

## SINGING PEDAGOGY AND CONTEMPORARY VOCAL MUSIC: A TROUBLED RELATIONSHIP

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### Abstract

In this paper, we explore the interrelationships between knowledge construction in the field of Vocal Pedagogy and compositional forms of the academic music of the 20<sup>th</sup> century. We propose that research logics within Vocal Technique contributed to the thinking of the time providing a matrix to consider the vocal instrument from an objectivist position. The importance of the inquiries presented lies on the slow expansion that contemporary vocal music acquired in the last years, and in the absence of a Vocal Technique teaching method that considers the particular characteristics of this repertoire. As a current challenge, we consider necessary to chart a new model in Vocal Technique that favors the interpretation of the vocal repertoire of the 20<sup>th</sup> Century, and to establish a corpus of knowledge about (i) which are the new required skills and abilities, (ii) how they are produced, and (iii) how they should be taught.

**Key-words:** 20<sup>th</sup> Century Music; contemporary vocal music; singing skills; Vocal.

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## INTRODUCTION

In this paper, we explore the interrelationships between knowledge construction in the field of Vocal Pedagogy and compositional forms of the academic music of the 20<sup>th</sup> century. We propose that research logics within Vocal Technique contributed to the thinking of the time providing a matrix to consider the vocal instrument from an objectivist position. This matrix soon became a privileged perspective that enabled composers to demand from singers certain performance requirements, typically instrumental. In this sense, extended techniques as vocal resources (*i.e.* changes of timbre use of extreme register and dynamics, production of non-vocal sounds, vocal effects) can be understood in continuity with an anatomist conceptualization of the vocal instrument. This mainstream anatomist point of view spread since 1950 as the result of interdisciplinary investigation. We suggest that this paradigm could have been responsible for the expansion of the expressive possibilities of the voice in the compositional production of the second half of the twentieth century.

The importance of the inquiries presented lies on the slow expansion that contemporary vocal music acquired in the last years, and in the absence of a Vocal Technique teaching method that considers the particular characteristics of this repertoire. We discuss the implications of the arguments presented via the analysis of three particular examples (Aria for solo voice - J. Cage, Sequenza III - L. Berio, and Adventures - G. Ligeti) and some concluding observations for opening a debate field that relates different pedagogical thought types and compositional practices.

In particular, we consider five unavoidable topics:

- i. The issue of the non-existence of a Vocal Technique directly linked to the 20th century repertoire, which generates that musical works of this period are addressed from an academic and tonal repertoire point of view, or from an experimental and personal standpoint;
- ii. The problems arising from a Traditional Technique outlook which maximizes the generation of a vocal-body scheme that only allows the development of repertoire-specific vocal abilities and characteristics;
- iii. the implications that (i) and (ii) set for contemporary vocal music diffusion;

- iv. The creation project of a new Vocal Technique model that favors the interpretation of the 20th century repertoire, establishing a corpus of knowledge about which are the new skills it requires, how to produce them, and how to teach them, and
- v. The generation of knowledge about what are the functional interrelations and learning processes involved in contemporary musical performances.

**A historical and musical framework to rethink the voice in the 20th century.**

“Which is more musical: a truck passing by a factory, or a truck passing by a music school? [...] I can’t understand why people are frightened of new ideas. I’m frightened of the old ones”(CAGE, 1939).

The musical history review about last century should mean a return to the past, to the transcended, to those things that have evolved. Even when more than a hundred years of technological developments have passed, and new philosophical schools, scientific paradigms and art poetics emerged; there is a certain contemporaneity persisting within the musical field that claims for presence.

The sonorous and creative inquietudes that opened up the 20th century seem to be very active when it turns to a ubiquitous question: *What is that thing we call ‘music’?*

Answering that question (and solving the aesthetic debate behind it) is not the main aim of this paper. Our investigation intends to probe whether within the Contemporary Vocal Pedagogy field we can find a model that takes into account the specific technical and expressive needs of the contemporary singer, to reconsider some possible reconfiguration of current pedagogical paradigms.

In the last sixty years, the emergence of new sonorous exploration landscapes and aesthetics debates presented new insights about music conceptualization. On one hand, we must consider the questioning of conventional academic and commercial musical institutions, which redefined the ‘artwork’ concept. The rupture of established standards, even if not radical, demanded new points of view (and listening points) for the world, accelerating the aesthetic revolution times, and creating different vanguards movements. In this way, certain untainted musical parameters became experimental material. Musical forms,

constructive principles for composition, timbre materials, graphical notation systems, composer roles, and interpreter role: all components within the musical spectrum were taken into account for the search of new languages.

Constructive principles that constitute the beginning point of composition ideas are not dependent on a pre-established format or harmonic combinations anymore. Instead, they are now linked to certain key-concepts. Composers create from an aesthetic, philosophical and political idea, to achieve a free and non-deterministic sonorous result. Art became art conceptualization, where thinking and self-reflection are more important than practice itself. To interpret art productions, what is needed is a holistic praxis valuation. Even when we can recognize new styles (ruidism, concrete music, electronic music); we think that within 20th century, the particularities of each work constitute the core of stylistic codes.

The traditional instrument performance possibilities became extended, and new exploration doors opened up. The need for a new sound, technological progress and scientific development drove searching efforts to new timbre characteristics, creating new sound exploration tools and opportunities.

The appearance of registration and amplification devices for sound material allowed manipulation (timbre, pitch, spaciousness) and deconstruction of musical language, greatly broadening the expressive resources of the voice. The radio presence, with its ethereal action space and its massive reproduction, inaugurated a new use field for the voice. With the emergence of broadcasters, the voice acquires a more personal imprint, different of the previous one. This panorama demanded an interpreter capable of answering to new poetical forms and a proficient singer that could understand not only a text and a melodic profile, but other musical, scene and creative variables.

The idea of sonorous object –instituted by Pierre Shaeffer (2002)- which defined sound as an entity with an inner value separated from the environment, its significance and its forms of production, enabled new forms for sound material treatments. This enlarged the timbre colors palette, and motivated the extended techniques of traditional instrument, the use of environmental sounds, and the electroacoustic generation of sounds. Silence itself, usually thought as sound absence, was redefined as an integral entity of the musical discourse.

Within the vocal field, this conceptualization of the sonorous material gained strength with the rise of the Contemporary Vocal Pedagogy Paradigm, sprung from interdisciplinary research between different professionals of vocal sciences that wanted to explain vocal phenomena in scientific terms (ALESSANDRONI, 2012a; 2013). We assume that this thinking movement propitiated an extreme objectification of the singing voice, enabling new interpretative desires. In the next sections of this paper, we develop a hypothesis about some ways in which the emergence of the Contemporary Vocal Pedagogy may have influenced the work of composers and the type of requirements linked to the interpretative requirements of academic vocal works of the 20th century.

***Vocal technique pedagogy and research since 1950: possible influences in contemporary composition.***

Until the mid-twentieth century, Traditional Vocal Pedagogy was the dominant pedagogical model that controlled the singing education scene. Its beginnings correspond to the founding of the National Conservatory of Paris in 1795, historical event that accelerated the crystallization of hegemonic models for the training of professional musicians (ALESSANDRONI, 2012b), which progressively expanded to other institutions, consolidating the denominated Conservatory Model (HEMSY DE GAINZA, 2002). In relation to the specific teaching of singing, this paradigm is based on learning through direct observation, i.e. it is considered that students should be able to learn technical skills imitating their teachers. Therefore, in a traditional singing classroom, a teacher shows how to sing and hopes that students do likewise without explanation (MAULÉON, 2005).

Ignorance of the physiological mechanisms involved in the production of voice and acoustic laws governing the vocal instrument made singers think about human voice as an invisible instrument. Consequently, the basics of Traditional Vocal Pedagogy were based on the individual perceptions and assessments of each voice teacher and on how they translated into words their acoustic and physiological proprioceptions (ALESSANDRONI, 2014b; MAULÉON 2005). This means that the pedagogical corpus was established from the collection of experiences and the oral tradition communication of a teacher-student *know-how*. This situation configured the conceptual system of Vocal Technique as highly entropic

(Alessandroni, 2013). This is that the same term was used to designate opposite things. Even today, it is possible to find different and contradictory versions of fundamental Vocal Technique concepts such as *registration*, *appoggio*, *resonance*, and *placement*.

In response to the Traditional Vocal Pedagogy Paradigm (LAVIGNAC, 1950; HEMSY DE GAINZA, 2002; ALESSANDRONI, 2013) and because of the integration of research results with scientific support from different areas of knowledge, a new Vocal Technique teaching paradigm emerged in 1950: Contemporary Vocal Pedagogy. This paradigm arose from the collaborative construction of knowledge among teachers of singing with scientific concerns, speech therapists, physicians, Physics researchers, acoustic engineers, mathematicians, anthropologists and psychologists of music. The aim of this interdisciplinary research program was to know in detail the physiological and organic functioning of the phonation process and to analyze the evolutionary conditions of the vocal instrument.

This new scientific paradigm made possible a new and better understanding of the physiological structure of the vocal instrument and its integration into the body. It also delved into topics of great importance within Vocal Technique such as the functionality of the postural muscles and their relationship with the breathing mechanism, the configuration of the body fasciae as a result of antagonism between muscles, and the presence of the singer's formant ( VENNARD, 1968; SUNDBERG, 1987; SUNDBERG, 1991). One of the most important contributions of this new paradigm was to define the voice -for the first time- as a *musical instrument*, from the functional and acoustic perspectives. This conceptualization, as the reader may have noticed, differs from the traditional treatment of the human voice:

“[...] There seems to be some discrimination between voice and other musical instruments, which is observable, for example, in the terminology used to distinguish between compositions that include voice and those that don't. [...] This differentiation is manifested throughout the history of music - particularly from late Baroque onwards - in a negative way towards the figure of the singers, who have been deified alternative and sometimes simultaneously or disqualified. In the first case characterizing them as 'magicians, prima donnas, absolutisms artists', in short, creatures that from some mysterious practice achieved what no other could with study and devotion. In the second case, disqualifies them as hysterical or hypochondriacs characters. [...] In either case it is considered a musician as others” (MAULÉON, 2009, p. 1).

The definition of musical instrument involves the production of musical sounds in a variety of frequencies, intensities and durations, with a particular timbre that allows listeners to identify that instrument among others. For sound production to be possible, any musical instrument must have three elements: a generator, a vibrator and a resonator. The *generator* is the element that provides the necessary energy to unchain the sound production process. The *vibrator* or sound source is the element that transforms the initial energy into a series of complex compression and refraction waves. Moreover, the *resonator* takes the vibrator product and acts as a filter, increasing or reducing certain harmonic partials (SUNDBERG, 1987; MAULÉON, 1998).

The vocal mechanism involves the coordinated action of many muscles, organs and other structures in the abdomen, the chest, the throat and the head. Virtually, all the body influences vocal sound, directly or indirectly (RABINE, 2002; TITZE, 2008). When it turns to the evaluation about the status of the voice, scientific researchers have shown that it can be described as a musical instrument, because it has the three needed parts. They broadly defined the generator as the whole singer's body –that contributes supplementing the breathing function-. From a strict acoustical point of view, the generator would be the air column generated in beneath the glottis. They also located the vibrator or sound source in the larynx, anatomical structure where the vocal folds lie. Thanks to their movement, they can produce the fundamental sounds of the human voice: to produce a given sound, for example, a middle A (440Hz), the vocal folds should complete 440 cycles in a second, by and approaching-and-separating movement. This sequence of glottic openings and closings determines a series of interruptions on the afferent air column flow that is traduced as a 440Hz sound. Scientists also discovered that vocal resonance takes place in the laryngeal vestibule, the pharynx and the mouth. A great part of vocal efficiency and quality depends on the conformation of these structures (MILLER, 1986; MCKINNEY, 2005).

In this manner, the voice can be defined as a musical instrument, identical to others (for example, a piano or a guitar), and as a new ontology that made possible new relations between the composition work and the interpretative skills. We hypothesize that this change of perspective -that includes an equality relation between the voice and other instruments- influenced the production of new composition styles during the second half of the 20<sup>th</sup> century. We think about this ontological shift as an essential background process that

permitted composers to pose new requirements for the singer, similar to those traditionally addressed to other instruments.

***Interrelations between pedagogy and composition.***

One of the most important pedagogical thought lines derived from the Contemporary Vocal Pedagogy paradigm understood voice from an anatomist point of view. Within this framework, authors think about singing as:

“[...] the sonorous result of a determined macrostructure, formed by different anatomical structures (organs, connective tissue, bones, etc.). [Thereby,] knowing the anatomical structure of the singing voice allows teachers to teach a sight better” (ALESSANDRONI, 2014a, pp. 25–26).

One of the beliefs derived from this conception is that modifications on any of the anatomical structures that constitute the vocal instrument are accessible to the singer in order to modify the resultant sound, or solve specific problems through alterations on that specific structure function (ALESSANDRONI, 2014a). From this point of view, the indications a teacher gives to a student to correct a haughty sound (consequence of a high position of the back of the tongue near the soft palate) would be something like *‘lower the tongue’*.

Over the last years we have seen -as an expression of extremist positions inside the anatomist paradigm- the emergence of new class format where teachers use software offered as a *‘mirror of the voice’*. This software allows a better comprehension of pedagogical indications by making the vocal instrument visible through graphics that show certain acoustical parameters, as frequency and harmonic structure. This visual feedback technology consists on a real-time spectrographic analysis that gives deep information about the harmonic structure of the voice and its change as a function of the execution of different vowels in different frequency ranges. In this class format, the teacher appeals to the utilization of technical indications that are, in theory, self-evident in virtue of its visual nature. Examples of these indications usually take the form of *‘relax the larynx to adjust the frequency of the first formant’*, and similar statements.

This new conception of the voice as a set of joint microstructures that can be modified individually as the different parts of other instruments could have been responsible of the expansion of expressive possibilities of the voice inside the compositional production of the second half of the 20<sup>th</sup> Century. This expansion, we propose, becomes clear when we see the appearance of new vocal uses (like changes in timbre or registration, and extreme dynamics, extended techniques, non-vocal sound production, vocal effects, among others).

We turn now to the analysis of the '*Sequenza III*' by Luciano Berio (1966). This composer is usually recognized as one of the biggest representatives of the Italian vanguard music, in virtue of his experimental works and his immersion into electronic music. His works, signed by a constant preoccupation about sound materials, are characterized by an adhesion to serialism and experimental procedures of 1950, where the voice plays a crucial role in which linguistic, dramatic and musical meanings reach a high balance. Because of his link with the vocal instrument (and maybe because of his relation with Berberian too), Berio exploited the vocal resources at the maximum. He considered that the voice was a material that created a wide variety of permanent associations. That's why the voice always signified more than itself:

“The voice always entails an excess of connotations, whatever it is doing. In *Sequenza III* I tried to assimilate a lot of aspects of the vocal daily life, including trivialities, and without losing the intermediate or normal singing levels” (BERIO, 1966, n/p).

The *Sequenzas* consist on a series of works for soloist instruments, influenced by scenic arts and literature, in which the composer focuses on exploring to the maximum the qualities of each instrument. Berio asserts that “this works are written for the only type of virtuous acceptable nowadays, sensible and intelligent”, and adds that this professional must have ‘the highest technical and intellectual virtuosity levels’ (1966, n/p). The *Sequenza III* was written in 1965 for a female voice, and it was dedicated to the American mezzosoprano Cathy Berberian. This work can be considered as a ‘dramatic essay’ where Berio seeks to explore the vocal capacities of singers to produce different timbre effects. To achieve that goal, and trying to control a wide variety of vocal behaviors, Berio takes a modular text by Markus Kutté and fragments it into phrases, words, syllables and phonemes (of one vocal or one consonant), and presents it inside the score in three different ways.

*Give me a few words for a woman  
to sing a truth allowing us  
to build a house without worrying before night comes.*

Some sounds (and groups of sounds) are marked by phonetic notation ([a], [ka], [w]) established by the International Phonetic Alphabet (IPA). Other sounds and groups of sounds appear written in the form in which we would pronounce them in the particular context where they are placed (/gi/ like in ‘give’, /wo/ like in ‘woman’, /tho/ like in ‘without’, etc.). By last, some words appear simply as they are usually written (‘give me a few words’). About the text treatment, Berio says: “I felt that I had to divide the text in a seemingly devastating form, in order to recover fragments of it in different expressive levels, and to remodel it into non-discursive musical units” (1966, n/p).

Nevertheless, timbral search not only relates with text work and diction, but also with the realization of different kinds of articulations, performances, and, specially, with short mood swings. It is possible to find more than a hundred different mood indications, represented by vague and ambiguous terms (*impassive, dreamy, tense, relieved, wistful, bewildered*, among others), in an effort from the composer to differentiate every second of playing of the piece. Berio uses all this expressive resources to generate a grand chaotic mass of sensations in the listener.

Addressing a work of these characteristics becomes a great challenge for any interpreter, since it requires a great technical mastery of different kinds of emission and a versatile vocal tract that allows him/her to produce quickly various articulations, timbre, vocal effects, changes of registration and no-sung sounds (as laughter). The difficulty inherent to resolving these issues generates that rhythm and the correct execution of frequencies remain subject to the articulatory possibilities of singers (both speed and expressive), which arrives, sometimes, to an oversimplification of what the score stipulates because of technical deficiencies.

Another example of paradigmatic work for solo voice is *Aria, for solo voice (any range)* by John Cage (1958). Cage was a prominent figure of the 20<sup>th</sup> century music; his influence became bigger during his lifetime, and he is remembered nowadays as the founder of postmodern music. He insisted on the philosophy that all sounds are, essentially, musical,

and that non-intentional sounds are as valid as sound generated by musical instruments. Thus, he utilized these sounds with the aim of creating a different and interesting musical style. Moreover, he considered vital the compositional procedures and the relation between them and the focusing of attention and invention processes. Cage gave special relevance to the indetermination principle (a compositional choice by which the way of resolving certain aspects of the performance is left to the interpreter to decide), and designed an innovative musical notation system based on graphical forms, as a way of adapting the traditional notational symbols to his aesthetic aspirations.

In this work, Cage proposes the interpreter to build a series of correspondences between the colors observed in the score and different vocal emission ways, characteristic of different musical styles. In several parts of the piece, it is also possible to find color changes in very brief times (this is, the chronometrical density of stylistic changes demanded by Cage augments). In addition to this, and to influence timbre spectrum, the composer defines the text of the work selecting standalone vowels and consonants and words from five languages: Armenian, Russian, Italian, French, and English. In this piece, time is measured in seconds (every page of the score must last approximately 30 seconds), and the articulatory and dynamic indications are indeterminate. Lastly, the work includes the realization of non-vowel sounds (indicated in the score by black squares). To accomplish this requirement, the singer can use the *Fontana Mix* -a cassette electronically generated and previously recorded-, or make himself his own non-vowel sounds, which can be of any kind.

Cage's work contains a heuristic form, which makes it a map of sonic possibilities. This indeterminacy principle, typical of compositions by Cage, positions the singer in a double role of interpreter-creator, instituting an open-work model of indefinite form where every interpretation-creation shall be subject to the technical and creative possibilities of singers (Davies, 2005). *Aria's* notation, in its color palette, demands expressive modifications that exceed timbre variations, and become corporeal and dramatic modifications.

The vast vocal repertoire that the new styles contributed to musical discourses aspirated to expand the technical possibilities, and to establish new musical composition premises. Whereas the vocal tradition demands a homogeneous sound (in timbre and

vibrato), new musical perspectives promote the sonorous contrast, and the amplification of register and timbre resources. In some cases, eventually, the interpreter must decide for an approximated tuning over a precise one. These patterns also apply to choral music. In a structure where voices become autonomous avoiding the traditional model of the superior melodic line, new parameters that highlight the effect and color of the mass will be crucial. Thus, a model widely used was the substitution of conventional text for vocal sounds without semantic reference, or, in some cases, the text is manipulated in its condition of sonorous material, getting away from its intelligibility. What primes it the color of different phonemes, and their rhythmic combination, over the sense of words.

An emblematic work from the choral repertoire of the 20<sup>th</sup> Century music that responds to these vocal composition models is *Adventures* (1962) by the Hungarian composer György Ligeti (1923-2006), whose production characterizes by the experimental use of timbre in a total abandonment of melody, harmony, and rhythm. *Adventures* is written for soloists soprano, contralto, and baritone, and flute, horn, cello, double bass, percussion, piano and clavichord ensemble. Drawing on extended techniques (for both instruments and voices) and the utilization of objects (like paper-cones voice amplifiers), the composer elicits a contraposition of states through extreme sonorities: the dynamics, the heights, and the extensive and contrasting timbre palette. Wailing, shouting, laughter, hiss, and other vague indications ('*as high as possible*'), favor the dramatic expression of sounds, which intertwine to generate the desired effect. Instruments work as an extension of the voice, in their use of resonance and timbre analogies. In *Adventures*, as in other contemporaneous pieces, the emotional impact and the exploitation of vocal abilities will be factors that primer in the construction of choral works.

These, as other works of the 20<sup>th</sup> century music, do not demand a traditional high performance performer, but a singer versed in a holistic singing practice, namely, a practice that understands the sonorous production from an integral and corporal communicative intentionality.

### ***Preliminary conclusions***

The non-existence of a Vocal Technique that responds to the vocal repertoire of the 20<sup>th</sup> Century generates that the pieces of this period are addressed from a Vocal Technique strongly related to the tonal and academic repertoire, or from the personal experimentation of the singer with its own vocal instrument. The problem that addressing contemporary vocal music from a traditional technique entails is that such technique potentiates the generation of a corporal-vocal scheme that allows the development of specific abilities and vocal characteristics (a homogeneous timbre, the development of the singer's formant, a determined tessitura, and a particular corporal posture) that are not those required by the repertoire in question. This problem is conducive to a singing experiential resultant highly controversial.

One of the challenges that the outline of a new Vocal Technique that facilitates the approach to musical works of the 20<sup>th</sup> Century entails is the systematization of the great number of extended techniques and vocal effects that the composers have developed through the last century and the current one. They have struggled to break the limitations of tonal language, exploring new ways of sound production, and reaching the configuration of new languages with specific performance forms that require specialization from the performer in order to accomplish the composer's idea. Thus, it is now common to find ensembles and soloists engaged for years only to the study of works of a specific composer.

Even when some singing teachers and schools introduce singers within the contemporaneous language, we consider that the absence of a specific Vocal Technique inhibits the interpreters to address works of this period, or, at least, determines that they perform more often opera and chamber music pieces, which is detrimental to contemporary music diffusion. Moreover, seeing the vocal instrument as plausible of being explained exclusively in scientific terms, where each structure is independent of the others, and sensitive to be modified without affecting the others, the anatomist contemporary perspective shelved the essential embodied nature of the vocal instrument (Rabine, 2002; Sataloff, 1992). This fact determines that any perspective willing to explain vocal phenomena (and eventually to found a pedagogical practice over this knowledge) shall adopt a holistic view about the body on interaction.

The functional perspective of the voice postulates that singing learning is identical to the configuration of a new corporeal-vocal schema, because vocal function is directly associated to anatomical structures whose primary biological function is not the sung performance:

“The analysis of the evolutionary conditions of the instrument and the primary function of the physiological structures which are assembled to sing allowed to understand that the formation of a singer does not happen ‘naturally’, but must be understood as the training of a corporeal-vocal schema (different to the one we use for speaking), in which the intervening structures are assembled by the most efficient patterns to sing, or, what is the same, they reach the highest possible degree of functional differentiation” (ALESSANDRONI, 2012a, p.3).

In the traditional conservatory or school, the singing practice pursues the achievement of some established standards, regarded as the ‘correct’ ones, or the most faithful to the style. The contemporary repertoire, however, demands the instrument the achievement of a different result, that which the piece requires. This opens a new paradigm on vocal interpretation: voice serving the necessary. Thus, the teacher’s role gives place to the coach’s or vocal trainer’s role, in order to guide the performer in its own exploration of the vocal instrument. Regarding the vocal characteristics, to distinguish the properties of the voice as a sonorous material estranged from his referentiality with the human nature and its link to the word, opens a new and vast field of sonorous and communicational possibilities. This implies a new positioning, in relation to the traditional treatment of the voice, the musical listening, and the application and interpretation of the vocal resources.

We consider necessary -as a current challenge- to chart a new model in Vocal Technique that favors the interpretation of the vocal repertoire of the 20<sup>th</sup> Century, and to establish a corpus of knowledge about which are the new required skills and abilities, how they are produced, and how they should be taught; as well as which are the functional interrelations at stake in performances, and which are the learning processes that favor the mentioned relations.

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