



## An elusive object: voice and “musicologies”

ELIZABETH TRAVASSOS<sup>†</sup>

Originally published as “Um objeto fugidio: voz e ‘musicologias’”. *Música em Perspectiva* 1(1), 2008, 14-42. doi: <http://dx.doi.org/10.5380/mp.v1i1>

Draft translation: Alice Leal and Daniel Stirrat, copy-editing: Jessica Sloan-Leitner.

### Editors’ note

TDE publishes this article – “An elusive object: voice and musicologies” – by Elizabeth Travassos (1955-2013) in commemoration and memory of a great scholar. Originally held as a lecture at the conference “II Encontro de Estudos da Palavra Cantada 2006” in Rio de Janeiro, the text was published twice in Portuguese in 2008, namely in the proceedings of the conference and in the journal “Música em Perspectiva.” This is the first publication in English.

Elizabeth Travassos received her Master's degree and Doctorate in Social Anthropology at the Universidade Federal de Rio de Janeiro (UFRJ). Her master's thesis, “Xamanismo e música entre os Kayabi do Parque do Xingu” (1984), was supervised by Anthony Seeger. The basic ideas of her dissertation were further developed and published in 1997 under the title “Os mandarins milagrosos: arte e etnografia em Mário de Andrade e Béla Bartók.” Elizabeth Travassos had been a professor at UNIRIO since 2009. She was a co-founder of the Associação Brasileira de Etnomusicologia (ABET) and co-organizer of the “Encontros de Estudos da Palavra Cantada” in 2000, 2006 and 2011. She was also a co-editor of the proceedings of the first two meetings. For further details on her biography, see footnote <sup>†</sup> in the text.

---

<sup>†</sup> Elizabeth Travassos received her PhD in Anthropology at the Graduate Program in Social Anthropology of the National Museum (UFRJ). She teaches anthropology and ethnomusicology at the Villa-Lobos Institute and at the Post-Graduate Program in Music at UNIRIO. She is a CNPq researcher. She published *Os mandarins milagrosos: arte e etnografia em Mário de Andrade e Béla Bartók* (1997) and *Modernismo e música brasileira* (1999). She organized the volume on art and popular culture in *Revista do Patrimônio* (IPHAN, 1999) and, with José Alberto Salgado e Silva, the number 8 of *Debates: Cadernos da Pós-Graduação em Música* (UNIRIO, 2005). With Claudia Matos and Fernanda Teixeira de Medeiros, she organized the collection *Ao encontro da palavra cantada: poesia, música, voz* (2001).

Following TDE's policy, we have not edited the text, but only translated it. However, our translator, Alice Leal (A.L.), has devoted herself with great commitment to her task, for which we are very grateful. She found that various links were no longer active and occasional bibliographical data were incomplete. We believe that her updates are very useful to the reader. This is why we have decided to include them in the text. Of course, we have made these insertions recognizable by \* and square brackets.

The Eds. (February 2017)

\*\*\*

## **Abstract**

Indissociable from speech and singing, the voice is an elusive object because it escapes the limited approaches of the various disciplines dedicated to it. This is the starting point of the present paper, whose main subject is the place allocated to the voice in these disciplines. The vocal typologies developed within classical singing are underpinned by the techniques and the sense of aesthetics developed in modern Europe, and hence cannot be applied to popular and folk forms of vocalization. Moreover, the musicological approaches structured around the syntactic axis of music have little to say about the voice. In this light, a few aspects of Alan Lomax's "cantometrics", along with speech and music ethnographies, emerge as a step toward the integration of phonetics, anthropology and musicology.

**Keywords:** voice; voice quality; cantometrics

*Although human phenomena [...] may be looked at on their own,  
independently of their connections with the social life of men,  
they are by nature nothing but substantializations of human relations  
and of human behavior, embodiments of social and mental life.  
This is true of speech, which is nothing other than  
human relations turned into sound...*  
Norbert Elias: *The Civilizing Process*

## Introduction<sup>1</sup>

In a recent paper, the ethnomusicologist Gary Tomlinson (2003) discusses the historical process that led to the distribution of objects among different disciplines within musicology, providing insight into the space currently allocated to the voice and to singing in these disciplines. Let us analyze his main argument. Academically speaking, the divorce of musicology – dedicated to written music of the past – and ethnomusicology – devoted first and foremost to “primitive” and folk music – gives rise to homologous oppositions between “us” and “them”, between “the” music and “other” music, between the study of text and the study of context, between an autonomous object and a heteronymous practice, between change and stasis. According to Tomlinson, we can only understand this separation in light of the process that culminated in the establishment of the notions of “pure”, “abstract” music in the 19<sup>th</sup> century, represented by instrumental music (as it was known in Europe). Despite the prestige enjoyed then by different vocal repertoires – especially sacred music and opera – in these European cultural circles, it was instrumental music that rose up to stand for “abstraction”.

This change caused the focus of music reflection to shift away from singing, which had been perceived as the paradigm of musical expression in the 18<sup>th</sup> century, a paradigm shared by both the civilized and the savage. In Tomlinson’s words, “[a]n earlier musicological impulse (or cantological [...]) precedes the full emergence of modern historiography and ethnography” (2003, 33). In Vico and Rousseau we read that both savage and refined singing were seen as fully commensurable in the 18<sup>th</sup> century, possessing the same expressive ability. This unity was only broken with the advent of instrumental music being elevated to the category of “abstract music”. Therefore, Tomlinson’s argument, summarized here, confirms the thesis that the relatively marginal space reserved for the voice and for singing in musicology traces back to the very formation process of the notion of Western music.

Singing as an object of study is difficult to approach not only due to the lack of communication between the multiple areas that investigate it, but also because of a certain modality in the musicological approach. Owing to the bio-psycho-social totality that the voice encompasses (Mauss 1973), it escapes the incomplete ap-

---

<sup>1</sup> The present paper was originally held as a lecture at the conference “II Encontro de Estudos da Palavra Cantada 2006” (Rio de Janeiro, May 2006) and as a closing lecture at the “III Simpósio de Música da Universidade Federal do Paraná” (Curitiba, November 2006).

prehension techniques of each discipline in which the voice is in the spotlight – namely phonetics, oral literature, vocal physiology, musical acoustics, singing, ethnomusicology, speech-language pathology, and psychoanalysis, among others. Indeed, other researchers have pointed to the limited character of these disciplines. José Roberto do Carmo Jr. (2003), for example, maintains that vocal physiology and articulatory phonetics devote themselves to the production of vocal sounds but not to their meaning; similarly, within “prosody” linguistics addresses verbal language but not singing, limiting itself to variations in pitch, intensity and length in their more “restrained” form, typical of speech. This is how Paul Zumthor summarizes this point:

It is strange that, among all the institutionalized disciplines, there is not yet a science of voice. Let us hope that one is forthcoming. [...] Such a science would provide the theoretical base for the study of oral poetry where at present there is none. It would include vocal linguistics, anthropology, and history in addition to physics and physiology (1990, 4-5; transl. K. Murphy-Judy).

With these observations as the starting point, this paper opens with a discussion of the role that the voice plays in the different fields of knowledge devoted to music. Next, we will review certain aspects of (Alan Lomax’s) cantometrics as well as of speech and music ethnographies, which in turn gave rise to important methods and concepts that may be combined with those of phonetics and acoustics.

## A musicology of the voice?

To consider the voice an elusive object is to repeat an opinion shared by various thinkers. And to repeat it is to underline the lack of consensual terminology applicable to the analysis of the heterogeneity of “popular” and “folkloric” vocal styles in Brazil.<sup>2</sup> As a professor in ethnomusicology, I take recordings of different genres of Brazil’s oral tradition to the classroom – including *repentes* [improvised verses], *romances* [popular poetic narratives], *folias de reis* [itinerating feast with music on the eve of Epiphany], *benditos* [liturgical chants], and *calangos* [responsorial popular chants], among others. I have learned not to underestimate the strange feeling caused by the metallic, nasal sounds, by the voice that “erupts” from a given chanter or by the high notes sung by the “tiple” in the *folias*.<sup>3</sup> All these elements must be discussed and reflected upon; otherwise, the students’ curiosity remains ignored. Not talking about this strangeness would simply reinforce the “class-biased” assessment of these singers’ voice quality.

But what can be said about these voices? Why does our vocabulary sound limited, naïve, amateurish? After all, members of academia are used to strict, uniform terminologies. Metaphors are considered a last resort, even though their use

<sup>2</sup> In this paper, “folkloric” refers to the music whose production and diffusion circuits do not depend on the market.

<sup>3</sup> A “tiple” is a soprano, the highest voice in the vocal set of a *folia* in the Southeast of Brazil. The term probably originated in *tripulum*, used in European medieval polyphony. See Reily (2002).

is actually quite common among musicians.<sup>4</sup> Folklorist literature does not offer much help when it comes to voice-related subjects. For example, in his text about the *jongo* in Taubaté, Alceu Maynard de Araújo's astonishment when recognizing "the dancers' admirable musical sense"<sup>\*1</sup> is emblematic of this issue: "All dancers sing and dance at the same time, in chorus. It is very hard to dance to the sound of a black woman's shrieking, strident voice; every time she comes near us, our ears hurt" (1952, 206).<sup>\*2</sup> Similarly and around the same time (mid-20<sup>th</sup> century), Câmara Cascudo (1942/1984) describes northeastern singers' voices as "hard, stiff, with no malleability, frills or softness", immediately calling the attention of Mário de Andrade, an attentive voice ethnographer:

Even though he [Cascudo] understands the subject far better than me, I do not believe that he is right. I have listened to many singers in the Northeast myself and did not find their voices any bit "hard, stiff, with no malleability, frills or softness" or anything else that my friend from Rio Grande do Norte [Cascudo] accused these singers in general of being (Andrade 1944/1993, 86).<sup>\*3</sup>

We will come back to Andrade's remarks above, but for now we can say that his attitude is the exception, not the rule. For space constraints, it would be impossible to include his immense contribution to the subject here – the critical study of his work, which was marked by the issue of the "nationalization" of classical singing and interrupted by his death, exceeds the scope of this paper.

How can we talk about the way *repente*, *jongo* and *samba* singers sing? Is the way they sing not a part of the meaning and the emotions that they convey? How much progress can we make in describing the *repente*, for instance, without including the study of vocal styles in our analysis? Does the singing voice have an illocutionary force *sui generis* (Zumthor 1990)? The fact that an individual's voice has its own physiognomy is indisputable. What should be stressed here, nevertheless, are the "social idiosyncrasies", i.e. those elements that

do not just vary with individuals and their imitations, they vary especially between societies, educations, proprieties and fashions, prestiges. In them we should see the techniques and work of collective and individual practical reason rather than, in the ordinary way, merely the soul and its repetitive faculties (Mauss 1973, 73 – transl. B. Brewster).

<sup>4</sup> Numerous thinkers have acknowledged the wealth of musicians' metaphoric language as opposed to the frugality of musicological vocabulary on the voice. See, among others, Feld, Fox, Porcello and Samuels (2004).

<sup>\*1</sup> ["é admirável o senso musical dos jongueiros" (translation A.L.).]

<sup>\*2</sup> ["Quando estão dançando, todos os jongueiros cantam, fazendo coro. É bem difícil tentar dançar com uma negra de voz esganiçada e estridente, cada vez que ela se aproxima da gente, dói-nos o ouvido" (translation A.L.).]

<sup>\*3</sup> ["Embora ele [Cascudo] conheça dez vezes mais o assunto que eu, não creio que tenha muita razão, pois pude escutar numerosos cantadores no Nordeste e nada percebi de "voz dura, hirta, sem maleabilidade, sem floreios, sem suavidade", nem várias outras expressões com que o meu amigo potiguar xingou os cantadores em geral" (translation A.L.).]

While, on the one hand, it is well documented that the source of all variations in vocal timbre lies in the anatomical differences between our speech organs (such as the size and density of our vocal folds, the length and area of the vocal tract, etc.),<sup>5</sup> on the other hand, these “social idiosyncrasies” remain unknown.<sup>6</sup>

Singers and singing teachers are not short of technical vocabulary; however, there is no consensus on the use of words to qualify different voices and singing styles. The established vocabulary in musicological discourse, in turn, is limited and remains closely attached to the opera. No wonder – after all, the history of singing in Europe and the establishment of *bel canto* can hardly be understood without taking the evolution of musical theater into account. Nevertheless, the technical vocabulary that stems from “opera singing” is part of the very same technical normatization and aesthetics that it implies.<sup>7</sup> To apply classical music standards to other types of singing and vocalization is not simply naïve, but, more importantly, tricky. After all, it would be necessary to constantly go through the archeology of these notions, to rethink the values that lie beneath them and then possibly attach new meanings to these standards.<sup>8</sup> To assert, for instance, that a *jongo* singer is a contralto says very little of her voice, which is filled with “social idiosyncrasies” – so much so that, if we try to sing along with her, we produce at best a caricature of her singing.

The key works in musicology do not fill the gap to which I refer to here – hence this is our first conclusion in this paper. When it comes to the voice and to the singing voice, musicology often turns either to anatomy and the physiology of the vocal tract (which belong to the natural and the universal) or to the arts of singing *per se* (which are artificial and learned). The nature of the latter, which comprise a wide array of techniques aimed at vocal training, is predominantly practical. Their vocabulary cannot be dissociated from direct, physical experimentation or from the norms of their particular musical context. In summary, therefore, it seems that musicologists resort either to anatomists or to singers when it comes to voice-related issues.

<sup>5</sup> See Leite, Y. & Callou, D. (1990, 20): “The size and width of the vocal cords, together with other anatomical elements – such as the size of the tongue, the shape and height of the palate, the length of the larynx and the distance between the larynx and the mouth – are responsible for the individual character of voice, distinguishing the adult’s from the child’s voice, as well as the male from the female.”

<sup>6</sup> As far as speech is concerned, phoneticians observe these differences. Since formant frequencies determine vowel and voice color, phonetics and studies on the singing voice are natural allies. Indeed, for Sundberg (1987, 21), “[t]he timbral properties of a note (regarding both vowel quality and voice color) depend on the frequencies at which there are strong and weak partials. In vowel sounds, this depends on the formant frequencies.” See Risset & Wessel (1991).

<sup>7</sup> Although the expressions “opera singing” or “classical singing” are not exact, they are useful to group most repertoires mentioned in musicological works. Similarly imprecise, the term “*bel canto*” started being used in Europe in the 19<sup>th</sup> century to refer to the Italian style, elegant and light, at a point in which more dense and intense sounds were becoming the mainstream as far as the opera was concerned. Different authors associate this trend to the increased number of instruments used in the orchestras then, as well as to the spatial growth of concert halls and theaters (Jander et al. 2001; Jander 1980, 420).

<sup>8</sup> See Piccolo (2006) on the specificities of popular singing and the development of adequate terminology.

In his critical study of Anglo-American musicology, Kerman (1985), for example, does not mention singing. Fleeting remarks here and there point to the fact that it was the so-called “historical performance movement” – mostly the performance of baroque and renaissance music – that tried to liberate music from the restraints of bel canto, deriving insight from older vocal traditions in Western Europe. Singing without vibrato and acute “strident”, as suggested by listening to non-Western peoples, joined the cast of techniques that granted singing its disputed historical authenticity.<sup>9</sup>

With this brief comment, Kerman reminds us that it makes no sense to oppose two hegemonic singing standards (namely classical and commercial or popular) to folkloric varieties since both the classical and the commercial encompass multiple standards. Indeed, during the course of the 20<sup>th</sup> century, European classical singing broke away from the framework inherited from the Romantic period; similarly, the popular market is highly diversified, ranging from blues to heavy metal and rap. Despite this, the chief works on musicology limit themselves to historical aspects of these genres, starting from the Middle Ages. For example, the authors of the entry “Singing” in the last edition of the *New Grove* (Jander et al. 2001) stress that the voice is transient and hence could not have its quality measured with the help of material means before the advent of sound recording. Additionally, they somewhat expand the short section devoted to popular singing, which already featured in the 1980 edition, but fail to mention its connections with ethnomusicology and all the other academic disciplines devoted to the human voice.

In encyclopedias and music dictionaries,<sup>10</sup> the first criterion of voice classification is gender (a few authors do point out that this is actually a secondary trait), followed by vocal range, with each voice type being ascribed a range from a high to a low note. This, in turn, encompasses not only the vocal “range” itself, but also vocal “extent”, “tessiture” and “register”. Indeed, the terminology is inconsistent, as different thinkers defend (Davini 2008; Sundberg 1987; Laver 1980).

There are six or eight partially juxtaposing voice ranges for males and females, often displayed on a stave – and without the help of frequencies measured in Hz, which is far more rare (a reminder of the predominantly cultural character of these subdivisions of the sound continuum). The core voice types are the quartet soprano / alto / tenor / bass (SATB), to which we add the in-between ranges mezzo-soprano and baritone as well as – according to some authors – countertenor and bass-baritone. The quartet SATB traces back to 16<sup>th</sup> century sacred polyphony,

<sup>9</sup> See Kerman (1985, 207): “Much is speculated about singing without vibrato, or with vibrato of a very different kind than is heard in the modern opera house (or, for that matter, the modern Oxbridge chapel). Such singing can be heard in non-Western musical traditions, but in the performance of Western music only Morrow’s lead singer Jantina Noorman [...] seemed able to carry it off in a convincing fashion. Her inspired screeching, one suspects, is the way the performance of older music has to go [...]”.

<sup>10</sup> *The New Grove Dictionary of Music and Musicians* (1980 and 2001), *Harvard Concise Dictionary of Music* (Randel 1978), *Enciclopedia Salvat de la Música* (1967), *The New Oxford Companion to Music* (Arnold 1983), *Dictionnaire de la Musique* (Vignal 1990), *Dictionnaire de Musique* (Riemann 1931), *Encyclopédie de la Musique et Dictionnaire du Conservatoire* (Lavignac & Laurencie 1926).



which in turn was embedded in an intricate process initiated four centuries earlier, with the medieval *discantus*. The addition of another two or four voice ranges dates back to the 18<sup>th</sup> century, thanks to the influence of the opera (Jander et al. 2001; Randel 1978). Our current vocal taxonomy is thus a result of the same process that established a number of genres with their own particular features and functions, fostered within strongly normatizing institutions.

The “passage” or register shift within each of the SATB voice types is a source of aesthetic concern both in classical and in popular singing. This refers to the moment in which a so-called chest voice changes into a so-called head voice or falsetto, for example. For female voices, we also say “frontal voice”, or the highest possible register in a woman’s head.

A few authors go into a third level of classification in which vocal range becomes entangled both with voice quality and with the opera characters with which they are associated. Here new types emerge, such as the dramatic soprano, “with a powerful voice and marked declamatory and histrionic ability”; the lyric soprano, “with lighter quality and pleasant cantabile style”; and the *Heldentenor* or heroic tenor, “combining agility, brilliant timbre, and expressive power” (Randel 1978, 552). Therefore, these subtypes entail aspects of range, specificities of certain repertoires and characters or even the artist’s institutional settings – take the *prima dona*, for instance (Vignal 1990).

In studies on the voice and on phonetics, the notion of register – so dear to singers and singing teachers – features prominently, even though its perceptual character is not denied. Sundberg (1987, 49) finds the concept of register “somewhat hazy” because it is simultaneously intertwined with questions of pitch, intensity and timbre. For this reason, he proposes a fully perceptual definition of register: a “phonation frequency range in which all tones are perceived as being produced in a similar way and which possess a similar voice timbre”. Moreover, he warns that “the chaos in register terminology merely reflects a regrettable lack of objective knowledge” (Sundberg 1987, 50).

Yet another intricate notion – timbre – is employed time and again in our discourse on the voice. It is indeed by no means an explanatory concept and simply pushes the issue of differences in sound perception to an allegedly objective sound “parameter”. In order to further support the thesis of the elusive nature of voice, let us take a quick look at the issue of timbre.

Here is what Mário de Andrade had to say about the singers Chico Antônio and Odilon do Jacaré:

[...] their voices did not fit into any European timbre classification. Not that they were abnormal. They were perfectly normal. Chico Antônio was the tenor, Odilon, the baritone, but their voices extended far beyond these established ranges. They were beautiful (Andrade 1944/1993, 86-87).<sup>\*4</sup>

<sup>\*4</sup> “[...] tinham vozes inclassificáveis diante da timbração européia. Não porém como tecido. Tecidos normais. Chico Antônio de tenor, Odilon de barítono, um bocado mais extensas que a demarcação culta. Eram vozes lindas” (translation A.L.).]



"Their voices did not fit into any European timbre classification". The abovementioned typologies are probably the ones Andrade had in mind when trying to describe Chico Antônio's and Odilon's voices. Unhappy with them, he did what most laymen do: resorted to synesthesia and "anaphony" (Tagg 2005), which indeed permeate most metaphors on the voice, and spoke of the "bright sun-golden touches" in Chico Antônio's voice as well as of his "clarionese" timbre and his "cashew nasal".

Andrade's discontent is perfectly understandable. In different European and North American dictionaries and canonical works on singing, the descriptions of the anatomy of phonation and of the physiological mechanisms of the voice can barely hide the aesthetical norms to which they subscribe. The descriptions of voice ranges and registers, for instance, are often followed by demands to transition smoothly and to flatten the timbre through an entire range. The need to hold a tone without *chevroter* is unanimous in these works – the surface of the voice must be flat so as to push away any resemblance to the voices of animals.<sup>11</sup>

The natural alliance between phonetics and studies on the singing voice has already been briefly mentioned above. The Brazilian linguist Beatriz Raposo de Medeiros (2006) very aptly reminds us, however, that the development of phonology, the cornerstone of modern linguistics, replaced the notion of sound as a phenomenon with intrinsic qualities with the concept of sound as a relative phenomenon – sound differences are distinctive features that allow us to tell lexical units apart. In other words, sounds are only relevant in their difference to other sounds in the system. The object of phonetics are speech sounds ("phones") from the point of view of acoustics, articulation and perception, whereas phonology is devoted to the study of phonemes, i.e. the basic units of speech, according to their "intentional [...] differences, that generate meaning differences" (Leite & Callou 1990, 11).<sup>\*5</sup> In this sense, the development of modern linguistics, underpinned by the structuralist concept of phoneme, led to the shift away from the voice – voice quality, singing voice or the "social idiosyncrasies" of the voice in general.

Obviously, linguistics does acknowledge the role that sound variations in terms of pitch, intensity and length play in the process of generating meaning in speech. Nevertheless, most other phonic phenomena – associated with melody, accent or rhythm – are deemed paralinguistic and pushed under "prosody". These phenomena "in themselves do not produce distinctive features in terms of meaning; their nature is, however, expressive, so they should also be taken into account in any phonological study" (Leite & Callou 1990, 37).<sup>\*6</sup> Ethnomusicologists, on the

<sup>11</sup> In the West, one of the methods of social control of the voice consists of attributing any deviation to the norm to animality, thus delimiting the boundaries between "us" and "the others". See, for instance, the old adage, repeated by Henry Estienne in his 1579 *Précellence du langage François* and very popular in Italy for over two centuries, according to Jane Arger: "Balant Itali; gemunt Hispani; ululant Germani; cantant Galli" (Arger 1926, 975).

<sup>\*5</sup> ["diferenças [...] intencionais, distintas [...] que se vinculam a diferenças de significação" (translation A.L.).]

<sup>\*6</sup> ["não constituem isoladamente traços pertinentes em português para a oposição entre palavras, mas possuem funções expressivas e, portanto, devem ser levados também em conta numa descrição fonológica" (translation A.L.).]

other hand, have been stressing the relevance of these phenomena: "Language's musicality – its tonal, timbral, prosodic, and gradient dynamic qualities – highlights the role of vocal performance for linguistic meaning" (Feld et al. 2004, 323).

But before we call for more interdisciplinarity among the various fields devoted to different aspects of the voice, let us understand why this object has been scattered among disciplines in the first place. Firstly, there are multiple vocalization types – speaking, singing, screaming, crying, praying, etc. – a fact that leads to academic scattering and mitigates integrated approaches. Moreover, there is the obstacle imposed by the methods of musicology. Because their chief object is music as written text, musicological methods do not offer any tools to analyze voice quality and styles. The music historian Carl Dahlhaus very aptly reminds us of the tension between the two notions of music that pervade Western thought, namely the notion of music as *poiesis* – i.e. as a human activity that creates elevated objects which remain after the activity is over – and the concept of music as *praxis* – i.e. as an action that generates a flow of sounds that ends together with the activity. For J. G. Herder, music is *energeia* (activity) and not *ergon* (work). While the plastic arts never had the artistic status of their concrete objects put into question, music only gained work of art status in the 18<sup>th</sup> century. It was the result of a combination of different thinkers' joint efforts and pivotal social transformations that eventually granted autonomy to artistic fields.<sup>12</sup>

It is also Dahlhaus who reminds us of the role played – though at different moments – by both music notation (which isolates texts from their contexts) and the bourgeois concert (which entails a taste and a demand for "aesthetics") in the institution of the concept of the autonomous musical work. Let us not forget here the fact that music then entered the market, detaching it from its social circles and attaching monetary value to it (as it could be replayed or copied), and later the advent of sound recording, which for the first time fixated in material terms what was once transient and unique. These last two points nonetheless exceed the scope of sociological reflections on aesthetics, which is Dahlhaus' aim in his work. In any case, what matters for our purposes here is the tension between *praxis* and *poiesis*, *energeia* and *ergon*, activity and work. This is what explains the withdrawal of singing-related discourse from musicology and its establishment in the two main areas in which they appear to have been since the 19<sup>th</sup> century, namely, on the one hand, in anatomy and physiology (for which the voice is a part of human nature) and, on the other, in technical and aesthetical norms (which exert social control over the singing voice). Well, let us hypothesize that the voice is ineluctably *energeia* – something that expires as soon as it is reduced to just word or melody. But what instruments do we have to speak about the voice?

In this section, we have analyzed two different phenomena as follows: firstly, the peculiar and historically embedded character of voice-related terminology developed within classical singing; and secondly, the lack of interdisciplinarity among the different academic disciplines devoted to singing and to the voice. The first one

<sup>12</sup> See Dahlhaus (1971/1988, 220): "In music the concept of a work arose at a relatively late stage in history, and, in contrast to the concept of the work in the visual arts, has always been a precarious one. For music is directly and primarily experienced as a process or a performance, and not as a form which confronts the listener."

is obvious and certainly relevant to the development of technical terminology or conceptual vocabulary in any area. The point is by no means to call for a transparent, stable and presumably universal glossary, immune to the social constraints and demands surrounding the voice. As for the second phenomenon, there is no easy solution to the scattering of the voice among different disciplines.

In this scenario, two different approaches seem especially promising – we will look into them in the next sections. The first is Alan Lomax’s “cantometrics” and the second is speech and voice-oriented music ethnographies. Though very different, both depart from the correlation between vocal styles and social categories, in that variations in the former indicate the boundaries between the latter. In other words, efforts to educate and manipulate the voice are not detached from social identities and categories or from the sense of belonging to a group (or not).

## Cantometrics

The entire cantometric enterprise rests upon the fact that “some traits of song performance show a powerful relation to features of social structure” (Lomax 1968, 3). Analogously, speech and music ethnographies reiterate “the connections between the singing voice and place, class, ethnicity, and identity” (Feld et al. 2004, 321).<sup>13</sup>

Let us return yet again to those northeastern singers’ voices that resist *bel canto* taxonomy.

His [Chico Antônio’s] singing voice is magnificent, though somewhat damaged by long nights of overuse. But when Chico Antônio’s voice is “there”, there isn’t a more pleasant timbre in the whole world. His timbre is very much ours – firm, sensual, warm thanks to this nasal singing style so typical in the whole of Brazil. Only – Chico Antônio made our Brazilian singing style quintessential. It’s discretely nasal, it’s sweet and mordent. It’s cashew nasal (Andrade 1944/1993, 169).<sup>\*7</sup>

Let us not forget here that Andrade was well-trained to listen to and describe vocal techniques, a command that he displayed with great confidence in the aforementioned work when using terms such as “appoggiatura”, “portato”, “tie”, “glissando”, “bocca chiusa”, “parlante” and “humming” to refer to singers’ voices. In-

<sup>13</sup> Ethnomusicological studies constantly emphasize the social character of the voice. See Lortat-Jacob (2006, 66): “the voice owns an astonishing flexibility which allows it to – for some reason – underline or even produce social and cultural divides. [...] Whether sung or spoken, the human voice is, as everyone knows, a powerful factor of distinction, or even of discrimination.”

<sup>\*7</sup> [“A voz de canto [de Chico Antônio] é magnífica, um bocado estragada já por noites inteiras de abusos. Mas nos dias em que Chico Antônio está “de voz” não é possível a gente imaginar timbre mais agradável. Timbre nosso muito, firme, sensual, acalorado por esse jeito nasal de cantar que é uma constância de todo o povo brasileiro. Apenas Chico Antônio quintessenciou esse jeito nosso de cantar. É um nasal discreto, bem doce e mordente, um nasal caju” (translation A.L.).]

deed, his use of terminology to designate ornament, sound treatment and vocal modalities in speech and singing attest his analytical efforts.

Yet the lack of a more global approach remained – one that accounted for all shared traits among the singers and explained the “ethnic” character of those voices, which in turn is embedded in the phonetical structure of the language and in the intonational trends of speech. There is an African-American timbre, an Afro-Brazilian timbre and also a European one. In fact, this was one of Andrade’s theses at the First National Singing Language Congress:

While it is true that these studies [on European *bel canto*] embody, reaffirm and develop the issue of the voice further, they do not constitute what singing is. Singing is far more about timbre, about diction and certain intonational trends, which in turn grant it its character and true beauty. If we apply the European *bel canto* timbre, diction and intonational trends to Brazilian singing, we deprive it of its national character and it becomes lost. (Andrade 1937/1991, 97).<sup>\*8</sup>

From Andrade’s pioneering attempt to approach the diversity in singing modalities, let us retain here the notion of “Brazilian singing”. To what reality does this notion refer: to the empirical perception of social idiosyncrasies or to aprioristic postulates on what national singing is? There may be a little bit of both in Andrade’s remarks on singing and on the voice.

About three decades later, an ambitious global mapping project of folk songs was emerging in the USA, a project named “cantometrics” by its creator Alan Lomax. His starting point, as quoted above, is similar to Andrade’s:

There is no agreed-upon terminology to describe the qualities of either the speaking or the singing voice, nor is there yet any body of accepted theory to explain or describe, either in acoustic or physiological terms, where and how these qualities are generated. This is an area where voice teachers, speech pathologists, psychologists, linguists, and laryngologists take diverse views (Lomax 1968, 70).

The aim of this innovative project was to systematically correlate vocal style and “cultural system”. Its name, “cantometrics”, embodies simultaneously the visionary audacity and the scientism of the method, whereby samples are rated according to 37 completely isolated and allegedly observable and measurable levels of style. Lomax stresses that the neologism should point both to the measurable character of the stylistic traits of singing and to singing as an indicator of “cultural patterns” – hence cantometrics means “a measure of song or song as a measure” [1968, 34]. Each of the recorded samples is codified into a profile; next, the similarities among the profiles of a given “culture” are grouped, thus determining the vocal style of the particular group. Finally, all vocal styles around the world are translated into

<sup>\*8</sup> [“Mas se estes estudos [do belcanto europeu] encorpam, afirmam e desenvolvem a voz, não são eles que fazem o próprio canto. Este deriva muito mais do timbre, da dicção e de certas constâncias de entoação, que lhes dá o caráter e a beleza verdadeira. E se usamos, no canto brasileiro, o timbre, a dicção e as constâncias de entoação que nos fornece o belcanto europeu, o canto nacional se desnacionaliza e se perde” (translation A.L.).]

an algorithm in order to allow for those much sought-after large-scale comparisons.

Critiques of cantometrics are well-known in musicology – generalizations based on extremely limited samples (ten songs), overreliance on previously determined cultural areas, and much too lavish analytical procedures. Indeed, these bold correlations between political organization, premarital sexual habits and vocal traits (such as nasalization or raspiness) are at odds with the ethnographical sensitivity typical of contemporary cultural studies. After all, these correlations approximate, without any mediation or reference to “native” perceptions, very distant analytical fields.

It all takes place as though these comparisons among large mappings of cultural areas had become entangled not only with culturalistic postulates on a culture’s “style” or “tone”, but also with a will to integrate all cultural instances structurally and functionally. Since singing is a redundant, formalized “pattern of learned behavior” [Lomax 1968, 3] that is, however, incorporated and made conscious, it thus lays bare the essence of culture. “Style is a potent culture classifier because it goes to the level where people actually experience and share culture patterns” (Lomax 1978, 11-12). Empirically speaking, these connections are established based on evidences that style varies with patterns of the political and productive systems, with social stratification, with group cohesion, with sexual morals, etc.

Our aim here nonetheless is not to repeat all the criticism – with which I very much agree – that the model has attracted, but rather to underline the following aspect of cantometrics: never before in musicology had vocal style been considered relevant enough to be approached as a phenomenon encompassing melody and rhythm. In other words, the morphological and syntactical axes of melody were no longer the be-all and end-all of music analysis. In order to apply the method, the analyst must focus on the following factors: tonal blend and rhythmical blend, melodic ornamentation, tempo, volume, glissando, melisma, tremolo, glottal effects (guttural attacks), register (understood as width), voice tension, nasalization, raspiness, frequency of forceful attacks (accent) and level of precision in consonant enunciation [Lomax 1968, 23].

At the heart of cantometrics, as an analytical method of “paramusical” elements, is a set of “overall” singing qualities based on which vocal patterns and cultural patterns may be linked. The method – whose currentness is beyond doubt, since its full implications and limitations have yet to be researched – counts on yet more innovative aspects. One of them is the fact that it acknowledges the laymen’s sharpness of perception of rather subtle variations in phonation quality. Indeed, this is the argument that Lomax uses to justify the “rough” classifications that he expected his analysts to deliver – each style had to be placed within a three or five-point scale. Analyzing songs with the naked ear was thus an attempt to emulate, at least theoretically, everyday music analysis, which in turn does not require the use of lab equipment between the listener and the sound source. The 37 parameters of cantometrics, which lie outside the realms of classical tradition, guarantee a certain “écoute éloignée” because they neutralize the listeners’ aesthetic prejudices. Perhaps Lomax is right, since listeners tend to stop consciously observing a given

voice quality once it becomes natural to them, as a part of their “vocal” expectations. However, when listener and singer belong to the same musical-linguistic community, it is easy to ensure that the meaning and the emotions associated with variations in vocal mode are fully understood – which is not the case when listener and singer do not belong to the same community.

In any case, cantometrics is certainly one of the most noteworthy steps toward an anthropology of the voice. Ignoring it is just as difficult as putting it into practice; after all, even though it is the only method to incite analysts to listen to voice quality, on the other hand, it requires analysts to derive meaning from parameters measured on a scale arbitrarily suggested by the analyst him/herself.

If we adhere to its strict style codification, the method is simply another instance of the rational impulse – in its most radical and scientistic vein – in musicology toward quantification. Yet putting these parameters into numbers is very difficult.<sup>14</sup> Indeed, whereas it is true that Lomax’s 37 parameters are not quantifiable as such, his coding sheets ascribe up to 13 levels to each parameter. The level of tonal blend (in other words, “to what extent” different voices are “in unison”), for example, ranges from “individualized and little integrated” to “integrated”; volume ranges from PP to ff, with P, N and f in between; and so on and so forth. Obviously, parameters such as pitch, length and intensity can be measured in objective scales – for example, frequency in Hz, loudness in dB or time in seconds and minutes. However, both in singing and (especially) in speech, relative values and categories are more important to musicians and speakers than absolute units of cycles per second or decibels.

Whereas, on the one hand, raspiness, falsetto and other traits may be described from the point of view of acoustics and physiology as well as graphically represented through spectrograms,<sup>15</sup> on the other hand, these measurements and graphs do not render any inferences on the fact that a certain vocal trait is absolutely essential in given musical and ritual contexts and not in others.

Due to its tendencies toward global comparatism and its universalist premises, cantometrics is no longer used by ethnomusicologists and anthropologists as a tool to analyze the singing voice. Lomax’s *Folk Song Style and Culture* nonetheless remains a striking source thanks to both the wealth of aspects and components of vocal style it encompasses and to its insistence on the need to integrate vocal style into music analysis.

<sup>14</sup> The distinction between discrete units and categories is useful here. Certain qualities cannot be sectioned into discrete values; as far as their perception is concerned, nevertheless, they can be divided into categories that represent values objectively placed within a continuum (see Cadoz 1991, 28-29).

<sup>15</sup> The use of computer programs to represent vocal spectrum across two coordinates (frequency and width) may be a valuable tool. However, these tools often merely confirm what one would consider meaningful (in very general terms) simply by listening to a song. See, for example, the graphs of Ray Charles singing “Georgia on my mind” and B. Lortat-Jacob’s (2006) highly interesting and pertinent observations that precede the graphs.



## On the notions of voice quality and timbre

Let us pause here for a moment and scrutinize the notion of voice quality, introduced by different voice and phonetics thinkers. More specifically, of interest here is the relationship between this notion and timbre, which is so important for musicians and has been in the spotlight of musicology and musical acoustics.

The cornerstones of modern phonetics are syntagmatic analysis (i.e. on consonant and vowel level) and the phoneme, which entails segmenting the speech flow in search of these meaningful phonological units – in other words, in search of sound units that produce contrasts in meaning on a lexical level. Despite this, there are approaches that go beyond syntagmatic analysis, complementing it with suprasegmental factors – i.e. other factors observed in the sound continuum.

Linguist W. Abercrombie introduced the notion of voice quality to convey “the quasi-permanent quality of a speaker’s voice” [Reference unclear. Travassos probably means D. Abercrombie 1967, 91. A.L.]. It is hence an aspect of sound perception whose articulatory and acoustic traits can be analyzed by the researcher. John Laver incorporates this notion to refer to continuous traits of speech that reveal the speakers’ physical, psychological and social characteristics. The length of time in which the same voice quality is maintained varies greatly – from a single syllable to entire utterances, as there is no length limit to an utterance presenting a single voice quality. It is thus an element which, together with linguistic and paralinguistic content, provides a more global perspective of the phenomenon of phonation.

Each different voice quality identified by Laver corresponds to a given articulatory setting,<sup>16</sup> i.e. the muscular adjustment of the phonation organs for a certain length of time, until a change is needed or desired. When this happens, the setting is readjusted. Unlike the structural phonological approach, which focuses on the differences between individual units of sound in terms of combination and permutation, the phonetical analysis of voice quality focuses on what is continuous and similar. Each sample is analyzed in terms of its articulatory setting, and each setting’s acoustic effect determines the perception of the speaker’s overall voice.

Different social and regional groups have their own particular articulatory settings and their respective sound outcomes (Laver 1980, 6). Consequently, certain voice qualities may be said to correspond to those “social idiosyncrasies” behind most of Mário de Andrade’s music research.

At first sight, the notion of voice quality adopted and developed by Laver appears to fulfill the need for a method of analysis of more constant phenomena, which can be used as a backdrop from which “different” articulatory settings, along with their corresponding voice qualities, stand out. However, the author *does* employ the notion of “modal voice” (and its corresponding setting, “neutral”) as well. In other words, he seems to apply the notion of voice quality both to modal voice or overall voice (i.e. the speakers’ natural and spontaneous voice in everyday

<sup>16</sup> “Broadly, it is the fundamental groundwork which pervades and, to an extent, determines the phonetic character and specific timbre of a language. It is immanent in all that the organs do” (Honnikan apud Laver 1980, 12).



speech) and to more salient, contrasting uses in relation to overall voice. The articulatory setting of modal voice is very similar to that of silence; hence, singing voice always entails contrast with modal voice – and in the case of classical singing, this contrast is even greater.

Laver prefers the term “voice quality” to “timbre” to describe voice in general or the voice used in a particular utterance. Other researchers, in contract, use the concept of voice quality in a more comprehensive fashion, to refer to traits that distinguish two vocal productions with the same lexical content. In the latter use, voice quality includes spectral timbre as one of its aspects:<sup>17</sup>

Voice quality is hence a rather complex notion, in which aspects of prosody, intonation, articulation, pitch, rhythm, intensity and spectral timbre on all segmentation levels of speech converge (Garnier et al. 2005, 152).<sup>\*9</sup>

This notion of voice quality tends to be preferred because timbre is a multidimensional concept that goes beyond the harmonics of the fundamental sound. Indeed, it encompasses elements of attack, time development and sound extinction (see Aharonián 2002; Risset & Wessel 1991; Sundberg 1987).

It seems that the layman’s notion of timbre corresponds more closely to the concept of voice quality than to the acoustic definition of timbre itself, which in turn is highly intricate. Witness, for instance, the following ethnographic observation on the sound recording industry:

The prominence of talk about timbre within the sound recording industry is in direct contrast to Western academic and critical discourses about music that emphasize the formal plane of music’s harmonic, tonal, and rhythmic dimensions. Musicologists often characterize discussions of timbre as mere verbal imitation or impressionistic metaphor. (Feld et al. 2004, 323).

Why do musicologists see timbre this way? Maybe because of the distinction, developed by Leonard Meyer, between “primary” parameters of music – i.e. syntactical aspects, such as melody, rhythm and harmony – and “secondary” parameters of music – i.e. dynamic aspects, including timbre. In order for syntax to exist, criteria for “mobility” and “closure” must be established (Meyer 1989, 14). That is, if the listener perceives a succession of sounds (for example an ascending succession of half steps or a succession of eighth notes or a gradually graded continuum of intensities from *f* to *ff*) and there are no reference points of articulation, there is no criterion for the closure and so there is no possible syntax:

Such criteria can be established only if the elements of the parameter can be segmented into discrete, nonuniform relationships so that the similarities and differences between them are definable, constant, and proportional. (Meyer 1989, 14)

<sup>17</sup> This is a definition by exclusion in the exact same way as the mainstream definitions of timbre – that which is neither pitch, nor length, nor intensity.

<sup>\*9</sup> [“La qualité vocale apparaît ainsi comme une notion très complexe, qui fait intervenir des aspects de prosodie, d’intonation, d’articulation, de hauteur, de rythme, d’intensité, de timbre spectral, à tous les niveaux de segmentation de la parole” (translation A.L.).]

A chromatic scale or an augmented triad organizes pitches uniformly; a glissando is a nonuniform continuum without discrete units – in neither is there expectation of a closure. In addition, the material means of secondary parameters cannot be segmented into proportional relationships:

There is [...] no relationship in the realm of dynamics that corresponds to a minor third or a dotted rhythm. And the same is true of tempo, sonority, timbre. [...] But because they cannot be segmented into perceptually proportional relationships, there are no specific closural states for such *secondary* parameters. It is, then, the presence of syntactic constraints that distinguishes primary from secondary parameters (Meyer 1989, 14 [his emphasis]).

Let us note here that Meyer takes the following concept of timbre for granted in his text: the perception of different sound sources (musical instruments) and its combinations. He uses it along with the notion of sonority, referring to the perception of sound qualities such as the thickness or thinness of sonority and the brightness or dullness of timbre. In any case, Meyer continues his argumentation explaining that the secondary parameters can be expressed in quantitative terms rather than in terms of classlike relationships (such as “antecedent-consequent”). However, the examples given by the author to support his argument refer to the dynamic levels, rates of activity and sonorities, all graded as being more or less, greater or smaller. Once a music process begins in which a secondary parameter is at play, it tends to persist: “Thus, if the primary parameters are said to be *syntactic*, the secondary ones might be labelled *statistical*” (Meyer 1989, 15 [his emphasis]). By this point, the author has obviously already forgotten about timbre, concentrating instead only on dynamic and tempo. To what extent are also timbre and sonority statistical?

Meyer’s approach to timbre offers a possible explanation to the difficulty in speaking about timbre and voice quality. Scientific discourse on music, organized as an academic discipline at the end of the 19<sup>th</sup> century as a product of the then ongoing process of rationalization (Weber 1995), was developed at the expense of both the practical dimensions of music (including, among others, singing and performance in general terms, which were systematically downgraded in music hierarchy) and of the qualities of music materials.

Similarly to Steven Feld et al. (in the abovementioned paper), Meyer places emphasis on syntax – the level at which the noteworthy music phenomena take place.<sup>18</sup> Let us stress, nevertheless, the imprecision of the term “timbre” in Meyer’s text. From an acoustic point of view, “timbre is the attribute of the auditive perception that allows us to distinguish between different instruments playing the same note, with the same intensity for the same length of time” (Risset & Wessel 1991, 102).<sup>\*10</sup> As an attribute of perception, timbre is to be found in the individual rather than in nature. Its physical traits are still being researched. In effect, different researchers in cognitive psychology are now investigating whether timbre

<sup>18</sup> See also Keil (1994).

<sup>\*10</sup> [“Le timbre est l’attribut de la sensation auditive permettant de distinguer des instruments lorsque ceux-ci jouent la même note avec la même intensité et la même durée” (translation A. L.).]

(in general, not only of the voice) is a perceptual phenomenon and hence determined externally:

Therefore, we propose the following hypothesis: the definition of timbre and the identification of its physical traits are not “intrinsic to the signal”, but rather a product of the conceptual framework of the individuals who establish them (Castellengo & Dubois 2005, 3).<sup>\*11</sup>

Perceptually, timbre is “two-faced”: initially, it is identified according to its source (it is always the timbre of something), and then according to its qualities. It is first and foremost a musical attribute: it characterizes a cultural object, which in turn is irreducible to the mere description of the acoustic signal (Castellengo & Dubois 2005, 3).

What does voice timbre mean? According to different studies on phonetics and on the singing voice, timbre perception goes hand in hand with the relative intensity of the main harmonics as well as with the vowel formants (see Mason 1983, 1944). If voice color and timbre are associated (from an acoustic point of view), phonetics is a kind of “timbristics” at the segmental level. For this reason, Castellengo and Dubois (2005) favor the notion of voice quality instead, which in turn reveals itself both at the level of the phoneme – as the spectral content of a sound – and at the level of the word or sentence – as spectral variations on the time axis.<sup>19</sup>

In summary, the notion of timbre is very aptly employed both by musicians and laymen to characterize sound sources and/or their respective qualities, without necessarily going into a thorough analysis of its physical spectrum, as experts in acoustics, for example, would do. Like with the notion of timbre, the layman’s concept of voice quality also encompasses a wide range of features on various levels. Even though these categories and comparisons may be useful as far as the perception of and the discourse on voice quality is concerned (a certain voice may be clearer than another, for example, or more velvety, etc.), voice quality itself cannot be expressed in quantitative terms.

## Speech ethnographies, vocal anthropology

Voice quality requires a completely different approach than those currently available in physiology and acoustics. In other words, it requires studies that stress the anteriority of voice, i.e. the fact that the voice always leaves a sound residue behind that is not entirely contained in its respective meaning. In this sense, Paul Zumthor’s works stand out because they go beyond the folklorists’ notion of “oral transmission” and celebrate orality – which he expands into vocality, corporality

<sup>\*11</sup> [“On soutiendra donc l’hypothèse que la définition du timbre et les repérages des propriétés physiques qui la caractérisent, ne sont donc pas « intrinsèques du signal » mais dépendants des cadres conceptuels des sujets qui les définissent” (translation A. L.).]

<sup>19</sup> Alan Lomax also noted this intersection between phonetics and the analysis of voice quality, as mentioned above.

and, finally, theatricality. Voice is “a *thing*” “before all differentiation, as an utterability suited to clothing itself in language” (Zumthor 1990, 5). It is indefinable and unobjectifiable. Yet these remarks do not circumscribe an empirical research method, nor do they lead to the rejection of attempts to describe vocal styles.

Ethnographic research on speech and music reveals new ways of conceiving the voice. Born in the USA in the 1960s, speech and vocal art ethnography is the meeting point of social sciences, folklore and linguistics – especially with a focus on language in use and on a culture’s expressive resources. Empirical research in this area is mostly devoted to different peoples in the Americas, who speak various languages (including English) (see Bauman 1977; Bauman & Sherzer 1974). In these studies, multiple voice data are investigated from a systemic point of view. Everyday speech, sociolects and slang, singing, ritual utterances – the gamut of a social group’s vocalizations is approached as a system or structure in which each term’s differences and similarities to other terms shed light on them. In the spotlight of this approach is the notion of performance, whose repercussions in various fields (among which are anthropology and ethnomusicology) are investigated, paying due attention to the role of the voice.

Being relative and particular, the concepts and uses of the voice revealed in ethnography are not stipulated a priori by the analyst. There are no absolute postulates based on which one can establish how and in which terms speech and singing are different – unlike various researchers of the voice often claim, purporting that variations in pitch, length and intensity are not as great, stable and controlled in speech as they are in singing, and that variations in voice quality are more tolerated in the former than in the latter.<sup>20</sup> Being in constant contact with new ways to understand the spectrum of vocal productions favors the relativization of the categories according to which the voice is assessed. Indeed, in his ethnography of the Suyá, a Gê-speaking community from central Brazil, Seeger explains that “[m]elody is not a particularly good way to distinguish between Suyá speech, instruction and song” [1987, 49].

The Suyá perceive, produce and appreciate the voice in a very peculiar manner. They distinguish between two contrasting larynx settings: one being “big”, which generates a low voice considered a sign of masculinity, and the other one being “small”, which gives rise to a “tense” voice typical of the so-called “shout songs” (known as “akia” [Seeger 1987, 41]). In J. Laver’s opinion, these two settings are voice qualities that are different from modal voice. From the point of view of the Suyá “physiology” and “acoustics”, they are two articulatory settings associated with two song genres and their respective social underpinnings.

\*\*\*

Cantometrics, phonetics, physiology and musical acoustics, along with speech and music ethnographies, all count as steps toward an approach in which the voice is taken as a bio-psycho-social phenomenon. Additionally, the dichotomies sound-

<sup>20</sup> Most researchers defend this rule, nevertheless, only in certain sociolinguistic contexts. Variations in pitch, for instance, are perceived as a pertinent trait in tonal languages.

meaning, internal-external and nature-nurtured are integrated. The idea that there are modes of being inscribed in our bodies as unconscious automatisms (Mauss 1973) is crucial for any music researcher. In fact, this idea is relevant for vocality in general. The boundaries between, on the one hand, the bodily and universal and, on the other, the cultural and individual are blurred. In Paula Vilas' (2008, 282) words, "the voice [...] puts all dichotomies into question."<sup>21</sup>

Even though this paper does not present a broad overview of the subject, it seems clear that the literature revision carried out here leads to multiple academic fields, making research in this area difficult and laborious, demanding a great level of expertise in numerous areas. Furthermore, whether the researcher is also a singer must be taken into account. After all, singers are used to having – and are trained to have – their voice qualities match certain verbal labels.

At least three large approaches to singing and the singing voice can be found in the specialized literature today, namely (i) naturalizing descriptions of the body and sound, which cannot be hastily ignored or hastily incorporated without much reflection; (ii) vocal typologies meant for classical singing, predominantly practice-oriented and teaching-oriented; and finally (iii) ethnographical studies of the speech and of "popular" and "ethnic" singing. Gradually, analyses and inventories of popular singers' technical and stylistic resources are emerging as well (Piccolo 2006). As already mentioned, valuable steps have been taken in speech and music ethnographies toward a greater understanding of the wide array of ways of using the voice. One strategy to deal with the fragmentation repeatedly mentioned here is to foster interdisciplinarity among these approaches, paying special attention to the issue of Brazil's oral tradition and its multiple singing modes.

## References

- [Abercrombie, David. 1967. *Elements of General Phonetics*. Edinburgh University Press]
- Aharonian, Coriún. 2002. *Introducción a la música*. Montevideo: Tacuabé.
- Andrade, Mário de. 1991 [1937]. "Os compositores e a língua nacional." In *Aspectos da música brasileira*, 32-94. Belo Horizonte: Villa Rica.
- . 1993 [1944]. *Vida do cantador*. Belo Horizonte: Villa Rica (Edição crítica de Raimunda de Brito Batista. Obras de Mário de Andrade, v. 25).
- Araujo, Alceu Maynard de. 1952. *Documentário Folclórico Paulista*. São Paulo: Prefeitura Municipal, Departamento de Cultura.
- Arger, Jane. 1926. "Évolution de la technique vocale depuis l'ère chrétienne." In *Encyclopédie de la Musique et Dictionnaire du Conservatoire*, edited by Albert Lavignac and Lionel de la Laurencie. Paris: Delagrave.
- Arnold, Denis, ed. 1983. *The New Oxford Companion to Music*. New York: Oxford University Press.
- Barriere, Jean-Baptiste, ed. 1991. *Le timbre: métaphore pour la composition*. Paris: Christian Bourgois / IRCAM.

<sup>21</sup> She used this expression in her lecture at the II Encontro da Palavra Cantada.

- Bauman, Richard. 1977. *Verbal art as performance*. Rowley: Newbury House Publishers.
- Bauman, Richard and Joel Sherzer, eds. 1974. *Explorations in the ethnography of speaking*. London: Cambridge University Press.
- Cadoz, Claude. 1991. "Timbre et causalité." In *Le timbre: métaphore pour la composition*, edited by Jean-Baptiste Barriere, 17-46. Paris: Christian Bourgois/IRCAM.
- Carmo jr., José Roberto do. 2003. "A voz: entre a palavra e a melodia." *Tereza: Revista de Literatura Brasileira* 4/5:215-227.
- Cascudo, Luís da Câmara. 1984 [1942]. *Vaqueiros e cantadores*. Belo Horizonte: Itatiaia.
- Castellengo, Michèle and Danièle Dubois. 2005. "Timbre ou timbres? Propriété du signal, de l'instrument ou construction cognitive?" *Proceedings of the Conference on Interdisciplinary Musicology*. Montréal (Québec), Canada, 2005. Available at [www.oicm.umontreal.ca/cim05](http://www.oicm.umontreal.ca/cim05), accessed January 23, 2007 [link no longer available].
- Dahlhaus, Carl. 1995. "Music as text and work of art." In *Esthetics of Music*, 9-15. Cambridge: Cambridge University Press.
- . 1987. "On the decline of the concept of musical work." In *Schoenberg and the New Music*, 220-233. Cambridge: Cambridge University Press.
- Davini, Silvia A. 2008. "Voz e palavra – música e ato." [In *Palavra cantada: ensaios sobre poesia, música e voz*, edited by Cláudia Matos, Elizabeth Travassos and Fernanda Teixeira de Medeiros, 307-315. Rio de Janeiro: 7 letras.]
- Feld, Steven, Aaron A. Fox, Thomas Porcello, and David Samuels. 2004. "Vocal Anthropology: from the Music of Language to the Language of Song." In *A Companion to Linguistic Anthropology*, edited by Alessandro Duranti, 321-345. Oxford: Blackwell.
- Garnier, Maeva et al. 2005. "Étude de la qualité vocale dans le chant lyrique." *Scolia* 20:151-169. Available at <http://www.icp.inpg.fr/-henrich/papers/Sco20Garnier.pdf>. [link no longer available; now available at: [http://www.afpc-evta-france.com/wp-content/uploads/sites/10/2015/02/89-EtudeQualiteVocale\\_Garnier\\_et\\_al\\_05.pdf](http://www.afpc-evta-france.com/wp-content/uploads/sites/10/2015/02/89-EtudeQualiteVocale_Garnier_et_al_05.pdf) (accessed Feb 2017)].
- Keil, Charles. 1994. "Motion and feeling through music." In *Music Grooves: essays and dialogues*, edited by Steven Feld and Charles Keil, 53-76. Chicago: The University of Chicago Press.
- Kerman, Joseph. 1985. *Musicology*. London: Fontana Press.
- Jander, O., and Henry Pleasants. 1980. "Singing." In *The New Grove Dictionary of Music and Musicians* 17, edited by S. Sadie, 338-346. New York: Macmillan.
- Jander, O., Ellen Harris, David Fallows, and John Poder. 2001. "Singing." In *The New Grove Dictionary of Music and Musicians*, 2<sup>nd</sup> edition, edited by S. Sadie and John Tyrrell, 428-436. New York: Macmillan.
- Laver, John. *The phonetic description of voice quality*. Cambridge: Cambridge University Press, 1980.
- Lavignac, Albert, and Lionel de la Laurencie, eds. 1926. *Encyclopédie de la Musique et Dictionnaire du Conservatoire*. Paris: Delagrave.
- Leite, Yonne, and Dinah Callou. 1990. *Introdução à fonética e à fonologia*. Rio de Janeiro: Jorge Zahar.



- Lomax, Alan. 1968. *Folk Song Style and Culture*. Washington: American Association for the Advancement of Science.
- . 1978. *Folk Song and Culture*. New Brunswick, NJ: Transaction Books.
- Lortat-Jacob, Bernard. 2006. "L'image musicale du souvenir: Georgia on my mind de Ray Charles." *L'Homme* 177-178:49-72.
- Mason, David. 1983. "Voice." In *The New Oxford Companion to Music* 2, edited by Denis Arnold, 1939-1946. New York: Oxford University Press.
- Mauss, Marcel. 1973. "Techniques of the body", translated by Ben Brewster. *Economy and Society* 2(1):70-88.
- Medeiros, Beatriz Raposo de. 2006. "Em busca do som perdido: o que há entre a Lingüística e a Música." In *Em busca da mente musical - ensaios sobre os processos cognitivos em música: da percepção à produção*, edited by Beatriz Ilari, 189-227. Curitiba: Editora UFPR.
- Meyer, Leonard. 1989. *Style and music: theory, history and ideology*. Philadelphia: University of Pennsylvania Press.
- Piccolo, Adriana. 2006. "O canto popular brasileiro: uma análise acústica e interpretativa." Diss. phil. (Mestrado em Música) - Universidade Federal do Rio de Janeiro.
- Randel, Don Michael. 1978. *Harvard Concise Dictionary of Music*. Cambridge: Harvard University Press.
- Risset, Jean-Claude, and David Wessel. 1991. "Exploration du timbre par analyse et synthèse." In *Le timbre: métaphore pour la composition*, edited by Jean-Baptiste Barriere, 108-131. Paris: Christian Bourgois / IRCAM.
- Seeger, Anthony. 1987. *Why Suyá Sing: A Musical Anthropology of an Amazonian People*. Cambridge: Cambridge University Press.
- Sundberg, Johan. 1987. *The science of the singing voice*. Illinois: Northern Illinois Press.
- Tagg, Philip. 2005. "¿Que és un musema?" In *Música popular na América Latina: pontos de escuta*, edited by M. Ulhoa and A. M. Ochoa. Porto Alegre: UFRGS.
- Tomlinson, Gary. 2003. "Music, anthropology, history." In: *The cultural study of music*, edited by M. Clayton, T. Herbert, and R. Middleton, 31-44. London: Routledge.
- Vilas, Paula Cristina. 2008. "Vozes entre festas: a performance vocal, da etnografia à cena." [In *Palavra cantada: ensaios sobre poesia, música e voz*. edited by Cláudia Matos, Elizabeth Travassos, and Fernanda Teixeira de Medeiros, 278-297. Rio de Janeiro: 7 letras.]
- "Voix." 1990. In *Dictionnaire de la Musique*, edited by Marc Vignal. Paris: Larousse.
- "Voz." 1967. In: *Enciclopedia Salvat de la Música*, 526-534. Barcelona: Salvat.
- Weber, Max. 1995. *Fundamentos racionais e sociológicos da música*. Translated, introduced, and annotated by L. Waizbort with a preface by G. Cohn. São Paulo: EDUSP.
- Zumthor, Paul. 1990. *Oral Poetry: An Introduction*. Translated by K. Murphy-Judy. Minneapolis: University of Minnesota Press.



I would like to thank all participants of the II Encontro de Estudos da Palavra Cantada (Rio de Janeiro, May 2006) and of the III Simpósio de Música (SIMPEMUS) da Universidade Federal do Paraná as well as the Organizing Committee of the latter, especially Professor Rogério Budasz. The ideas presented here have been developed within the research project “O moderno gosto das raízes” under my coordination at the Universidade Federal do Estado do Rio de Janeiro (funded by CNPq). I would like to thank both the university and the funding agency. Many thanks to my colleague Professor Ingrid Barancosky and to the singers Luiza Borges Cardoso de Oliveira (PIBIC/CNPq fellowship holder) and Adriana Piccolo (Master in Music UFRJ) for their suggestions and bibliographical contributions. Professor Yonne de Freitas Leite kindly agreed to read the excerpts in this text devoted to phonetics – which does not exempt me from any mistakes that I might have made.