/repique effect, both generated by the *dobrão*. D’Anunciação’s 1991 system is made of 3 connected lines; the top is for motions with the right hand, the middle line for the left hand, and the bottom for the placement of the gourd.

The TUBs system for the berimbau has vertical spaces indicating the time units, and 4 horizontal spaces, two for the right hand (stick and *caxixi*), and two for the left (*dobrão* and gourd). It uses different note heads for different effects, illustrated in the image. While the system, as described by Oliveira Pinto, does not account for all of the
sounds, it could be modified to accommodate them by adding extra horizontal lines or note heads. Where this method gives insight into the motions of berimbau playing, especially for those not trained in musical notation, it lacks the other systems’ rhythmic reference, as the time unit spaces need to be divided according to the smallest common rhythmic denominator. In notating a normal musical pattern with syncopation and rests, the amount of empty spaces could become very unwieldy.

![Figure 9 - Oliveira Pinto's TUBs notation scheme](image)

1—6 — indicating measures subdivided into 2 units
x- Sounding the caxixi
● - Pressing dobrão to get high pitch
○ - Releasing dobrão for the low pitch
/ - Striking cord with stick
> - Pressing gourd against body
< - Moving gourd away from body

Beyond giving musicians a pedagogical or compositional tool with which to approach the berimbau, these notational systems "…successfully countered elitist assumptions that the berimbau was an instrument of limited musical potential" (Galm 2004, 19), and legitimize it within academic and art music spheres. They illustrate the
variety and complexity of possibilities brought about by the advancements in organology and technique discussed in earlier sections. They do offer some room for further innovations and expansions. Common musical nomenclature certainly contains all the elements to adequately represent the berimbau’s tonal possibilities, yet have not been synthesized into a single framework. Only a combination of several systems offers a palette of the most common sounds produced by the berimbau, and yet omits other more exotic effects created by striking, scraping or shaking other parts of the instrument.
Conclusion

This thesis establishes that the musical, sociocultural and organological trajectory can serve as an archetype for the growth within western and diaspora musical cultures of instruments with similar makeup or origin. Key elements of the original makeup of the berimbau are the limited functionality as it relates to producing varied or complex musical patterns, its identity as an African derived musical instrument, and its place among marginalized or colonized people’s spaces—its place in performance venues, repertoire, and among the overall population of musicians during the instrument’s Brazilian infancy.

Although it is likely impossible to demonstrate empirically, this thesis established through a review of accounts and depictions that the musical bow which came to be known as the berimbau was originally an instrument of limited scope in its visibility and demographic of adept performers. These accounts and depictions show that the only group who used the instrument to be Afro-Brazilian slaves prior to emancipation in 1888, and the freed black population after that point and past the turn of the nineteenth century. They also show that marketplaces and gatherings of slaves were the principal venues where observers could see and hear the berimbau in performance.

The thesis also proposes that an idea of the berimbau being exclusively a component or appendage to capoeira is not consistent with history or the current state of the berimbau as a musical. This idea arises as a result of its prominent role in the martial art/dance and based on the assumption that the berimbau is and always was exclusively used in capoeira. This thesis argues that this exclusivity was limited in scope by showing
that the berimbau was used in other settings decades prior to the emergence of capoeira, which by some accounts did not come about until after abolition around 1888. While the berimbau appears to have enjoyed a period of exclusivity within the capoeira rituals, since the 1960s its presence has expanded into art and popular music.

This myth of exclusivity, the limited functionality and the peripheral spaces it occupied all combined to make the berimbau an unlikely prospect to become a global cultural and musical icon that crossed boundaries—geographic, political, musical, cultural and racial. This thesis cites and discusses literature to show that over the course of more than one hundred years, the berimbau’s identity made strides in: musical versatility, social consciousness and status, and academic attention that allowed it to grow from a marginalized and peripheral beginning to become a prominent multinational instrument, rather than become obsolete like other African prototypes from the same area and period.

This study identifies and discusses several key factors and developments that were crucial to the transformation of the berimbau, from peripheral, folkloric and rudimentary to global, popular, virtuosic, mystical and iconic. These factors are organological evolution; the role it assumed in capoeira; sponsorship on the part of state institutions; its emergence as a symbol of black consciousness and social movements; the incorporation of the berimbau into music of various genres; the mysticism that arose around the berimbau; new performance techniques, and new schemes for musical notation.
Organological evolution addresses the change of how the instrument was constructed, and the auxiliary tools and instruments that became standard over time. The adoption of a metal wire over a gut string and the addition of a resonating gourd increased its volume capacity and durability. This made the berimbau a more practical instrument to be maintained and heard in ensembles consisting of louder drums and several singers. The earliest accounts depict it as an accompaniment to a solo vocalist, usually played by the singer. These changes were some of the earliest recorded, and accounts following these changes in the 1820s depict it as part of an ensemble including drums, well before the emergence of capoeira. The other key changes to the instrument’s design were the addition of the dobrão as a device to fret the cord and the use of the caxixi, an instrument unto itself, in the same hand that holds the baqueta and strikes the cord. Prior to these additions, performers could strike the cord in an open position or with cord muted by the fingers of the weak hand—either pinching the cord or pressing with one finger. The performer could also mute the cord after letting it resonate. This likely represented the entire standard musical vocabulary of the early berimbau models and is the basis of the claim that the early berimbau was functionally limited in the variety and complexity that it could produce, both rhythmically and melodically. I include melody even though as a percussion instrument it is technically unpitched, because there is a discernable tone that serves as a reference point for other pitched elements.

This study contrasts the musical vocabulary of the early berimbau models to the possibilities opened up by the organological changes. The performer can strike an open cord for the lowest and most resonant pitch, strike a taut cord that has been fretted by the dobrão, or strike with dobrão resting lightly against the cord—creating a buzzing effect.
Once the performer has struck the cord, they can also bend the pitch by releasing or pressing the cord with the *dobrão*; they can also create a buzzing effect by resting the *dobrão* against the already vibrating cord. These tones add a level of nuance and subtly to the berimbau’s musical vocabulary. As mentioned in earlier sections, a performer can also sound the *caxixi* together with the cord or by itself.

This evolution in organology was integral in creating the musical identity of the modern berimbau. The result is a repertoire that is rich and diverse, with literature that features the berimbau as accompaniment and virtuosic soloist.

This study also establishes that the incorporation of the berimbau into capoeira both created the myth of exclusivity and was the key factor to the spread of the berimbau across the globe. Berimbau and capoeira became synonymous with each other in the twentieth century while together they generated a worldwide audience. Capoeira exploded in popularity during the twentieth century, and has practitioners around the world. This no doubt remains the gateway for learning about the berimbau—including learning how to play it—for the majority of people who are made aware and interested in it.

As an agent of the capoeira ritual, the berimbau benefitted from a Getúlio Vargas administration program that sought to construct a national identity. The program came about in the socio-political environment of Gilberto Freyre’s *Casa Grande e Senzala* and Oswaldo Andrade’s *Manifesto Antropófago* where scholars sought ways to create a Brazilian identity out of all the cultural parts that made up colonial and imperial Brazil. As detailed in this study, these government programs made capoeira—and the berimbau
by association—a state-sanctioned cultural expression. This came at a critical time, when public sentiment and law enforcement were against them. Prejudice persisted against both, but this endorsement by the state appears to correlate with the end of legislation against capoeira. Further studies of this relationship may help determine if there is a causal relationship between the state sponsorship and the end of legislation and protest against capoeira.

Due to its African heritage and the above mentioned role in capoeira, itself an embodiment of resistance, the berimbau became a cultural symbol, artifact and commodity. Part of its growth from regional, peripheral and folkloric into global, mainstream and popular is that the berimbau became a tactile embodiment of black resistance. This identity expanded to include black social consciousness and pride. This embodiment made the berimbau a cultural commodity of these constructed notions of race and identity and is manifested in the tourism market as well as the global capoeira market.

Related to its cultural symbolism, the berimbau also assumed a spiritual identity. Consistent with other Afro-Brazilian spiritual traditions, it serves as a transmitter of energy or communication between the spiritual and physical realms. Judging from the body of literature dedicated to the berimbau, this spirituality appears to be a secondary or perhaps newer characteristic. It is a subject that merits further study, to find the extent to which it informs the berimbau’s identity and what links may exist to any spiritual identity of African musical bows from the colonial period.
The related developments in the twentieth century that expanded the berimbau’s musical footprint outside of capoeira, and beyond the myth of exclusivity, are new performance techniques, notation schemes and new repertoire using or quoting the berimbau. This study reviewed popular and art music pieces incorporating the berimbau from the 1960s until the present to show the berimbau’s repertoire expanded across musical boundaries, while its awareness expanded across geographical ones. Genre is not the only musical boundary that the berimbau has crossed; the work of several berimbau specialists—chiefly Vasconcelos, Nascimento and Musotto—featured the berimbau as a principal and a virtuosic instrument. This represents a functionally different role for the berimbau, which traditionally is the referee of pace, rhythm and, to a degree still limited by its organology, harmony. New notation schemes and techniques, such as electronic sequencing and the use of a guitar slide, were crucial to the expansion of the repertoire and musical roles. The notation schemes, only applied to the instrument in the latter half of the twentieth century, also provide an avenue for academic discussion and pedagogical use.

The berimbau grew from humble beginnings as a folkloric instrument of the African peoples of the Bahia region, into a worldwide phenomenon with cultural, social and spiritual significance. It has become a multinational symbol and commodity of blackness and Africa diaspora identity. The pivotal points in its evolution help to understand what drives the growth and spreading of African diaspora instruments, especially those with limited musical functionality. They can also help us position the significance and symbolism of these musical instruments and their legacy within a larger social framework.
Finally, this thesis shows a need to reframe how we codify the berimbau. This applies to concrete codification, and the shortcomings in notational representation of the berimbau’s musical possibilities. It also applies to theoretical positioning in terms of globalization, commodification, and cultural symbolism. The berimbau navigated colonial and post-slavery periods while maintaining its link to African legacy. It later navigated globalization and maintained its identity as an Afro-Brazilian cultural artifact that was a narrative for resistance. Preserving these meanings made it a transmitter of culture across time and geography. Understanding the berimbau in these terms provides a lens through which to view other African-derived percussion instruments that could have similar cultural, spiritual, and historical traits within their own communities and traditions.
Further Questions

One of the topics in this thesis that deserves a deeper treatment is the nationalist administration of Getúlio Vargas. The president-dictator is a monumental figure in almost every facet of Brazilian history in the twentieth century, yet detailed deconstruction of his legacy is scarce for such an influential and controversial person. As controversial as I believe him to be, he tends to be romanticized, rationalized, or discussed in a broad context of the political parties and military groups that supported or challenged him. An examination of the extent of a causal relation between his nation building programs that legitimized the practice of *capoeira* and the end of formalized protest against *capoeira* and the berimbau would be an insightful contribution.

The *batá* drums in Cuba, much like the *atabaques* of Brazil, are traditionally part of sacred ceremony and their use crosses over into secular music. This sacred/secular cross over is similar to the berimbau, if we can say the berimbau crosses over in reverse, from secular to sacred. The similarities between their groupings of three and hierarchies within the rhythmic framework indicate possible links in the spirituality of the modern berimbau and its African predecessors. If the berimbau assuming a pseudo-sacred is a post-colonial development, a more microscopic comparison of the histories of the *batá* and berimbau may reveal common factors leading to a sacred percussive trio.

Lastly, this thesis attempted to demonstrate how the application of creativity and ingenuity to the construction of the berimbau was essential to its globalization. Can we draw similar conclusions about other African-derived instruments? From musical bows of other Latin American areas or the diddley bow of the southern United States, to others
that achieved global awareness and presence, such as the congas and cajon from Cuba, the pandeiro from Brazil, and the marimba from various Central American countries, a comparison of their organological histories may shed light on common threads of ingenuity that enabled their expansion into the musical and social fabric of their communities.
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