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# Listening to Capoeira: Phenomenology, Embodiment, and the Materiality of Music

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hat does this music sound like?" Like many ethnomusicologists, I often find myself playing recorded versions of music in response to this implicit question when I talk about the performance genre that I study—the Afro-Brazilian martial dance, *capoeira*. In many ways, recordings are a blessing, saving my audiences from a slew of adjectives and vague metaphors, but they also leave me uncomfortable. Music objectified as a recording or transcription skirts a number of troublesome issues and generates its own distortions in our understanding of musical events. One of the most bothersome issues regards the phenomenology of hearing. I fear that by presenting an objectified recording as "the music," I may seem to imply that the musical object alone determines musical experience, that when my audience hears a mechanically reproduced sound event, they hear the same "thing" as the performers or listeners who produced that performance. The boldest audience members often throw this question back at me: "What exactly are we supposed to be hearing?"

A writer as steeped in a musical tradition as John Miller Chernoff is in West African drumming expressed similar reservations: "Even after nearly thirty years of playing African music, I am reluctant to hazard a guess about what people hear when they are listening to music.... At this point, I believe that in West African research, we have very limited methodological resources for any search for an auditory phenomenology of hearing" (1997:24–25). In spite of his own eloquence on the experience of hearing counterrhythms within a percussion ensemble, Chernoff's hesitation at discussing "hearing" signals the apparent difficulty of apprehending and describing another's experience.

Clifford Geertz offers a potential point of entry into the seemingly

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impenetrable interiority of experience when he suggests that what ethnographers are studying is not experience itself, but the structures through which experience occurs:

The ethnographer does not, and, in my opinion, largely cannot, perceive what his informants perceive. What he perceives, and that uncertainly enough, is what they perceive "with"—or "by means of," or "through". . . or whatever the word should be. (1983:58, ellipses in the original)

What do people perceive music "with" or "by means of" or "through," to borrow from Geertz? The naïve answer to this question is that people perceive music with their ears—and perhaps, to a lesser degree, with their eyes or bodies as a visually-arresting or chest-thumping performance impresses upon the listener. Or for a performer, perhaps we could say that he or she perceives music across the whole epidermal frontier and throughout the nerves, muscles, sinews, and flesh of their bodies when they sing or play an instrument, alone or with an ensemble. Music makers may perceive rhythms, pitches, and melodies as much from muscle and joint placement, motion and tension, as from the sounds produced by their actions.

If we assume that ears, eyes, skin, and nerves are not affected by culture, then this privileging of the embodied dimension of experience would seem to suggest that music sounds the same to everyone—if we share a common biological substrate. In fact, many students of human behavior seem to assume just that, that sense experience results from the interaction of the individual organism with objective "qualities" of the world that leave physical impressions on the senses. "Culture" or social influences enter the experiential equation in these models only when idiosyncratic "raw" sense data is subsequently "processed" through socially acquired intellectual constructs or systems of categories.<sup>2</sup> Some social scientists seem to assume that socially constructed "realities" are linguistic, conceptual, or symbolic interventions occurring after primary sensation. The sensual dimensions of phenomena themselves—qualities like colors, sounds, sights, smells, tastes, textures—are presumed to be pre-cultural, either irredeemably individual or embarrassingly universal. But might sense experience itself be shaped by social and cultural factors? Might sense experience be, not the raw material sorted through semiotic filters into culturally meaningful categories, but already refined by a cultural agent actively constituting his or her perceptions? The audience members who ask for guidance as to what they are hearing suggest that this is the case.

Maurice Merleau-Ponty (1962) and other phenomenological philosophers have demonstrated that a naïve objectivist approach to perception—that is, assuming sensual qualities are merely the subjective effects of the objective qualities of the sensed object—proves inadequate for many phe-

nomena. This sort of approach fails to explain not merely pathologies of perception (see also Sacks 1987, 1995), but even such basic sensory qualities as color (see also Hardin 1990). Instead, sensual qualities are better understood as arising in a dialectical process of sensing that conjoins the sensory capacities of the "subject" with the sensory qualities of the "object," both present meaningfully only in the perception.<sup>3</sup> To say that there is a "prepredicative immediacy" to music, as Thomas Clifton (1983:68) does, is not synonymous with saying that it is "pre-cultural." Instead of treating sound as a property of a musical object separate from the listener, we might examine the culturally specific processes of listening to understand better how "music-ness" is variously perceived in sound. This phenomenological process is essential to ethnomusicology, I believe, because I share with Thomas Porcello (1998:486) a suspicion that "the ultimate significance of music resides not solely in musical texts per se, but rather in social and individual processes of musical encounter."

From this phenomenological perspective, the poetic accounts practitioners offer of musical performances and the concrete criticisms they give to their students do not constitute the music, as some models of "discursive construction" suggest. Instead, these data are the starting points for hearing the processes of perception, listening closely to expressions of experience for the echoes of the perception on which it might be grounded, or observing directly the inculcation of techniques for hearing. If music is constituted in the ear as much as on an instrument or in a throat, we may be able to locate processes that condition the ear, preparing it for its active role in music performance.

Paul Stoller (1989) has suggested that we learn to listen in culturally specific ways through an apprenticeship process (cf. Mauss 1973). Stoller describes how he was chastised by a Songhay sorcerer for not knowing how to hear and thus failing to perceive a sick man's spiritual double, separated from him through witchcraft, that returned after the healer discovered it in a pile of millet husks. Stoller calls it his "first lesson in Songhay hearing" (1989:113). The sorcerer scolded him:

You look but you do not see. You touch, but you do not feel. You listen, but you do not hear. Without sight or touch... one can learn a great deal. But you must learn how to *bear* or you will learn little about our ways. (115)

Stoller's brief, provocative discussion of the cultural specificity and learned quality of the ability to hear touches on how that apprenticeship in sensing might take place.

In the following pages, I wish to explore how an apprenticeship in hearing takes place among practitioners of capoeira, an Afro-Brazilian art that mixes elements of dance and martial art. This phenomenological exploration will demonstrate, not only that culture shapes the way one hears, but also that sensing is an inherently social and cultural phenomenon. When we suspend our assumptions about music and turn to the case of capoeira in Brazil, I will argue, we find that cultural and social influences play an important role, not merely in the linguistic or symbolic "interpretation" of music, but in its very sensual apprehension. The question, "What does music sound like?" may be replaced with a careful consideration of the question that Geertz suggested: What do practitioners perceive "with"—or "by means of," or "through"? Practitioners perceive music, I argue, not merely through a layer of cognitive categories and symbolic associations, but with a trained and responsive body, through habits copied from others and socially reinforced, and by means of their own musical skills, arduously acquired and actively engaged in listening.

# Capoeira as a "Blurred Genre"

Although practitioners typically refer to capoeira as a "game," it might also be described, borrowing a phrase from Clifford Geertz (1983), as a "blurred genre," combining elements of dance, folklore, martial art, sport, ritual, and training for unarmed (and sometimes armed) fighting. Once an activity outlawed and persecuted by Brazilian authorities (see Bretas 1989, 1991; Holloway 1989, 1993; and Soares 1994), many Brazilians now consider capoeira a vital Afro-Brazilian contribution to the country's cultural patrimony. Capoeira is practiced, learned, and used in diverse contexts: from folklore performances for tourists and physical education classes, to athletic competitions, and for self-defense.

The group with whom I worked most closely in Salvador, Brazil, the Grupo de Capoeira Angola Pelourinho, practiced capoeira as an holistic art and an Afrocentric political project. They constructed outreach programs for street children and participated in a broad-based black nationalist cultural and political movement in the northeastern state of Bahia, cultivating consciousness and fighting racism through capoeira practice. In contrast, other practitioners have historically allied capoeira with avant-garde arts, folklore groups, the military, the national government, leftist groups, private sporting academies, children's fitness programs, and psychotherapy. Programs with capoeira have been founded on Pan-Africanism, Brazilian nationalism, anti-racism, Bahian regionalism, and blatant commercialism. Nevertheless, in spite of these differences, *capoeiristas* (as adepts are called) assert, nearly unanimously, that the *roda*, or capoeira "ring," is both the ideal forum for demonstrating all facets of proficiency and the most "traditional" manifestation of the practice.

The roda is a space as well as an event. Spatially, bodies—of spectators, of adepts waiting their own chances to play, and musicians, themselves practitioners—form a circle to enclose the game, to contain it, and, according to capoeira's oral history, to conceal the practice from persecuting authorities. Temporally, the roda is an acoustical event, framed by musical landmarks. Sound informs players when to start and stop their matches and how to play, and ties all participants into the ongoing sequence of games as successive pairs of players enter the space or individual practitioners "buy" the game, cutting in on one member of an already-playing pair.

Within the sonic and spatial confines of the roda, two players at a time engage in a restrained, acrobatic form of interaction. Confrontations generally obey tacit standards for acceptable levels of aggression, but even within these standards lies a range of intensities. Capoeira games can fluctuate between artistic cooperation and violent conflict, dance and combat, theater and sport, the ludic and the agonistic, often in response to changes in music. At times, the interaction between two players resembles athletic sparring, even brawling (often to the consternation of those charged with controlling an event). Other times, adepts appear to be cooperating in an acrobatic, improvised dance that merely implies fighting; they pass over and under each other, cartwheeling and slipping close to the floor to narrowly avoid long, arcing kicks or stabbing headbutts.

Ideally, in a match, a player demonstrates superior ability by tripping or headbutting an adversary—artfully—so as to knock him or her to the ground in a moment of vulnerability. Players avoid touching any part of the body to the ground except the hands, feet, and head. More importantly, however, a capoeirista strives to demonstrate "malícia": "cunning" or "savvy" that might manifest itself as humor, technical virtuosity, deceptiveness, the ability to anticipate another's actions, a superior command of the space, a sense of the dramatic, or even malicious opportunism.

The game of capoeira escapes most of the genre designations we might apply to this sort of practice. Players compete to outperform each other, generally with no clear winner, using acrobatic movements to kick, trip, or headbutt an opponent (strikes with the hands are discouraged). At the same time, players strive to perform beautifully, interpret the music, respond in imaginative, unexpected ways to an opponent's moves, and use ritual, humor, and drama to enhance the performance. Excellence in the capoeira ring is judged by aesthetic, dramatic, and psychological criteria as well as the pragmatic consideration of who gets tripped or knocked down. Becoming proficient requires long-term training, and full participation demands learning how to play instruments, as well as acquiring movement skills.

### Capoeira as Musical Practice

For a roda to be complete, an orchestra must be present; for the game to be fully realized, music must accompany and guide it. One or more instrumentalists playing the *berimbau*, a single-stringed, gourd-resonating musical bow, lead the capoeira ensemble. The ensemble may also include some combination of an *atabaque*, a tall, cylindrical, single-faced drum; *pandeiros*, tambourine-like frame drums; a double bell-gong called an *agogô*; and a *reco-reco*, a type of scraper typically made of wood. The musicians, often called the "*bateria*," form one side of the ring in which capoeira is played. While they wait to enter the roda, players engage in call and response singing, often initiated by the musicians. Capoeira practitioners are expected to become proficient as instrumentalists and singers; adepts who do not develop all of these skills were sometimes said to be "*capenga*," literally, "lame," by my informants.

In capoeira, instrumental music serves as more than an acoustical vehicle for conveying song texts or a mere accompaniment to the physical interaction. Within the roda as a sound space, instrumental voices predominate. Lulls in singing are common, albeit undesirable, during games. A disturbance in the instrumental music, however, even a supporting instrument played out of rhythm or a string breaking on a musical bow, can bring the players' physical interaction to an abrupt halt. Capoeiristas describe the experiential effects of sound textures, especially the berimbau, the musical bow distinctive of capoeira, in ways that challenge the limits of anthropological and social scientific approaches to music and hearing.

For example, during a 1967 interview, the late Mestre or "Teacher" Pastinha, a legendary capoeira master, recalled the days when capoeira was a violent endeavor: "It was a sad time for capoeira. I was familiar [with it]. I saw. In the gangs of the docks . . . Violent struggles—no one was able to contain them." Then the nearly blind mestre must have heard a change in the rhythm of the berimbau during the interview, and his nostalgia changed to an immediate perception of bodies and emotions through the music:

Now that the rhythm is faster, I feel the agility of these two men, and I imagine each one of their blows striking the target in full. I imagine rage, fear, spite, despair, propelling these feet . . . . (cited in Freire 1967:80, ellipses in the original)

The sound of the roda, the music of the bateria, draws the past into the present, provoking Pastinha to perceive echoes of previous violence in the trajectories of contemporary movements, movements he cannot see. An anonymous reviewer of this article suggested that capoeira "updates the past as a reverence," a phrase that beautifully evokes the phenomenological transformation that occurs when remembered violence, even "despair,"

re-emerges as emotional gravitas. Blind, but acutely sensitive to the affective soundscape of the roda, Pastinha invites us to trace back from his perceptions, shared so poetically, to the processes through which he can hear bodies, movements, emotions, and violence in sound. Time is folded over in Pastinha's musical experience, the imagined past conditioning the aesthetic present. If, as Thomas Clifton (1983:70) has suggested, "musical texture has a tactile quality," the culturally proficient mestre tells us what the texture of the berimbau feels like.

Although capoeiristas argue incessantly about the proper configuration for the ensemble, what instruments it should include, and what rhythms should be played by the supporting musicians, they uniformly agree that the berimbau is the most important instrument in the ensemble. The instrument is a monochord, musical bow with a gourd resonator that, according to Gerhard Kubik (1979) and others who have studied it, probably originated in Angola or southern Africa and was modified significantly once in Brazil. Although it has some wider use, in jazz music, for example, Brazilians strongly associate the berimbau with capoeira. In some places, when capoeira was illegal, just carrying a berimbau in public was said to be sufficient grounds to justify arrest, legal prosecution, even deportation.

The bow of the berimbau is fashioned of the supple trunk of a small biriba tree or other hardwood and ideally strung with a steel belt, an aço, torn from the sidewall of an abandoned tire. A hard-shelled gourd, called a cabaça, is affixed to one end of the bow to act as a resonator with a hole that faces the musician's belly. The musician strikes the bow with a stick, altering the tone with a large metal coin, disk, or smooth stone by pressing it against the string. Using this technique, the musician can produce three distinct tones: a low open note, a higher-pitched tone when the coin or stone is pressed hard against the string to shorten it, and a buzzing, intermediate gray tone when the coin or stone is held loosely against the vibrating string. In addition, the musician holds a small wicker rattle filled with seeds, called a caxixi, that can produce an accent on each beat or may be shaken on its own. The berimbau produces a surprising range of different sorts of sounds and timbres, although it does not systematically produce a wide variety of pitches.<sup>5</sup>

The berimbau may moderate the game of capoeira in several ways. First, the pace of physical interaction between players should follow the tempo determined by the player of the lead berimbau, that is, typically, the bow with the deepest tone or the one in the hands of the teacher or senior practitioner (if the roda contains more than one). Novices are easily recognized because, when they become agitated or anxious, it is said, they tend to accelerate and play more rapidly than the music. Second, the berimbau regulates the game by cueing particular events through specific rhythmic

phrases. For example, a steady stream of beats on the open string suspends play. If a game escalates beyond musical controls, the lowered instrument can be used to separate overly aggressive players physically, or, as a weapon of last resort.<sup>6</sup>

The berimbau also moderates the type of game to be played. What adepts call the "toque" (literally, "tolling" or "touch") of the berimbau distinguishes playing styles. A toque is a melodic-rhythmic pattern of the three tones that can be produced with the instrument. Each toque is associated with a distinctive style of physical interaction. For example, the toque "Angola" designates a slow, reserved game played close to the ground, used to initiate matches in the style of the art said to be most traditional. In contrast, one variant of "São Bento Grande" accompanies the fastest and most aggressive games in Capoeira Regional, the style of the art created and taught by Mestre Bimba in the first sporting center dedicated to capoeira instruction.<sup>7</sup> Other toques accompany particular sorts of games. For example, "Iuna," a toque said to mimic the male and female mating calls of a bird indigenous to Bahia's arid interior, is reserved for games between advanced practitioners.8 Another, called either "Santa Maria" or "Apanha laranja no chao. tico-tico" is often reserved for the "money game" in which capoeiristas vie to pick up money with their mouths while playing.

Sonic qualities of the toque are experienced as directly related to the style of play that they provoke. For example, some teachers' versions of the toque "Iuna" make no use of the high pitch available on the berimbau; I was told that this helped advanced players remain especially calm and perform their most beautiful movements in harmony with each other. Although capoeiristas do not agree on the correct form of each toque and the style of play appropriate for each, these debates reveal an underlying normative assumption that styles of bodily and instrumental play should be intimately related. Capoeiristas echoed the proverb, "The berimbau is the first teacher," and chastised students who did not play "in the rhythm." Just as the roda contained the game spatially, so, too, music does sonically.

But tempo, formulaic musical codes, and the toques are just the most basic and functional ways in which instrumental music—specifically the berimbau—affects activity and experience in the roda. The experience of hearing the berimbau can be better understood when the instrument's sound is located in relation to bodily comportments it evokes in a broader acoustical context, what Steven Feld has called a "soundscape" (1990:264–68; see also Keil and Feld 1994; Martí 1997).

During the course of this century, other instruments formerly used to accompany capoeira have fallen into disuse; the guitar, for instance, was once included in some rodas. In contrast, the berimbau, previously used in some Bahian forms of samba and played by strolling produce vendors,

is now heard exclusively in capoeira-related events. The instrument's distinctive sound qualities—the pronounced, oscillating drone of the gourd as it moves on and off the musician's belly and the shaker's fuzzy buzzing that thickens the instrument's voice—offer a marked contrast with other musics. Most commercially produced recordings, for example, have a crisp, electronically-produced clarity and uniform amplification. Other Afro-Brazilian religious and festival musics, because they are drum-based, possess neither the sustain nor the drone of the berimbau, and tend to be far more emphatically percussive.

Some adepts described the distinctive sound of the berimbau as "African," "traditional," or even "ancient." In a 1967 interview, the celebrated traditionalist teacher, Mestre Pastinha, insisted:

You can't forget the berimbau. The berimbau is the primitive teacher. It teaches by sound. To our bodies, it gives energy [literally, "vibration"] and the *ginga* [the basic swaying step of capoeira; one could translate the term as "swing"]. The percussion ensemble with the berimbau is not a modern arrangement, no, it's a fundamental thing [literally, a "thing of the principles or origins"]. (cited in Freire 1967:82)

Pastinha, like many capoeiristas, hears the sound as distinctly opposed to "a modern arrangement." Ubirajara Almeida (1986:71), known by the nickname "Mestre Acordeon," writes that the rhythm of the berimbau is "black and strong, a deep and powerful pulse that reaches the heart," a sound that he evocatively suggests can "envelop" the practitioner.

# The Corporeality of Sound

Rather than focusing on the sound as unproblematic sonic fact or evocative signifier referencing other elements of context like social structure. symbols, or value, I want to think about the processes through which sound is apprehended. This analysis works backward reflectively, as Edmund Husserl advocated, from a perceptual phenomenon, or descriptions of them like Pastinha's, to the implicit grounds of that perception. 11 In the article, "The Grain of the Voice," Roland Barthes (1977) specifically addressed the problem of talking about sound quality and whether it was possible to do so without simply lapsing into adjectives. Barthes recommended changing the musical object in a direction parallel to that which I am suggesting (1977:180-81). He designates the intersection between the sonority of language and the sonic materiality of the individual voice as "the grain" of the sung word. Barthes attempts to highlight the way that sound does not float free of its source; rather, it drags along the material trace of its origin in the case of instrumental playing. He writes that he knows "at once which part of the body is playing," when he hears piano music, "if it is the arm,

too often, alas, muscled like a dancer's calves, the clutch of the fingertips... or if on the contrary it is the only erotic part of a pianist's body, the pad of the fingers whose 'grain' is so rarely heard" (189).

One of the first things one notices when one attempts a phenomenological reduction of musical perception, that is, when one suspends one's presuppositions about what the musical object is in capoeira, is that capoeiristas do not seem to hear musical sound as a conjuncture of abstractable. purely sonic qualities, like rhythm, tone, or melody. When practitioners describe the berimbau's sound, they typically refer to the material qualities of the instrument that causes it. They do not say that they hear a changed pitch, for example, but that they hear the coin pressing on the string. The sound makes present the physical action that produces it. Capoeiristas can readily tell when a musician uses a smooth stone rather than a slice of copper ingot to alter the pitch of the bow, but cannot abstract away the qualities of the sound that are distinctive in conversation. When I asked players to describe specifically the difference in sound generated by a stone in comparison to a coin, they always described the physical qualities of the stone and coin, not abstract, objectified qualities of the sound. When the bottom of a caxixi, or shaker, is cut from a plastic milk carton rather than a gourd, adepts say that it does not sound right, that it sounds like plastic. When a bow needed to be restrung, it was not because the pitch was too low; a musician said it was because the bow had "grown loose," a description of the instrument, not of the sound.

What is significant is not only whether an ethnomusicologist can convert these palpable experiential presences of material qualities into objectifiable and measurable qualities of air pressure changes or waveform (perhaps with electronic assistance), but what it suggests to us about the experience of hearing the berimbau for the adept. For the adept, the instrument itself is apparently immanent as a physical object in the experience of the sound it makes. To notice this is to notice the visceral nature of sonority, the distinct culturally-specific materiality of sound experiences. A capoeira adept, who must necessarily be a musician, accustomed to feeling the instrument meshing with his or her own body both physically and sonically, feels the instrument present in the sound it produces. Barthes, when writing about vocal music, calls the physical presence of the singer in song, "the grain of the voice." He describes how the sound of a Russian cantor's voice was, "brought to your ears in one and the same movement from deep down in the cavities, the muscles, the membranes, the cartilages, and from deep down in the Slavonic language, as though a single skin lined the inner flesh of the performer and the music he sings" (1977:181-82).

The "grain of the voice" is not the abstract quality of timbre imputed

solely to the musical object; the "grain" is, according to Barthes, "the materiality of the body" in the voice. The grain of the berimbau is the presence of a real aco, a real steel belt, in the sound itself, rather than the piano wire some contemporary practitioners use. The grain of the berimbau is the bite of a brass coin (not a silver dollar—far too dull and mushy) into the cord, or the warmer nuzzling against the string of a stone smoothed by a river, not a quality of a wave form's attack and decay. The grain includes the weight of the wood, the solid, table-top smooth clarity of a biriba shaft compared to the light, brittle hollowness of bamboo bows made for tourists. This is one reason I like the expression "grain" to talk about the phenomenology of hearing; when dealing with a wooden instrument. the term evokes the veins in the wood and how one can perceive the inner qualities of wood from its grain at the surface, just as one hears an instrument's material qualities at a distance in sound. Barthes writes, "The 'grain' is the body in the voice as it sings, the hand as it writes, the limb as it performs" (188). For capoeiristas, accustomed to performing, the experience of the berimbau's sound includes a synesthesia, a perception of one sense in terms of another, with physical, sensual qualities of the instrument itself felt through the ear. Sound evokes textures, sights, and physical qualities of the object that produced it. In addition, as Clifton suggests, describing a musical texture as "hollow" or "thin" means that the body of the listener "adopted an attitude of hollowness, thinness, etc." (1983:68, emphasis in the original), a dimension of synesthesia in hearing that I explore in the next section.

# The Body's Apprenticeship in Listening

The phenomenology of listening to the berimbau is further complicated for adepts by the way that they are trained to perform. When playing the bow in the ensemble, they are not taught simply to follow along lockstep with the rhythmic line of the toque. Only a novice musician repetitively plays the toque's most basic gestalt or permutation. Instead, capoeiristas are encouraged to listen for opportunities to improvise and create engaging tensions with the other instruments in the ensemble. They vary rhythms and double, "dobrar," the tempo, dropping a beat when another instrument is "securing" the time line, or "marcaçao"; in turn anchoring the rhythm while a fellow musician improvises embellishments. They delay beats or create interlocking rhythmic phrases with other instruments, sometimes even attempting to cause another musician intentionally to "get out of" the implicit toque. In other words, as soon as a student learns to "secure" the rhythm, he or she begins to depart from it and thus to hear what is possible in the rhythm, not merely what is present. As John Cher-

noff (1979) discovered was the case with the drummers he studied, musicians listen to other parts and respond through movement with a counterrhythm (cf. Chernoff 1997:24). Robert Walser describes this form of musical education as acquiring "the ability to recognize, distinguish, and deploy the musical possibilities organized in styles or genres by various communities" (1993:xii).

This incorporation of bodily skill conditions a practitioner simultaneously to hear the rhythm that is being played by another and to feel different, complementary rhythms or variations emerging from his or her own fingers and hands. One will frequently see practitioners "playing along" with capoeira music when they have no instruments; they will not, however, follow mechanically what is being played. Instead, I often saw them miming the playing of other, complementary variations. This phantom berimbau, rhythms immanent in the music itself that are the product of one's own potential to become actively enmeshed in the ensemble, may be a persistent accompaniment or simply a horizon for the music that is actually "heard" in a physiological sense. For example, when a virtuoso player exploded in a flurry of subtle tones, executing difficult counter-rhythms and delays, and demonstrating extraordinary control over the coin and instrument. I experienced this display in relation to my own ability. I could hear how fast the musician's fingers had to move, the exquisite control of the string, and the dramatic movements of the bow against the body because these sounds transcended my own ability to produce them. My awe arose from my inability to feel my way along with the rhythm, to keep up with the actual sound with virtual movements of my own potential hands.

John Chernoff (1997:22) suggested in the case of West African percussion that, "Movement is the key to 'hearing' the music. If the music relinquishes its relation to movement, it abandons its participatory potential." When Chernoff's Western students tried to learn these rhythms, if they did not integrate them into whole body rhythms, they could not keep pace with changes in tempo. Music, like space, can be experienced not merely as an object outside the self, "but as fields of action for a subject" (Clifton 1983:70).

Even recordings of capoeira music are generally listened to actively as pedagogical materials rather than received passively as external sound objects by some practioners; thus similar processes shape listening to recorded music even though the instruments and musicians are distant in both time and space. While listening to recordings, novice performers may strive to incorporate the music, translating unfamiliar improvisations that they hear into the movements of the hands and arms that can produce these sounds. Hands mediate the sound of the instrument rather than symbols

or words. Music becomes generalized in the limbs, not localized only in a relation between the ears and mind. Music emerges in a field of corporeal potential rather than in a cognitive space. The adept's body is experienced as intertwining with the berimbau in the presence of music, even when the instrument itself is absent. As Clifford Geertz put it, "Art and the equipment to grasp it are made in the same shop" (1976:1497).

This experiential intertwining of the body and instrument results, in part, from the organology of the berimbau itself. As is the case for most instruments, the body of the musician completes the mechanical structure of the musical bow. The musician's stomach and the gourd together form the instrument's resonating chamber, allowing the musician to change the size and shape of the chamber to alter its pitch and volume by moving it on and off the belly. The fingers of the hand that holds the berimbau must wind around the cord that connects the gourd to the instrument and control the coin that changes the bow's pitch. At first, the position hurts the thumb or little finger, sometimes even wearing away the skin when one plays for extended periods before developing the requisite calluses. When I held up a bleeding little finger after one long session, an instructor joked, "The capoeira's coming out!" Just as sound flowed out of the joints of my body and the instrument, so did the art seep into my body through practice and attendant suffering. 13

The experience of hearing the berimbau is not just affected by instrumental proficiency; one's apprenticeship in the bodily techniques of the art—the movements—conditions how the music is constituted in experience. Players frequently comment on the effect that the music has on their bodies, how the berimbau "moves them," "gets in their blood," and, as in the passage cited from Pastinha, gives adepts' bodies "energy" and "swing." Movement is so intimately linked to sound that author and mestre. Almir das Areias (1983:26), called the berimbau, the "teacher of every capoeirista." I take these comments not merely as metaphors or exaggerations, but, as Martin Heidegger (1971) has suggested in his discussions of poetry, as ways of disclosing being. Although they describe the sound of the berimbau, they are also disclosing the means through which it is apprehended: through a bodily kinesthetic sense. This is not because of some innate kinesthetic quality of particular music, nor is it because of a uniform response to musical stimuli. Although "evidence of the art of hearing can be historically shown in all cultures," the "sense of sonic systems" is, as Max Peter Baumann (1997:3) suggests, nonuniversal. John Blacking (1985: 64) has argued in the case of trance—and I think his argument applies more generally—that people must have "acquired certain habits of assimilating sensory experience" for music to affect them viscerally. "Any sensory experience is partly a skill and any skill can be cultivated," Edmund Carpenter (1972: 20) has argued. To talk about the embodied or sensory dimensions of musical experience means assuming musical experience is pre-cultural or universal, *only if* one assumes that the experiential body (or the senses) are given entirely by its physical or biological nature.

Music occurs in proximity to bodily movement, and patterns of action form a foundation for pre-abstract sensual experience. In the case of capoeira, put quite simply, the distinctive sound texture of the berimbau is seldom heard outside of training or play. Practitioners' lived bodies, fashioned by patterns of acting in relation to the music, respond almost involuntarily to the sonic texture. Thomas Csordas (1993:138) referred to "culturally elaborated ways of attending to and with one's body" as "somatic modes of attention," an existential foundation for cultural differences in experience. In the case of capoeira music, practitioners feel the swaying movements diligently sedimented in corporeal memory through arduous training either as an outward movement or an inward quickening, a readiness to move. Just as salsa aficionados may feel dance steps percolate through the body from the first beats of a Célia Cruz song, or a tanguera feel her body prepare for the distinctive spidery-legged posture a woman assumes in tango's close embrace when she hears the bandoneon, a capoeirista feels a quickening to the game in the acoustical space of the berimbau. Elizabeth Behnke (1997) has described what she calls "ghost gestures," that is, movements that are summoned to corporeal awareness even if they are not performed, that condition the experience of the lived flesh.

A phenomenological study of music must take account of this dimension of corporeality, especially because so many musics are apprehended actively in dance. To the uninitiated ear, the music may be sound, but it is corporeally incomprehensible, unaccompanied by the practical understanding, the bodily enmeshment, that an adept ear has attained. To the dancer's ear, music is a summons to dance.

In these ways, acquiring instrumental and physical proficiency affects perceptions of music and structures how sound "sounds." Conditioned to respond with physical action and heightened awareness while playing the game and trained to weave their own variations and counter-rhythms into the ongoing interactions of the instruments, capoeiristas are especially alive to the acoustical texture of the berimbau. Sound textures intersect with patterns of bodily dispositions acquired through apprenticeship. In phenomenological terms, the materiality of the music is associated with a modulation in the intentionality of the listener's body. The bodily apprenticeship in listening undergone by capoeiristas conditions their perception of sound, leading them to "discover" the art's kinesthetic, not as an object external to the body, but as a sensitivity immanent in their lived flesh.

## The Socio-ability of Hearing

The "subjective" dimension of hearing, however, is not purely idiosyncratic or individual. Often, due to an emphasis on a choreographer's individual "genius" or artistic vision in genres such as ballet and modern dance, the ability of music to "inspire" dance is considered to be a matter of personal "creativity." Cultural patterns of embodiment, acquired through social interaction, ensure that the body trained to hear is a socialized, acculturated body.

In his discussion of the "grain of the voice," Barthes (1977:188) asserts that there is an "erotic" dimension to the grain of the voice, that one hears in the "grain" the relation between the sound and the specific parts of the musician's body by which it is produced that is a form of sociality. The grain of the berimbau may be said to have a similar erotic quality, but it is an erotics of the instrument's materiality and of one's own bodily potential both as musician and player. The body experienced in the sound is not just the instrument's wooden and steel flesh, but also one's own capacity to perform with another player in the capoeira ring. When phantom movements percolate through the body, they are already experienced in relation to a potential adversary in the roda—no movement ideally exists in isolation in capoeira, outside the context of the game. Capoeira is not a solo "expressive" dance; it is an agonistic, interactive form of the game.

According to some teachers, rhythmic variations heard in the music should motivate each one of a player's aggressive and evasive maneuvers. This admonishment does not result merely from aesthetic concerns, but from a perception that sound organizes and reveals opportunities in the constantly shifting intercorporeal relation between bodies at play. Adepts found it easy to deceive with bodily feints and visual distractions any player who depended too much on sight in the roda. Capoeiristas described to me the experience of, instead, "listening for" the right moment to attack in the overlapping rhythms of an orchestra's multiple berimbaus. In one class, Mestre Cobra ran exercises in which two players were asked to dance while facing the orchestra; they were to listen, not watch, for the other player's vulnerabilities. They searched for a musical inspiration that would help them to slip through the defenses of their adversary.

Special exercises and constant encouragement train novices to relate movement and listening through synesthesia so that they might hear opportunities, allowing them to catch an opponent unaware. Anthropologist and former practitioner, Ordep Serra, told me that his teacher, Mestre Pastinha, even suggested that when defending himself in the street, a capoeirista should "imagine the rhythms of the berimbau in order to escape harm." The sound of the instrument would aid in avoiding injury and in

quickly dispatching an assailant. In a sense, capoeiristas describe hearing a confrontation on the soundscape of the berimbau's rhythms where the intentions of an adversary become audibly apparent and predictable. An adversary's body, ideally, was present and revealed in the sound if one knew how to listen bodily.

Alfred Schutz (1964) treated "musical tuning-in," how musicians must feel their way into a shared temporal flow so as to perform together, as an archetypal example of the intersubjectivity demanded by everyday life, Capoeiristas, however, do not seek to dilate their own individual volitions into a shared "groove"; they attempt instead to know and anticipate their adversary. A practitioner "tunes in," not to a shared temporal flow, but in order to disrupt another player's flow.

Because the musical rhythms—tempo, phrasing, toques—moderate the physical relation between players, the kinesthetic conditioning of the listening body is emphatically intercorporeal. Hearing is a social, not a purely individual, event. A capoeirista ideally does not rehearse solitary movements in relation to music; he or she refines a sensibility to interact with another player's body, which, like his or her own, is actively responsive in an acoustical field. When one hears the distinctive timbre of the berimbau, one feels an inward quickening to interaction with another person's body, experiencing the self in relation to a generalized adversary's body. One does not simply feel movements in the body—one feels the awakening of the hard-won capacity to exploit the opportunities an adversary's movement presents, the heightened responsiveness necessary to avoid being tripped or caught at a disadvantage. To use Barthes' terms, this is the berimbau's "erotics."

One of the things that makes the intercorporeality of capoeira music so "primitive," to borrow Mestre Pastinha's term, or "African" and "ancient" (descriptions given by other adepts), I believe, is that the movement techniques, rhythms, and bodily ways of being in the sound are borrowed. One does not simply interpret music freely in movement. Nor does one create one's own purely idiosyncratic way of performing, although one does hope to develop an individual style. In large part, movements are acquired through a mimetic process Marcel Mauss (1973) called "prestigious imitation." Players copy capoeira from the bodies of their "ancestors" in the game, as my teacher Mestre Moraes told me, imitating those players whose movements they admire. When one moves in relation to the berimbau, one's body becomes inhabited, not only by sound, but by conventional movements and gestures peculiar to that sound space, borrowed from one's teacher. A player subsequently becomes a descendent from kinesthetic ancestors, a link in the chain of bodily transmission and transformation, with which one has this "erotic" corporeal relation Barthes describes. When I suggested this point to a fellow practitioner, he laughed; he reminded me that when we met, I discerned his teacher (his capoeira "father") in his movements, and, within minutes, he recognized my lineage as well. The experience of listening is already social because the body is an intercorporeal intersection informed by habits descending through mimetic processes of learning from other peoples' bodies and embedded in bodily interaction with others.

Many capoeiristas argue that bodily movement is immanent in the sound of the berimbau itself, so much so that the intercorporeal transmission of techniques might occur through the medium of music alone, hence another reason for referring to the instrument as the "mestre of every capoeirista" (Areias 1983:26). The late Mestre Bimba was allegedly convinced that capoeira could be learned spontaneously from the instrumental rhythms of the berimbau. According to one of his closest associates, on one of the first recordings of capoeira music ever made (reissued as Machado 1989), he intentionally played the toques with barely perceptible flaws. Too much fidelity might have made tenure in his academy unnecessary to an aspiring novice who bought the record, and thereby might deprive the mestre of his own livelihood. Whether or not his fears were well founded (I believe this is the type of creative hyperbole common in capoeira exegesis, but one that reveals a profound truth), or even if the sage mestre had these fears, his student's comments reveal the intimate relationship between bodily motion and instrumental rhythm in the transmission of the art. The implausible assertion that one could learn movement solely through music may seem to run against my argument that one must learn movement in order to hear. I take it simply as evidence of the synsthesia between informed hearing and corporeal activity, the imbrication of the two as a "perceptual system" (Gibson 1966).

Without the bodily predispositions incorporated from others through apprenticeship, however, the experience of hearing for most listeners (perhaps to Bimba's relief) is bereft of its visceral dimensions. Most novices cannot acquire the inward sense of the game's swaying step, the dynamic of interactions in the roda, the anticipation of attack, evasion, and counterattack, from music alone. For those who are trained in listening, however, movement and musical sound seem so closely linked that they can imagine music as a route to proficiency.

### Conclusion

Although sense experience may be pre-objective, pre-predicative, and pre-abstract, this does not imply that it is purely individual or pre-cultural (see Clifton 1983; Csordas 1990:10). The ability to "hear" capoeira music

is cultural, not because a semiotic web of meanings informs it "after" visceral sensing, but because the bodily patterns of responsiveness and attentiveness instilled through habituation that constitute it—what Thomas Csordas's (1993) called "somatic modes of attention"—are learned. A capoeirista's sense of hearing is a cultural accomplishment. Certainly, music typically occurs in the social context of the roda; but even more importantly, the practitioner's body carries the imprint, gestures, and anticipation of others' bodies. The sensing body itself is a social product.

These are a few first steps towards a phenomenology of listening to capoeira music, especially the berimbau. A completed phenomenology would have to account for other facets of culture that shape the perception of music, some of them pre-abstract, corporeal, and mimetic, some of them discursive, symbolic, and historic. For example, the sung texts that are part of capoeira music, which I have not even touched on in this article, are evocative poetic contributions to the overall experience of the roda. For now, considering how embodiment affects practitioners' perception of instrumental music demonstrates the necessity of accounting for dance in the study of musical experience and suggests how listening may not simply be the endpoint of musical communication, but a mode of taking up a perceptual world. That is, music as a social apprenticeship develops a distinctive sensibility. Music may be a dwelling in the world, with what Steven Smith (1992:43) called, "its own characteristic way of enthralling." This "enthralling," in the case of capoeira is a susceptibility of the body to specific types of musical sounds. I suspect many musicians and dancers may develop a similar susceptibility to other music (cf. Chernoff 1997).

In order to understand the experience of hearing musical sound, we should examine the processes through which it is apprehended, and these processes, I believe, are often dance or movement. Thomas Clifton (1983:66), in his phenomenological discussion of music, characterized perception of music as a "movement of the body," pointing out the listener must participate in the realization of music. Music is "the outcome of a collaboration between a person, and real or imagined sounds" (1983:74; cf. Ferrara and Behnke 1997:469). Learning to dance appropriately, coming to live one's way kinesthetically into a distinctive musical world, means "allowing my self to enwrap the object [sound] on condition that it enters me" (Clifton 1983:68). Dancing, then, is an apprenticeship in hearing. On a practical or methodological level, I believe, bodily apprenticeship like dance or learning to play an instrument (or both, in the case of capoeira) may make intelligible the poetic imagery that musicians and music listeners use, not to constitute, but to disclose their own experience. Without participation, a statement like "the rhythm enters your blood" may seem to be metaphoric hyperbole and easily disregarded. Through a phenomenological reduction, however, what initially appears cliché reveals itself as an eloquent sharing of experience.

#### **Notes**

1. Versions of this paper were presented at the University of Chicago, Northwestern University, and the Midwest Regional Meetings of the Society for Ethnomusicology. In these settings, I was fortunate to receive a wealth of critical input and discussion of these ideas; in particular, I would like to thank Ubirajara Almeida, Philip Bohlman, Carolyn Johnson, Virginia Gorlinski, and Martin Stokes for their invaluable suggestions. Bruno Nettl and two anonymous reviewers of this article offered excellent criticisms and helped prepare the work for publication. Marita Eibl assisted with editing the manuscript and organizing the citations.

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- 2. Thomas Porcello (1998:506) makes a similar point when he highlights the fact that although music is framed by a host of mediations, "individual and collective experiences of music are not reducible to these mediations." Obviously, perceptions are conditioned both by mediations and by the immediate sensualness of being in the world. As Merleau-Ponty (1962: 229) suggested, in order to perceive the world "as the physicist conceives it," we must err in the direction opposite to radical social constructivists, forgetting the role of the embodied subject in generating experience.
- 3. I place "subject" and "object" in quotation marks because a radical phenomenological perspective, such as those advocated by Merleau-Ponty (1962) and by Martin Heidegger (1996), leads one to conclude that there are meaningful objects only as they are constituted through different noetic processes, and meaningful subjects only as a residue or reference of experience. This is the origin of Heidegger's statement that, "Ontology is possible only as phenomenology" (1996:31).
- 4. Lowell Lewis (1992:1) first described capoeira as a "blurred genre." Elsewhere, Lewis (1995) specifically discusses the theoretical ramifications of capoeira's indefinite genre status, and advocates a more phenomenologically-informed approach to the study of human movement. In his work on genre and human movement studies, Lewis advocates an experience-sensitive approach to the study of capoeira, drawing on Peirce's semiology.
- 5. For this and other reasons, objectifications of capoeira music using Western musical notation systems fail egregiously to capture a practitioner's sensual apprehension or cognitive understanding of sound. In simplest terms, Western notation systems focus on melody, tone, and harmony, dimensions of musical sound that are not emphasized in capoeira in part because of the organology of the instruments involved. These notation systems fail to represent elements like sonic textures and timbres, most crucial to the experience of capoeira music.

In addition, berimbau performance elaborates improvisations on a *toque*, a sort of melodic and rhythmic gestalt. Notes played on the berimbau are not heard in reference to si-

multaneous tones (harmony) with other instruments, nor even in relation to previous tones (melody) on the same instrument, but primarily in relation to the (acoustically) absent toque against which improvisation exists in a dynamic tension. Richard Waterman (1952:211) called this sort of subjective awareness in a listener of implicit rhythmic cycles a "metronome sense"; his description could easily be applied to the experience of hearing an implicit toque in capoeira music. My only reservation about Waterman's very perceptive discussion of the "metronome sense" is that he seems to suggest it provides merely a steady pulse, perhaps supplying implicit danceable "up-beats" for explicit "down-beats." In fact, the toque is not a metronomic pulse by a more complex implicit ostinato. For a more complete discussion of the dynamics of improvisation, see Paul Berliner's (1994) discussion of jazz improvisation.

- 6. Mestre Noronha writes: "This berimbau is [for the] personal defense of the player who participates in a brawl. [In that case] it would be him with his weapon in hand [to use] for his own defense . . . with the shaft of his berimbau so that he would not be vanquished . . . " (Coutinho 1993:68). I repeatedly heard that capoeiristas formerly mounted razor blades on the instrument (cf. Capoeira 1992:113); and a mestre taught me to construct the instrument with a sharpened point at the bottom so that it could serve as a lance if necessary (cf. Schaffer 1981:21-22, and photograph, p. 64).
- 7. Mestre Bimba (Manoel dos Reis Machado, 1900–1974) opened a school of capoeira in Salvador, Bahia. Recognized and accredited by the state in 1937, it was the first publicly-recognized, non-clandestine school for teaching the art. He earned renown for a series of victories against practitioners of other martial arts in public prize fights in the 1930s. In his school, Mestre Bimba taught what he asserted was an innovative, improved form of the traditional art of capoeira adapted to the demands of self-defense and sport fighting, a style that came to be known as *Capoeira Regional*. Mestre Bimba's life is detailed in a number of books including Abreu 1999 and Almeida 1982 and 1994.
- 8. K. K. Bonates (1999) devotes an entire book to exploring the relation between the iúna bird and the game of capoeira.
- 9. The toque "Apanha laranja no chão tico-tico" ("Grab oranges on the ground, little bird") takes its onomatopoeic title from a song by the same name. The toque mimics the rhythm and melodic contour of the song's opening line. Some practitioners insist that the rhythm "Santa Maria" should only be played at the funeral or internment of a capoeira mestre.
- 10. Similarly, the preferred vocal quality for capoeira singing distinguishes it from contemporary popular musical genres and from everyday speech. Capoeiristas ideally sing gruffly, forcing a powerful chest voice through a tightly-constricted throat often with nasal overtones. I heard practitioners criticize those who sang too "clearly" or "sweetly" as being better suited to sing samba, or even opera, than capoeira. Adepts ridiculed recordings with carefully arranged, extremely clear, multi-part vocal harmonies, even though song leaders such as Mestre Moraes, who could improvise harmonies over a roda's choral responses, were widely admired. By overdriving tensed vocal cords and shifting pronunciation from the mouth to the throat (and even sinuses), the style of singing characteristic of capoeira produces an acoustical thickness and dense voice that some practitioners described either as sounding "African" or like a lamentation.
- 11. What is perhaps most difficult about this approach from a philosophical perspective is that I am attempting to work backward from someone else's description to their perceptions. I attempt this by tacking back and forth between their accounts of experience, the pedagogical processes that I am arguing shape the senses, and my own experiences having passed through these apprenticeship processes. Wilhelm Dilthey (1988) is often credited with advocating a hermeneutical approach to social science, working backwards from the material objects produced by a historical person or group to the schemas that generated them.
- 12. This sort of agonistic or "agonic" rhythmic play (see Clifton 1983:239-56) suggests that, in spite of Alfred Schutz's (1964) discussion of "being in time together" in music, the temporal relationship among members of a musical ensemble may not always be shared or harmonious. In fact, departures from synchronicity that Charles Keil (1987) has discussed

under the term "participatory discrepancies" may generate a field for playful musicians to create tension and potentially test each other's skill, although such contests usually end in reconciliation.

13. The tight intermeshing of the body and instrument also provide insight into equations I heard between the body and the berimbau. For example, one teacher told me that his mestre had explained that the parts of the instrument were the parts of the body: the aço like the berimbau's vocal cord, the gourd its belly, the shaft its spine, the stick used to strike it a rib, the seeds in the shaker like wrist bones, and so on. He could not remember the whole extended metaphor. In fact, when playing the berimbau, one often perceives a link between the belly and the gourd which vibrates against it; between the tense vocal cords needed to sing capoeira songs at the taut string of the instrument; between the berimbau's shaft and one's own spinal cord, which sometimes feels like it's conducting sound from the instrument to the base of one's skull. The metaphor is not simply picturesque or visual; it seems to me that it emerges from an experiential field in which sound permeates the body and the body completes the instrument. The body and berimbau are not simply intellectually similar, but experientially resonant.

14. My description borrows from George Herbert Mead's (1934:14, 167) ideas about the interactive emergence of the self in relation to a generalized other, although Mead was more interested in the emergence of the "mind" then in intercorporeity. Both Mead and Alfred Schutz (1964:160-62; see also Behnke 1997:194-95) discuss the primary "conversation in gestures" through which individuals achieve what Schutz calls a "mutual tuning-in" that is the foundation of sociability. Because this sensitivity, as Mead argues, inheres in the individual's sense of self (or bodily memory), I am suggesting that the experience a capoeirista has of his or her own body in relation to music is essentially "intercorporeal," that is, open to and expectant of interaction with another body due to the form of apprenticeship.

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