



## Vocal Body, Gender and Performance

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**ABSTRACT – Vocal Body, Gender and Performance**<sup>1</sup> – The text discusses scientific and artistic discourses from the perspective of vocalities gendering, which assigns specific and binary gender marks to bodies. For this, it contextualizes the territory of Feminist Critique and Gender Theories, mainly based on the thoughts of the feminist philosopher Judith Butler, who approaches sex and gender as naturalized cultural constructions. It points, in this context, to a view of biological determinism implied in these discourses concerning the voice, which naturalizes vocal production from physiological aspects of vocal bodies, limiting the understanding of training and vocal creation in the arts.

Keywords: **Voice. Vocal Body. Gender. Performance. Acting.**

**RÉSUMÉ – Corps Vocale, Genre et Performance** – Le texte discute des discours scientifiques et artistiques présenté de la perspective d'engendrer les vocalités qui ajoute aux corps des marques spécifiques et binaires de genre. Pour cela, il discute le territoire de la Critique Féministe et la Théorie du Genre, en se fondant principalement sur la philosophe féministe Judith Butler, qui place le sexe et le genre comme constructions culturels naturalisés. Dans ce contexte, il remarque une vision du déterminisme biologique implicite dans ces discours sur la voix, qui prend la production vocale comme aspects physiologiques des corps vocaux, limitant aussi la compréhension de la formation et de la création vocale dans les arts.

Mots-clés: **Voix. Corps Vocale. Genre. Performance. Interprétation.**

**RESUMO – Corpo Vocal, Gênero e Performance** – O texto problematiza discursos científicos e artísticos formados a partir da perspectiva do engendramento de vocalidades, que atribui aos corpos marcas específicas e binárias de gênero. Para isso, contextualiza-se o território da Crítica Feminista e das Teorias de Gênero, apoiando-se principalmente no pensamento da filósofa feminista Judith Butler, que aborda o sexo e o gênero como construções culturais naturalizadas em um sistema androcêntrico e heteronormativo. Aponta-se, nesse contexto, para uma visão do determinismo biológico implicado nesses discursos sobre a voz, que naturaliza a produção vocal a partir dos aspectos fisiológicos dos corpos vocais, limitando a compreensão do treinamento e da criação vocal nas artes.

Palavras-chave: **Voz. Corpo Vocal. Gênero. Performance. Atuação.**

## About Feminisms and Genders

The concept of gender, introduced in the psychoanalytic studies by Robert Stoller in 1964, established an initial differentiation between sex and gender. For the American physician, sex is related to the biological formation of the subject (physiology, morphology, functional systems), while gender is related to the individual's psychosocial construction from his or her sex (Stoller, 1968), that is, the physical representation of sexual identity.

Following the first wave of the feminist movement<sup>2</sup>, which developed mainly in the United Kingdom, France, and the United States between the late 18<sup>th</sup> and the early 20<sup>th</sup> centuries - with women demanding equal rights such as the right to property and voting -, the second wave of the feminist movement gained strength in the 1960s and 1970s in Europe and the United States as well, spreading to many other countries since then. This time, the militants fought for cultural and political equality between men and women and for the end of discrimination based on sexual difference.

Similar to the Anglo-American feminist critique, the French theorists made at that moment reflections and re-readings of the history constructed, registered and analyzed from the masculine view. The early work of the French philosopher Simone de Beauvoir (1980), *O Segundo Sexo* [The Second Sex] (1949), inspired several female authors to question "the cultural construction of women as *Other* [...]" (Thornham, 2001, p. 34), that is, from what is not a man.

The work of the French psychoanalyst Jacques Lacan is also a source of discourse and critique for French feminist theorists (Thornham, 2001). Lacan claims that the child is inserted into the social symbolic order from language, and that the language mediates the symbolic learning of gender representation (Thornham, 2001). Theorists such as Julia Kristeva (1988), Hélène Cixous (2000) and Luce Irigaray (1985) develop further theories based on Lacan studies, reflecting about gender relations and constructions in phallogentric and binary patriarchal societies.

The French philosopher Michel Foucault is another important reference in the construction of feminist critical theory. His research revisits historical social practices as practices of power, control and subjugation, and construction of the subject. Cultural Studies, Feminist Theory and

Gender Studies are some of the contemporary theoretical perspectives that attempt to rethink the body based on some of the Foucauldian notions such as sex, gender, and ethnicity.

According to the researcher Sarah Gamble (2001), normative discourses that construct representations of sexual identities begin to be destabilized during the third wave<sup>3</sup> of the feminist movement, also known as post-feminism, which partially inserts philosophy and feminist critical theory developed from the 1980s. She claims that several female researchers begin to question the universality of culturally constructed genders and the sexual binarism.

By questioning the hegemony of the heterosexual matrix in Euro-American<sup>4</sup> culture, the American feminist philosopher Judith Butler destabilizes the normative representations of gender (man vs. woman), problematizing the biological interpretations of sex (female vs. male). Butler (2003) invites to discuss about the materiality of the body and the performativity of the gender. Basing her studies on *Speech Act Theory* - by John Austin (1975) with the collaboration of John Searle - Butler applies the concept of performativity to the act of creating discursive practices on the bodies.

Mentioning Austin, the philosopher asserts that “[...] a performative is that discursive practice that enacts or produces that which it names” (Butler, 1998, p. 283). In this way, discourses are legitimized as practices, and gender representations are naturalized as sexual identities. The “[...] critique of the categories of identity that contemporary juridical structures engender, naturalize, and immobilize” (Butler, 2002, p. 8) is central on Butler’s work. Butler quotes the work of the French feminist theorist Monique Wittig, commenting on her:

The ‘naming’ of sex is an act of domination and compulsion, an institutionalized performative that both creates and legislates social reality by requiring the discursive/perceptual construction of bodies in accord with principles of sexual difference. Hence, Wittig concludes, ‘we are compelled in our bodies and our minds to correspond, feature by feature, with the idea of nature that has been established for us... ‘men’ and ‘women’ are political categories, and not natural facts’ (Butler, 2002, p. 147).

Both Butler and Wittig destabilize the concepts of sex and gender on their works, asserting that both can reveal the construction of performative

discourses (with potential of happening) on bodies (matter). Gender may even be an obsolete concept, a squealer of heteronormative man/woman binarism, and needs to be revised, given the multiplicity of existing sexual identities (lesbian, gay, transsexual, transgender, intersexual, pansexual, bisexual etc.). Mentioning Wittig, Butler claims that the *woman* category itself reveals a relational gender identity: “A woman, she argues [Wittig], only exists as a term that stabilizes and consolidates a binary and oppositional relation to a man; that relation, she argues, is heterosexuality” (Butler, 2002, p. 143).

Butler (2002) also says that the idea of gender is only possible through the repetition of the gender acts, requiring a repeated and naturalized performance that identifies the gender: “(...) there is neither an ‘essence’ that gender expresses or externalizes [...], and because gender is not a fact, the various acts of gender create the idea of gender, and without those acts, there would be no gender at all” (Butler, p. 2002, p. 178). Gender acts are marks, gestures, intentional signs, culturally attributed to the genders, and repeated to be kept as natural. So, how can these acts of gender be destabilized?

Butler (2002) points to practices of gender subversion as practices that blend instances of body meaning (anatomical body) and gender acts. When discussing a *drag queen* performance, Butler (2002, p. 175) explains that:

[...] we are actually in the presence of three contingent dimensions of significant corporeality: anatomical sex, gender identity, and gender performance. If the anatomy of the performer is already distinct from the gender of the performer, and both of those are distinct from the gender of the performance, then the performance suggests a dissonance not only between sex and performance, but sex and gender, and gender and performance. As much as drag creates a unified picture of “woman” (what its critics often oppose), it also reveals the distinctness of those aspects of gendered experience which are falsely naturalized as a unity through the regulatory fiction of heterosexual coherence. *In imitating gender, drag implicitly reveals the imitative structure of gender itself – as well as its contingency* (Emphasis by the author).

According to Butler (2002), those dissonant gender performances destabilize the naturalization of the gender itself, and its consequent representation in performative acts: they are practices that subvert the heteronormative system of sexual identity and gender identity.

Sharing ideological and epistemological assumptions similar to Butler's, the Spanish feminist philosopher Paul Beatriz Preciado<sup>5</sup> proposes in his book *Manifesto Contra-sexual* the “[...] systematic deconstruction of the naturalization of social practices and of the gender system”<sup>6</sup> (Preciado, 2002, p. 19).

Trying to get away from binarism and opposition – man vs. woman, male vs. female, heterosexuality vs. homosexuality etc. –, the author proposes a theory of the performative body, and affirms that the sex/gender system is a power technology (Preciado, 2002, p. 19), which aims at the production of sexual bodies:

The gender is not simply performative (as well, an effect of linguistic-discursive cultural practices) as Judith Butler claimed. The gender is prosthetic, that is, it is given only on the materiality of the bodies. It is purely built and at the same time entirely organic. It escapes from the false dichotomies between body and soul, form and material. The gender resembles the vibrator, because both go beyond imitation. Their carnal plasticity destabilizes the distinction between the imitated and the imitator, between truth and the representation of truth, between reference and referent, between nature and artifice, between the sexual organs and the practices of sex. Gender can be a sophisticated technology that manufactures sexual bodies<sup>7</sup> (Preciado, 2002, p. 25).

Besides being performative, the gender, according to Preciado, is also a technology of power that transcends evocation, embodying itself. The categories of gender would remain themselves as characteristics that are constantly repeated to prevent that from being forgotten. Preciado affirms that the *body's scripture* is a technology that transforms the history of humanity into the “[...] history of production – sexual reproduction, in which certain codes become naturalized, others fall elliptical and others are systematically eliminated or scratched”<sup>8</sup> (Preciado, 2002, p. 23).

Butler and Preciado are philosophers who develop their thoughts in the field of the Queer Theory. The Queer Theory emerges from the third feminist wave, and it covers studies on non-heteronormative genders (gays, lesbians, transsexuals, transgenders etc.), questioning the cultural constructions of discourses on sex and gender, and its reflexes on society and politics.

Both Butler (1998; 2002) and Preciado (2002) agree on the existence of the naturalization of sociocultural codes as biological factors, in which

both gender and sex are not factors given *a priori*, but rather then they are given *a posteriori*, aiming at a political coercion.

Thus, the genders either reflect the operations of *re-inscription* and *re-citation* (practices of repetition and naturalization) of social codes (Preciado, 2002), or they subvert these codes through dissonances between the physicality of bodies and the acts of gender.

The voice is also a bodily production and a production of corporality. From Butler's (2002) and Preciado's (2002) studies on sex and gender, we can think that these practices of naturalization of gender acts are also inscribed on the vocality attached to the different sexes. In the same way, subversive practices of gender, which present dissonances in their signifying corporalities, also include vocal production.

Trying to deepen into this question, I will reflect on the physiology of vocal production and its relations with sex and gender in the next topic.

### **Physiology of Vocal Production**

In *Voz: o livro do especialista vol. 1* (2008), Mara Behlau invites prominent Brazilian speech-language pathologists and otorhinolaryngologists to collaborate in writing the book, under her edition. Behlau is a researcher, speech-language pathologist and founder of the *Curso de Especialização em Voz do Centro de Estudos da Voz* (CECEV) [Voice Specialization Course of the Voice Studies Center] in São Paulo.

In the chapter *Anatomia da laringe e fisiologia da produção vocal*, Mara Behlau, Renata Azevedo and Glaucya Madazio synthesize some of the main theories<sup>9</sup> of vocal production. According to the authors, most theories of vocal production were developed during the 20<sup>th</sup> century. There are still others besides these, mentioned by them, but I will briefly explain those that they present as the main theories of vocal production.

The Myoelastic Aerodynamic Theory, established by the Dutch physician Jamwillem Van den Berg (1920-1985), which, according to the authors, is the most widely accepted theory of vocal production in the world (Behlau, Azevedo and Madazio, 2008), assumes that the voice is produced by the elasticity of vocal fold muscles and subglottic air pressure. The Neurochronaxic Theory, described by the French phoniatriest Raoul Husson (1901-1967), proposes that “nerve impulses vibrate the vocal folds at the

same frequency of the sound” (Behlau, Azevedo, Madazio, 2008, p. 33). On the other hand, the Chaos Theory, more recently applied to vocal production, brings as a central concept the notion that “the larynx is a chaotic, nonlinear and highly sensitive system” (Behlau, Azevedo, Madazio, 2008, p. 33), which, for the authors, “seems to offer quite interesting and adequate explanations about altered and aperiodic vocal productions, normal or dysphonic” (Behlau, Azevedo, Madazio, 2008, p. 37). In turn, the Neurochronaxic Theory<sup>10</sup> implies the electrical process involved in vocal production (nervous impulses sent by the cortex to the nervous system), as well as the mechanical process (muscular movements) that the Myoelastic Aero-dynamic theory postulates. Still, in the perspective of the Neurochronaxic Theory, Behlau, Azevedo and Madazio (2008, p. 19) claim that “[...] the control of the laryngeal function has been developed phylogenetically from a simple reflex to a complex and interdependent network at various levels of the nervous system”, and that “[...] the acquisition of voluntary vocal production required the development of a series of pathways that connect the laryngeal musculature to the corresponding brain areas”<sup>11</sup>. Here, the proposition of the Neurochronaxic Theory that both electric and mechanical energy are involved in vocal production is ratified by the authors.

According to Mara Behlau (2008), François Le Huche and André Allali (2005) and Sílvia Pinho (2009), the voice is usually<sup>12</sup> produced during expiration, with the passage of air through the glottis (a space located in the median region of the larynx, where the vocal folds are) and with the simultaneous vibration of the two vocal folds. French phoniatrists François Le Huche and André Allali (2005) propose that inspiration is active in colloquial vocal activities (which generate muscular tensions) and expiration is passive (which generates muscle relaxation). On the *projected voice*<sup>13</sup>, according to the authors, both inspiration and expiration are generally active to enable vocal production and control. Le Huche and Allali (2005) explain that the respiratory movement involves a series of structures. They argue that the diaphragm and the intercostal muscles are mainly important in the inspiratory process, to enlarge the rib cage and allow the lung expansion with the accumulation of oxygen. The authors continue saying that these muscles<sup>14</sup>, together with the abdominal and pelvic musculature, are also essential for the control of expiration for projected vocal production, al-

though in colloquial phonation they are been relaxed at expiration and with less activation.

Mara Behlau and the otorhinolaryngologist Paulo Pontes (2009) explain that the vocal folds appeared in the human being with the main function of protecting the lungs. They are two membranes composed of muscles and mucosa, accommodated horizontally in the glottis, relaxed (without tension) and open to the passage of inspired or expired air without phonation (Behlau, Pontes, 2009). According to Behlau and Pontes (2009), the vocal folds seal the passage of air in the case of toxic substances present on air and try to expel food and/or other substances that may have passed the laryngeal canal through coughing. However, the authors continue explaining that in voice production, vocal folds tighten up themselves to decrease the airflow and generate the original vocal vibration, known as *laryngeal buzz* (Behlau; Pontes, 2009). The authors explain that this *proto-voice* has low intensity and needs posterior amplification and articulation.

Based on studies of Sílvia Pinho (1998), Willard Zemlin (2000), and Behlau, Azevedo and Madazio (2008), the voice professor of the Bachelor of Performing Arts course at the Federal University of Santa Catarina, Janaína Martins (2008, p. 51), proposes that

[...] the thickness and the extension of the vocal folds establish the amount of muscular mass in vibration, which defines its oscillatory movement and consequently the tones that will be generated. The number of vibratory cycles produced by the vocal folds in a second is what will generate the fundamental frequency.

Behlau and Pontes (2009) explain that the fundamental frequency is measured in hertz (Hz), and it refers to the number of vocal folds' vibrations in a second. The Brazilian researcher and musician José Miguel Wisnik (2011) states that all sound has a fundamental frequency and its harmonics, which also means that no sound is pure. Wisnik (2011) suggests that the harmonics are higher frequencies than the fundamental ones. He explains that it is a mathematical relation of multiples. The harmonics form the timbre of the sound (Wisnik, 2011) and, consequently, the voice. The more elongated, narrow and/or quickly are the vocal folds vibrating, the higher will be the fundamental frequency; and the shorter, thicker and/or slowly are the vocal folds vibrating, the lower will be the fundamental frequency (Behlau; Azevedo; Madazio, 2008).

The original vocal sound needs its amplification after being produced. The amplification process occurs in the resonators, which consist of empty spaces in the body, in which sound propagates (Behlau; Pontes, 2009). Martins (2008, p. 53) explains the process of voice resonance based on research of the speech-language pathologists Mara Behlau and Sílvia Pinho:

On the sound's flow through the body cavities, some of the vibratory frequencies will be absorbed according to their size, material and thickness. For example, the body cavities above the vocal folds, such as the larynx, pharynx, oral cavity, nasal cavity, and paranasal sinuses, are supraglottic regions sympathetic to the higher-pitched vibratory frequencies. It happens because of their smaller size, where the shorter waves fit, that is the higher frequencies. The cavities below the vocal folds, such as trachea and lungs, are the subglottic regions, which, due to their larger size, will resonate the larger sound waves, that is the lower vibratory frequencies.

Martins (2008) also explains that the main resonators are the orofacial cavities (oral cavity, nasal cavity, paranasal sinuses), larynx, pharynx, trachea and the entire bronchial tree.

Behlau and Pontes (2009) clarify that the voice is modulated by the vocal tract articulators<sup>15</sup> after it being generated and amplified (but in a quasi-concomitant movement). According to the authors, the articulators are also the producers of the second sound source of the voice, the frictional source, which consists of sounds generated by the friction of the air on the articulators. The first sound source of the voice is the glottal source, which is the voice itself, the original sound generated by the vibration of the vocal folds (Behlau; Pontes, 2009).

After this brief contextualization on the physiology of voice production, the following questions arise: where do the sonorous differences of human voices come from? And would these differences be unique to each person? Would these vocalities be related to the sex of the speakers?

### **The Uniqueness of Voice and Gender Destabilization**

My intention in this topic is to problematize scientific and artistic discourses on vocal production, which set spaces of vocality production from the sexual difference. I approach this question because I consider that these discourses bring certain visions about the body and about the production of the voice, visions that are not free of an ideological approach. As Butler

(2002) suggests that the cultural construction of gender goes far beyond the biological body (sex), I problematize the common association of voice production and sexual difference that is widely reproduced in several areas of voice studies in Brazil, precisely because of their influences on vocal training and creation of Brazilian theater actors.

The Italian feminist philosopher Adriana Cavarero, in *Vozes Plurais: filosofia da expressão vocal* (2011), criticizes the devocalization of Platonic and Cartesian metaphysics, based on the *logos* (reason) and the *cogito* (thought), that is, on a supremacy of the written thought and the generalization and universalization of the human being in metaphysics, creating a homogenization of human being.

The philosopher relates the vocal *uniqueness* to the singularity of the living being, to the “particularity of an embodied presence, which is heard through the voice” (Cavarero, 2011, p. 230). That is, for Cavarero (2011), each living being would have a unique voice, revealing its existential singularity.

Cavarero (2011, p. 205) further states “[...] that each human being has a sonorous self-revelation on voice’s uniqueness, which transposes the linguistic register of meaning”.

The philosopher bases her argument on the relationality of the human voice, and on the understanding of *logos* as connection or reconnection, from the Greek word *legein*. For Cavarero, being the voice relational, by connecting the bodies in communication, it would reveal the singularity of each subject, formed from her/his history of relations with other subjects.

Thus, the singularity of the voice, according to Cavarero (2011), can be understood as a reflex of the relations between the living being and the world, evidencing her/his potentialities of presence, her/his desires of vocalization and her/his status of being, and not her/his immutability.

It is a fact that each person has certain vocal characteristics on her/his emissions that often allow us to recognize the person without seeing her/him, just listening to her/him. These characteristics form the voice quality (or vocality) of an emission.

Behlau and Ziemer (1988, p. 74) explain that

Voice quality is the term currently used to designate the set of characteristics that identify a human voice. It relates to the composition of the harmonics

of the sound wave, and to the total impression created by a voice. It was formerly called *timbre*, but today this word is having its use limited only to musical instruments.

I would like to emphasize the distinction between *timbre* and voice quality (or *vocality*). According to the authors quoted on the previous section, *timbre* can be understood as the focus of voice resonance, because this is the vocal aesthetic aspect on which its modulation acts most notably. However, voice quality, according to Behlau and Ziemer (1988), would include a series of others characteristics. The *timbre*, the pitch (or frequency), the sound duration and the loudness (or volume) are the basic parameters of sound<sup>16</sup> (all sounds have these elements in some modulation) and, therefore, of the voice.

However, here I am interested not only in the parameters of sound materiality of the voice, but also in other elements involved in the production of *vocality* or voice quality cited by Behlau and Ziemer (1988), which I believe that are important for the problematization of voice training on theatre from the perspective of the Gender Theories. I will briefly explain these elements of *vocality* to analyze them in their relationships with the biological sex of actors.

Let's begin with the *tone* of voice. It is one of the first parameters that people relate to an actor's sex. The pitch of voice refers to the frequency of vocal fold vibration, which will generate the fundamental frequency of the emission. It may be lower, medium or higher. *Pitch* and *frequency* are synonymous. However, *musical note* refers to a certain frequency, selected as musical within a specific context (a musical note used in Arabic music may not be considered a musical note in Brazilian music due to the different contexts of systematization and musical production), and *tone* can be synonymous of note, or it can also mean a difference of pitches between notes or even a scale given from a certain note (the *tone* of the music).

According to Behlau and Pontes (2009), the Brazilian men's voice fundamental frequency (colloquially) is, on average, 113 Hz (113 oscillations / vocal fold vibrations per second), while the women's voice is 205 Hz. However, these numbers are a statistic approximation, and do not represent the reality of all inhabitants of this continental country in their ontogenesis (involving several variants: climate, geography, ethnicities, habits etc.). Listening to people from different regions in Brazil, we can find diffe-

rences in the fundamental frequencies of their voices. Another exercise could be trying to compare different people from the same place in order to better access how much cultural variables could influence in the vocality of a Brazilian. It is very likely that some women will have a lower voice than some men, and vice-versa.

Likewise, the pitch (like all sound parameters and elements related to voice quality) can be purposely altered in vocal (colloquial or professional) production. In the performing arts and music, this modulation is essential for the expansion of the possibilities of creation. In daily life, it happens less often in situations of communication (prosodic modulation, timbristic modulation etc.), and more in situations of voice therapy.

For example, in a case of puberphonia<sup>17</sup> some types of voice therapies can be suggested by speech-language pathologists for changing the voice quality. Regina Maria Freire and Cláudia Chiarini Bistão (1988) describe a treatment used with a 56-year-old patient. To correct his infantile voice, several possibilities of tonal modulation were demonstrated to the patient. Thus, the patient performed exercises of voice emission control (focusing on lower frequencies). After 14 sessions, the patient found his *new voice*, a voice that, for him, sounded *normal*, that is, adequate to the listening patterns of his social group and his consequent desire of emission for better acceptance in this group.

Behlau, Azevedo and Pontes (2008, p. 64) claim that “[...] the concept of normal voice and altered voice has been changing over time, being largely influenced by the medium to which one belongs and by the culture in which one lives”. The altered voice would be a dysphonic voice, with an oral communication disorder. The alteration can be given by a series of factors, from psychological to anatomic-functional. The authors continue emphasizing that “The criterion that separates voices into normal and non-normal voices is determined by the listeners, and vocal disorders are culturally based and socially determined” (Behlau, Azevedo; Pontes, 2008, p. 65).

Anne Karpf (2008) also makes a sociological analysis of vocal production and the relation between voice and *sexual difference*. She explains that not all the differences between female and male voices can be explained by changes in puberty: “[...] each culture establishes for both sexes contrasting

conventions and norms that go beyond biological differences”<sup>18</sup> (Karpf, 2008, p. 261).

From these perspectives, we can consider that vocality, in analyzing the fundamental frequency of the emission, is formed by a continuous relationship between the person and the environment.

The voice extension is also in the territory of frequencies. It “[...] refers to the limit of sounds emitted by a voice, from low to high, even beyond the natural limits of its tessitura” (Marsola, Baê, 2000, p. 33). Behlau and Ziemer (1988, p. 79) complement the definition of voice extension as the “[...] number of notes that a person can emit, from the lower to the higher.”

However, the term *note* makes direct reference to musical notes, which are culturally chosen frequencies, according to the musical mode and scale in question (tonal, modal or serial mode, chromatic or diatonic scale etc.). So, would this nomenclature (note) limit the learning of listening to other possibilities of frequencies (which can be considered tuneless if they do not belong to the paradigm in question) for vocal production in performing arts?

Another important aspect about voice extension is the work on the individual vocal range, which would define the range of frequencies with control and stability.

The musicians Mônica Barsola and Tutti Baê claim in the book *Canto: uma expressão* (2000) that the tessitura (or vocal range) is within the voice extension. They present in the book the six main types of female and male voices, which require specific vocal ranges. The women voices are the highest, divided into a *descending glissando*<sup>19</sup> as soprano (very high), mezzo-soprano (high to middle) and contralto (middle to low). The masculine ones are classified as tenor (high to middle), baritone (middle to low) and bass (very low).

This statement needs to be questioned in the actors training, because classifying an actor’s voice according to her/his gender can limit both the notion of vocal training and the listening capabilities (what one intends to listening, listening to the other and listening to oneself) for the performing artist. This does not mean to be against the training on popular or lyrical singing to work on<sup>20</sup> and with the tessitura, but only to point out that this is a hegemonic training that perpetuates a pattern of vocal tuning, that is, a

pattern of listening and reproducing the vocal sounds from the man-woman binarism.

To be tuneful is to be able to reproduce a given sound proposed. According to Murray Schafer (2001), tuning refers more to listening than to the reproduction of conventional scales. So, could an expanded, intercultural, investigative listening make possible an expansion of the vocal repertory for the performing artist?

As the actor's listening repertory expands, the possibilities of relation between voice and gender in vocal production on stage also expand, because the voice is also formed by the frictions between the living being and the world (and on the listening of the world). An example to illustrate this issue is the case of Alfred Wolfson and Roy Hart<sup>21</sup>, who have created the training for an extended voice<sup>22</sup>, or 8-octave voice. With Wolfson and Hart, the vocal training took into account the personal aspects of the artist (organic-functional-historical-cultural-emotional context), but without framing her/his into an *a priori* voice type, that is, without working from the sexual difference.

Different cultures have different voice qualities, both for the phonetic aspect of the language and for the ontogenetic, musical and prosody characteristics of the voices. Vocal types are result of a specific type of listening, and the standardization of vocal types is also the result of a standardization of the listening, not a rule for daily or stage. The voices are reflexes of the relations between bodies and daily training, directed (in the art) or spontaneous (in the daily life).

Lignelli (2011) states that, apart from electronic sound sources, the human voice is the most versatile of all sound sources. But, even if the vocality is so flexible and if the emitter is capable of conscious modulation, would the voice still be a spontaneous result and an agent of revealing of psychosocial layers, which are unique to the emitter in daily life? What forms this uniqueness? How is it forged?

Behlau and Ziemer (1988, p. 71) state that:

The voice is one of the strongest extensions of our personality and if we sharpen our senses we will recognize that this extension is deeper in its non-verbal dimension (pitch, loudness, voice quality etc.) than verbal (linguistic structure).

However, although it reveals anatomic-functional characteristics, the vocality also reveals behavioral and cultural characteristics of the speaker. The authors continue complementing this information by saying that “[...] in all emission situations we can have several levels of analysis, of voice analysis: analysis of the physical, psychological, social, cultural and educational parameters of a certain speaker” (Behlau; Ziemer, 1988, p. 71).

This dimension of analysis used by some authors is called *vocal psychodynamics*, and considers three dimensions: the biological, the psychological and the socio-educational.

The biological dimension refers to corporeality, referring to the “[...] anatomical and physiological characteristics of the individual, such as sex, age, health, global and specific physical structure of the organs that make up the speech apparatus” (Behlau; Ziemer, 1988, p. 74). However, such biological characteristics quoted by these authors can result from cultural and social practices, such as the use of certain clothes, postures, movements, surgical interventions on the body etc., which implies an understanding of the continuous processes of the relationship between the living being and the environment, in the living being (*ad infinitum*) formation. The psychological dimension reflects the emotions and the personality data of the emitter. However, different people express emotions in different ways. And, following this statement, we can also reach the socio-educational level of the voice, in which aspects of specific groups of conviviality also construct the vocality, mainly in its prosodic elements (articulation, intonation etc.). The accents are also an example of this level.

Thus, vocality reveals several dimensions of a person in constant construction in the interaction between her/his vocal body and the world. We can consider that, in this context, there are practices of *recitation* and *re-inscription* in their (re)territorializations of voices and genders.

In the actors training, there are several approaches that reveal different ideologies and vocality ideals. Davini (2007) states that since the Industrial Revolution, but more effectively after the beginning of the 20<sup>th</sup> century, the scientific paradigm of the natural sciences has spread as the only genuine medium of knowledge production. This posture affects the arts context, and generates a demand for *scientific rigor*, which undermines the legitimacy of more holistic and experimental practices.

The approach between physiology, psychology and sociology (as in the *vocal psychodynamics* formulated by Behlau), allied to contemporary philosophy, as is the case of the Gender Theories, reshapes the interpretation of vocal production and the discourses on vocal training for the performing arts.

### Some Resonances

The vocal body precedes and surpasses both the word and the socially constructed person, and can transform her/him. It is also performative in the context of reception and social questions (especially ideological) brought by the arts.

The researcher and acting/voice professor of the Universidade Federal da Bahia (UFBA), Meran Vargens (2013, p. 69), states that:

Voice is a result. This means that the vocal expression of the person is directly linked to circumstances such as: who she/he talks to, the education she/he has had, the social and cultural class to which she/he belongs, the profession she/he has chosen and exercised, what were the voices that influenced her/him in childhood and through which she/he learned to speak, beyond the place where she/he is, her/his physical, emotional, psychological constitution, the imaginary universe, among others elements. And if voice is a result in life, in the construction of the character so will be too. Therefore, this principle becomes a key to the actor vocal exercise and the exploration of her/his expressiveness.

Voice is a result of creative processes in performing arts, and of continuous daily relationships, that is, our constant re-creations in the interactions with the environment. Voice reveals the uniqueness of a singular vocal body, which also is in constant transformation: a body that overcomes the biological determinism that engenders it from the sexual difference.

### Notes

- <sup>1</sup> A version of this text is part of the PhD dissertation entitled *Possível cartografia para um corpo vocal queer em performance* (Jacobs, 2015).
- <sup>2</sup> According to Gamble (2001).
- <sup>3</sup> Sarah Gamble suggests the term *third wave in the chapter "Postfeminism"*, from the book *"Feminism and Postfeminism"*, edited by her and published in 2001.

- <sup>4</sup> A reference work for the construction of feminist arguments on discrimination and sexual difference is the book *The Origin of the Family, Private Property and the State*, by the German philosopher Friedrich Engels. According to the Marxist author, still in the primitive era of the Western world the transition from the matriarchal and matrilineal system to the patriarchal and patrilineal system occurs through production. The whole family (woman, children and slaves) is now serving the orders of the man, patriarch and owner of the herd of cattle, who guarantees the feeding of the group. Engels argues that in the transition from polygamy and group marriage to the monogamous marriage, the woman lost all her rights in the tribe, being assigned only to the care of the house and the children. The preservation and passage of the inheritance to the other men's sons now belong to the man. The patriarchal family emerges at the same historical moment of definition of private property, given by economic motives (Engels, 1991).
- <sup>5</sup> Beatriz Preciado recently published an open letter requesting a change of his female name (Beatriz Preciado) for the male one (Paul Beatriz Preciado) as a consequence of his gender change. In the Portuguese version of this text, we kept the "x" in the gender bending as a strategy to not binarize the author condition. In the English version, this does not make sense into the language.
- <sup>6</sup> "[...] deconstrucción sistemática de la naturalización de las prácticas sexuales y del sistema de género".
- <sup>7</sup> "El gênero no es simplemente performativo (es decir, un efecto de las prácticas culturales lingüístico-discursivas) como habría querido Judith Butler. El gênero es ante todo prostético, es decir, no se da sino en la materialidad de los cuerpos. Es puramente construído y al mismo tiempo enteramente orgánico. Escapa a las falsas dicotomías metafísicas entre el cuerpo y el alma, la forma y la materia. El gênero se parece al dido. Porque los dos pasan de la imitación. Su plasticidad carnal desestabiliza la distinción entre lo imitado y el imitador, entre la verdad y la representación de la verdad, entre la referencia y el referente, entre la naturaleza y el artificio, entre los órganos sexuales y las prácticas de sexo. El gênero podría resultar una tecnología sofisticada que fabrica cuerpos sexuales".
- <sup>8</sup> "[...] historia de la producción-reproducción sexual, en la que ciertos códigos se naturalizam, otros quedan elípticos y otros son sistemáticamente eliminados o tachados".
- <sup>9</sup> There is not a universally accepted theory about vocal production, which could explain all the diversity of voices, both *normal* and *pathological* (dysphonias).

- <sup>10</sup> The researcher and voice teacher of the Department of Performing Arts at University of Brasília, César Lignelli (2011), states that the Neurochronaxic Theory “[...] is the one that specifically addresses the study of voice production in high intensities (volume), a requirement both for the teacher and actor work. The others theories cited focus on the vocal pathologies arising from the daily and non-professional vocal and word production” (Lignelli, 2011, p. 228-229).
- <sup>11</sup> Lignelli (2011) also discusses the phylogenetic evolution of the vocal apparatus. However, as I intend to make only a brief approach on the vocal production in this text, I will not dwell on these aspects, both references being suggested as readings for further studies.
- <sup>12</sup> Generally, not necessarily, because this is considered as the biomechanics that involves less effort and greater control in the voice production. However, there are exceptions, such as the case of artists who produce the voice during inspiration for the creation of certain vocalities in the performing arts and music.
- <sup>13</sup> Context of vocal production in which the emitter try to *act* on other people, such as in lectures, music and theater productions (Le Huche; Allali, 2005).
- <sup>14</sup> In several vocal techniques for singing and acting, and also in some researches of voice therapy, the terms *respiratory support* or *voice support* are used to make reference to the force exerted by the muscles of the breath in the control of the pressure and the exit of the air. There are several voice support techniques (or respiratory support): abdominal support, costodiaphragmatic support, costodiaphragmatic-abdominal support, pelvic support, etc. Many of these breathing techniques come from singing and speech language therapy, but practices of breathing and strength that come from the gravity center of the body are also found in martial arts, somatic education, and theater practices (Finardi, 2014).
- <sup>15</sup> The physiology books consulted, indicated in the previous note, relate articulators to speech specifically, or oral verbal language. I emphasize this question, because I believe it is an important aspect of the vision of the voice linked only to the production of language in science itself, because any onomatopoeia or melisma, for example, needs a specific articulation, even if it is not configured as a word.
- <sup>16</sup> There are many differences in the definition of voice production parameters. Lignelli (2011; 2014) assigns the same sound parameters both to the sound and to the voice: silence, noise, pitch, timbre, loudness, rhythm, reverberation, contour and directionality. Reverberation refers to the propagation and reso-

nance of sound in the environment; the contour refers to the melodic curve, which in the voice is usually called intonation; and directionality refers to the point of sound emission, point at which the sound source is located, and its path in space. Gayotto (2009) classifies the voice elements into resource, primary (breathing, loudness, pitch, resonance and articulation), and secondary (projection, intonation, pauses, velocity, fluency). Other authors will also distinguish between sound parameters and prosodic (or expressive) elements.

- <sup>17</sup> The voice change at puberty causes the lowering of the larynx and the growth of vocal folds. Due to the greater hormonal (testosterone) increase in boys, the tendency is for male vocal folds to increase by up to 1 cm, while female vocal folds increase by an average of no more than 4 mm. This makes the fundamental frequency of the male voice generally decrease by one octave, while the female voice decreases only from two to four semitones of the infantile voice (Behlau; Azevedo; Pontes, 2008).
- <sup>18</sup> “Chaque culture établit pour les deux sexes des normes et des conventions contrastées qui vont bien au-delà des différences biologiques”.
- <sup>19</sup> It means sliding. Term used in music to indicate a movement of continuously sliding between frequencies. The descending *glissando* goes from a higher pitch to a lower one, and the ascending from a lower pitch to a higher one.
- <sup>20</sup> Vocal training in singing also aims to expand the vocal range, that is, the reach of higher and lower notes.
- <sup>21</sup> According to Laura Backes (2010), the German Jew Alfred Wolfson (1896-1962), after witnessing the horrors of World War I in which he served as a stretcher bearer, finds in his voice the possibilities of getting rid of his emotional traumas. The author explains that Wolfson was shocked by the agonizing voices of the scourges of war. So, he has been inspired by psychoanalysis, especially by Carl Jung, but he couldn't find a singing teacher to help him to unlock himself emotionally through the production of extreme vocal sounds. Wolfson have begun his own training, trying to produce extreme pitches, both high and low, and different qualities of his voice (which reminded him of the almost inhuman sounds he had heard in combat). Backes tells that Wolfson begins to work as a singing teacher in Germany, and later in England, where he takes refuge during World War II (in which he also served, but in the English Army, as a combatant of the Nazis). The author goes on to say that he encouraged his students to achieve both high and low frequencies, deterritorializing the traditional singing voice production attached to the person's sex. Back-

es explains that Roy Hart (1926-1975), a young South African actor that have lived in England, starts taking classes with Wolfson, and manages to develop 8 octaves in his voice extension, basically going through all the main voices types. The author goes on to say that Hart engages in contemporary music and theater, deepening his vocal research at the Roy Hart Theater, a theater company he founded in 1967. The author explains that after his untimely death, the actor Enrique Pardo and the actress Linda Wise, members of the group, have founded the Panthéâtre group, still active and based in France. Backes informs that, along with other collaborators, they also maintain the *Centre Artistique International Roy Hart*, in France (Backes, 2010).

- <sup>22</sup> The term is used to designate unconventional uses of voice in Western music, as a counterpoint to *bel canto*. The inclusion of noise in music from the beginning of the twentieth century, the exploration of new sonorities and musical systems (such as dodecaphonic music in opposition to tonal music), the presence of the spoken voice, whispered voice, glossolalia (kind of *grammelot* – the term comes from the areas of religion and health), the semantic deconstruction of language, the unconventional voice qualities, etc., are in this territory (Valente, 1999).

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This unpublished text, translated by Daiane Dordete Steckert Jacobs and proofread by Ananyr Porto Fajardo, is also published in Portuguese in this issue.

*Received in January 24, 2016*

*Accepted in October 12, 2016*