

## Martin Link

### Linguistic influences in Latin America – Flo Menezes and the studio PANaroma in São Paulo

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#### Introduction

In contemporary music history, electroacoustic music plays a major role. This is not just because of the new methods and specific selection of material in electroacoustic music, but also due to an international exchange, which has taken place. Especially the perspective of electroacoustic music in Latin America demonstrates, how crucial interactions have been for the manifestation of this genre. One example of such interplays is Brazilian composer, musicologist and theoretician Flo Menezes, who traveled from 1986 until 1997 to Europe and experienced a huge scholarship of linguistic research, which he later took back to Latin America and as a consequence, this remained as a lasting effect in his compositions. This linguistic influence shall be examined now in detail with the intention on the one hand to see, how this experienced scholarship exactly looked like and on the other hand to demonstrate, to what extent this can be traced back in Menezes' compositions.

#### Flo Menezes and linguistic interest

Born in 1962 in the city of São Paulo, Flo Menezes began already quite early to intensify his interest not only in music, but also in language since his own father Florivaldo Menezes is a poet himself.<sup>1</sup> Having read famous books of European intellectuals such as Karl Marx, Voltaire or Robert Schumann, it seemed to be a logical step to undertake a funded trip to Europe in 1986 after receiving his composition diploma from the University of São Paulo. This journey didn't just take him into one country, but instead almost across the whole continent until 1990, starting at the conservatory of Cologne.<sup>2</sup> Further milestones were his study with Pierre Boulez at the *Centre Acanthes Villeneuves les Avignon* and with Luciano Berio at the *Mozarteum*.<sup>3</sup> The later encounter was an experience, which proved to have a profound impact on his career. One of the reasons for this is the fact, that Italian composer Luciano Berio had already an important significance in the *casa Menezes* for a long time: Flo Menezes' father had a recording of *Visage*, which he played back in the living room regularly fascinating his son because of the versatile voice of Cathy Berberian.<sup>4</sup> At the time when Berio completed this electroacoustic composition, an important part of his career came to a conclusion: his termination of contract at the *Studio di Fonologia musicale* in Milan. In the meantime, Luciano Berio became one of the most recognized experts in linguistics in Italy,

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<sup>1</sup>Flo Menezes, *Nova Ars Subtilior*, Hofheim, Wolke Verlag, 2017, p. 211

<sup>2</sup>Ibid. p. 260

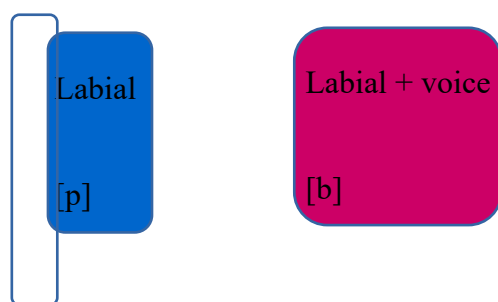
<sup>3</sup>Ibid.

<sup>4</sup>Ibid. p. 211

since the academic discipline hadn't quite established in the country. While accomplishing *Visage* as a farewell for the *Radiotelevisione Italiana*, especially the field of phonology and the scholarship of Roman Jakobson were the key elements of his linguistic expertise and also the concepts, with which Flo Menezes began to deal with after 1989.<sup>5</sup> In order to understand this important subject matter, it will be necessary to outline the scholarly basis of phonology and Roman Jakobson.

## Phonological theory according to Nikolai Troubetzkoy and Roman Jakobson

If we try to define phonology as a research field of sounds in language, we have to make a distinction between *phonology* and *phonetics*, even though this is a rather late development, because *phonetics* used to be the umbrella term for any linguistic sound study. Today, *phonetics* deal exclusively with the pure nature of sounds as isolated appearances, which are used for expression in any language. To put it in the words of Ferdinand De Saussure, *phonetics* is focused on *langue*.<sup>6</sup> This means a registration and classification of sounds, as it is illustrated in the well known IPA-chart. In the beginning, the term *phonetics* also covered another type of sound study, which is known today as *phonology*, namely the manifestation of sounds in relation to each other and their organisation. This method deals with the appearance of sounds in a specific application in spoken language. Thus, it is focused on *parole*.<sup>7</sup> One of the founders of this research and therefore also Flo Menezes' as well as Luciano Berio's area of interest was Russian linguist Prince Nikolai Troubetzkoy, who gave a concise definition of *phonemes* as sound in language: "The *Phonem* is the smallest phonological unit in language".<sup>8</sup> Troubetzkoy distinguished the smallest units with a strict logical method, which can be seen for example in the differentiation of presence and absence of a factor, which is called *privative opposition*.<sup>9</sup>



**Figure 1:** Privative opposition through distinction of presence and absence of the voice in pronunciation.

<sup>5</sup>Luciano Berio, *Quelques Visages de 'Visage' - Colloquio con Flo Menezes* in: Vincenzina Caterina Ottomano, *Luciano Berio – Interviste e colloqui*, Torino, Einaudi, 2017, p. 282

Flo Menezes, *Nova Ars Subtilior*, 2017, p. 38

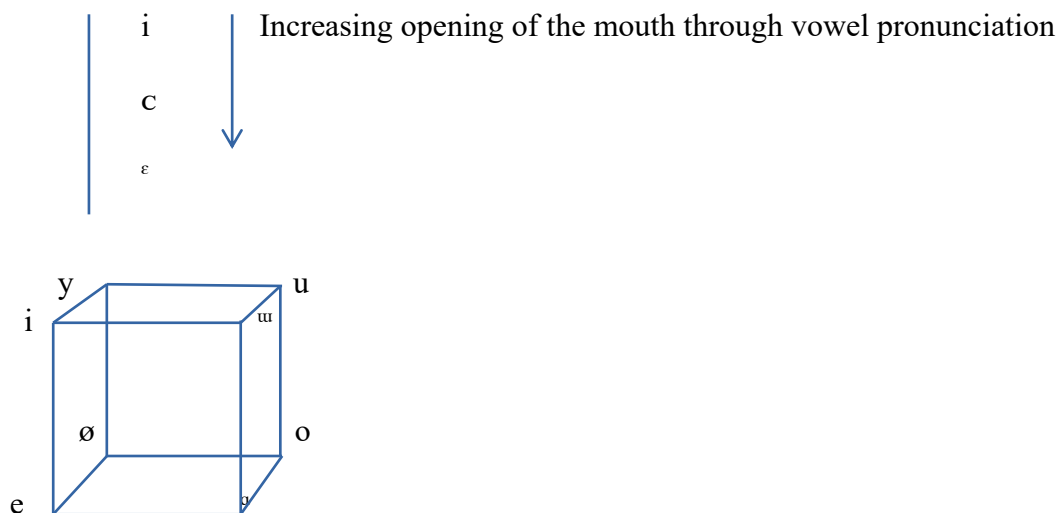
<sup>6</sup>Elmer Tenes, *Einführung in die Phonologie*, Darmstadt, Wissenschaftliche Buchgesellschaft, 2012, p. 20-21

<sup>7</sup>Ibid. p. 1, 24-26

<sup>8</sup>Nikolai S. Troubetzkoy, *Grundzüge der Phonologie*, Göttingen, 1989, p. 34 in: Elmer Tenes, *Einführung in die Phonologie*, 2012, p. 223

<sup>9</sup>Elmer Tenes, *Einführung in die Phonologie*, 2012, p. 224

In figure 1, the left phonem “p“ is pronounced without a voice while the other phonem “b“ on the right has a voice additionally in its pronunciation. The context of such properties can be depicted in a ray, which demonstrates the transition from “i“ to “ε“ through gradual opening of the mouth, and in a three-dimensional model, where a systematisation of vowels is shown through opposition, as figure 2 reveals.



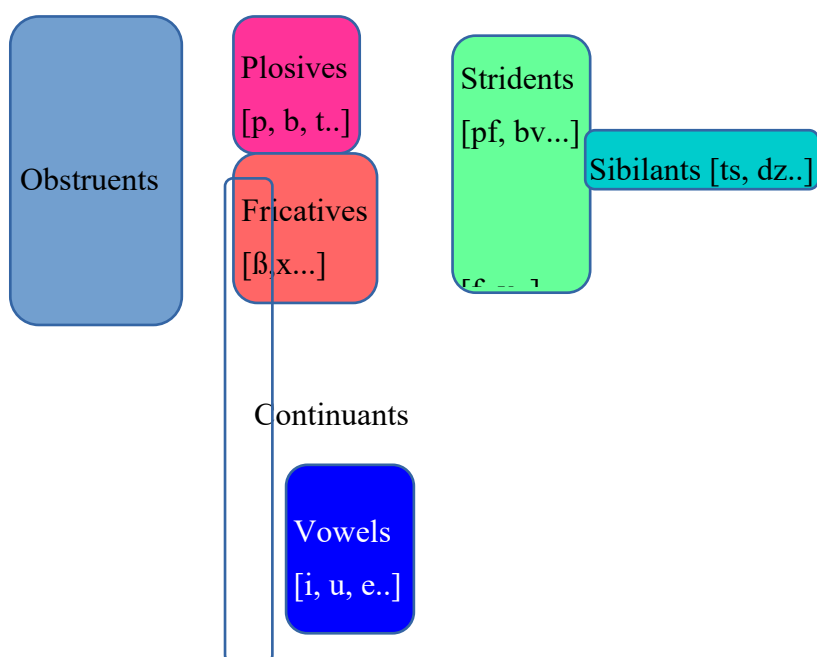
**Figure 2:** Gradual opposition and three-dimensional systematisation of vowels.

Distinguished sound pairs of a *private opposition* are also referred to as *correlations* and their attribute of differentiation as a *correlation-feature*.<sup>10</sup> It is important to indicate the binary method of determination in the previous descriptions, which played an important role in the further development of phonology. Hence, the next step of observation is to go further than Troubetzkoy’s logical systematisation and to take the model of *privative opposition* to a more abstract level. Russian linguist Roman Jakobson saw the method of distinction as a new opportunity to characterise sound in language. In contrast to Troubetzkoy, he didn’t define *phonemes* as the smallest units in spoken language, but instead their distinctive features.<sup>11</sup> This meant a split of the atomic nucleus and a regulation of phonetic attributes as the new common denominators. Consequently, the phonemes were reorganised in schemes, such as an Euler diagram, encircling elements with analogue properties, as it can be seen in the coloured areas of figure 3.<sup>12</sup>

<sup>10</sup>Ibid. p. 226

<sup>11</sup>Ibid. p. 231-232

<sup>12</sup>See also: Elizabeth G. Zsiga, *The Sounds of Language*, Hoboken, John Wiley & Sons, 2013; Carlos Gussenhoven and Haike Jakobs, *Understanding Phonology*, London, Hodder & Stoughton, 2011; Peter Ladefoged and Ian Maddieson, *The Sounds of the World’s Languages*, Hoboken, John Wiley & Sons, 1996.



**Figure 3:** Euler diagram as a new method of classification.

As already pointed out before, Jakobson's new technique of analyzing implemented binary schemes, like for instance the opposition "labial – non labial", which is in theory usually indicated with a minus and a plus character. In summary, such phonetical relations were described as *correlative oppositions*. But also phonemes with no direct relation to each other were specified, namely as so called *disjunct oppositions*.<sup>13</sup>

However, a binary method is not always adequate for structural explanation, since some disjunct oppositions can be multivalent. This difficult problem of modern phonology was an important issue of discussion through the entire collaboration of Jakobson and Troubetzkoy, which remained unresolved.<sup>14</sup> But in spite of the complexity and some controversies, this research area was adopted in music by one of the best Italian connoisseurs of linguistics.

### Luciano Berio's *Visage* as a fundamental root

During his European years, Flo Menezes experienced the extensive theories of Jakobson and Troubetzkoy, which were explained in the previous section. Together with Luciano Berio he clarified in a publication from 1993 the exact roots of the linguistic exchange, as well as the fact, that Menezes' own academic journey didn't start in Europe but in his very own living room. In this interview, titled *Quelques visages de 'Visage'*, Berio pointed out, that especially at the time when he composed *Visage*, he himself was influenced by the classic phonological propositions from Nikolai Troubetzkoy and Roman Jakobson. Hence, Menezes' early listening experience of *Visage* pointed indirectly already in a direction, which would later lead to Europe and to a study of the fundamentals of *Visage's* concepts. At the end of Menezes' trip, a research project where Berio put these concepts into an analysis of Luciano Berio's music was carried out: His dissertation with Henri Pousseur as his supervisor. This project produced

<sup>13</sup>Morris Halle, *The Modern Study Of Speech Sounds* in: Daniel Armstrong, Cornelis H. Van Schooneveld, *Roman Jakobson – Echoes Of His Scholarship*, Lisse, Peter De Ridder Press, 1977, p. 126

<sup>14</sup>Ibid. p. 142

two publications with the headings *Un essai sur la composition verbale/électronique "Visage" de Luciano Berio* and *Luciano Berio et la phonologie – Une approche jakobsonienne de son œuvre*, both published in 1993.<sup>15</sup> As the former title with the two important ingredients of the study already reveals, Menezes established in his analysis a model, which is closely related to Roman Jakobson's structural phonology and broke Luciano Berio's music down with this concept. Thus, he united the two components, which he already heard in his childhood and which he explored through research in Europe. It will be the intention now to see, how the works of the Brazilian composer were exactly affected by this.

## Influences in Flo Menezes' œuvre

In a sense, also the consideration of language as a musical component was a subject in Menezes' reflections before his trip to Europe, when he composed the suite for Orchestra PAN in 1985/86, where the phonetical pronunciation of the word PAN through p / a and n was stretched on an additional tape.<sup>16</sup> To demonstrate the phonological structure of this short term PAN, one possible analysis regarding the factors of articulation can be seen in figure 4 with reference to a system of contemporary English from Gavin C. Cawley. The exact anatomical place of articulation in the mouth is indicated in the upper row and the manner of articulation in the lower.<sup>17</sup>

Phoneme analysis according to Cawley 1996:

<b>/p/</b>	<b>/a/</b>	<b>/n/</b>	
bilabial	low/central	alveolar	← <i>Place of articulation</i>
plosive	open	nasal	← <i>Manner of articulation</i>

**Figure 4:** Analysis of the phones [p] [a] [n].

Linguistic examination constituted the formal foundation of the composition PAN, because every part is assigned to one specific phonological aspect. Moreover, time stretching became the second important element of Menezes' technique,<sup>18</sup> when he recomposed the PAN-suite in the German *Studio für elektronische Musik* in Cologne in 1988. This time he created a pure electroacoustic composition with the new title PAN: *Laceramento della Parola (Omaggio a*

<sup>15</sup>See also: Flo Menezes, *Luciano Berio et la phonologie – Une approche jakobsonienne de son œuvre*, New York, Peter Lang, 1993 and Flo Menezes, *Un essai sur la composition verbale/électronique "Visage" de Luciano Berio* in: *Quaderni di Musica Realtà No. 30*, Modena, Mucchi Editore, 1993

<sup>16</sup>Flo Menezes, *Nova Ars Subtilior*, 2017, p. 38

<sup>17</sup>See also: G. C. Cawley, A.D.P. Green, *The Application of Neural Networks to Phonetic Modelling*, University of Essex, 1996 in: [https://www.academia.edu/2956329/The\\_application\\_of\\_neural\\_networks\\_to\\_phonetic\\_modelling](https://www.academia.edu/2956329/The_application_of_neural_networks_to_phonetic_modelling)

<sup>18</sup>Flo Menezes, *Nova Ars Subtilior*, 2017, p. 38

*Trotzkij*).<sup>19</sup> This was the first time that he used a new concept in order to combine a delicate perception with a time expanded form of music: the *pronunciation form* or *forma-pronúncia*.<sup>20</sup> The new model allowed an acute experience of articulated language with the help of temporal expansion, which is explained by Menezes as follows: “[...] a given word whose meaning seems to be relevant to the concept of the piece is radically extended in time, in a concrete or imaginary way. Its phonological moments, as defined in structural phonology, are consequently lacerated, thus determining essentially the succession of the sound textures that constitute the musical form.”<sup>21</sup> One example, where he realised his new technique in such an intensive manner as he never did it again, is the composition *Phantom-Wortquelle; Words in Transgress*. The entire work is based on a *forma pronúncia*, which contains three words from three languages: *Voix* from French, *Árvores* from Portuguese and the German word *Wort*.

• I. <b>Voix</b> (Fr)	5'	[v] [o]
• II. <b>Wort</b> (De)	10'50	[w] [o] [t]
• III. <b>Árvores</b> (Pt)	6'30	[a] [r] [s]
Linguistic material	duration	selected phonological moments

**Figure 5:** Linguistic structure of *Phantom-Wortquelle; Words in Transgress*.

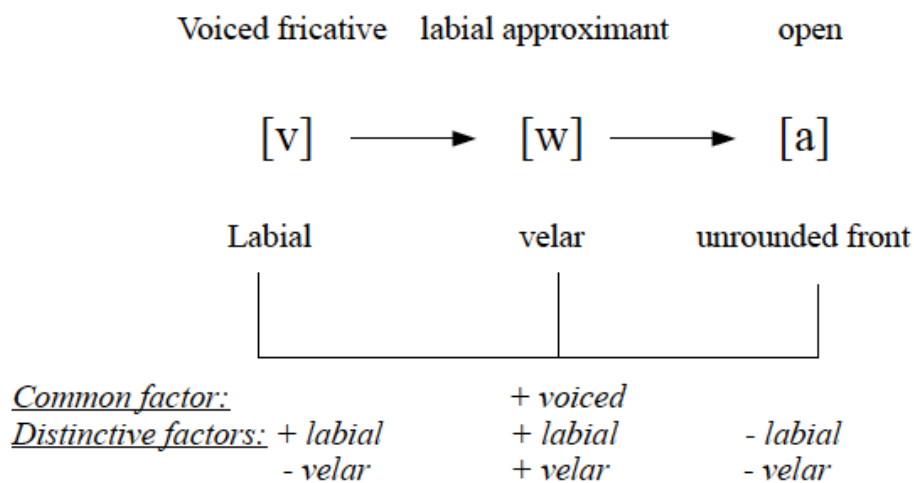
Since the *pronunciation form* shapes the musical form, the entire composition can be divided according to the three words in three sections, which is depicted in figure 5 with the duration in the middle and the phonological elements on the right. As an example, the word *voix* exists of three phones, which can be analysed according to IPA-French standard. The result in figure 6 shows a more detailed manner of articulation, indicated in the upper row, and a different place of sound production, indicated in the lower row.<sup>22</sup>

<sup>19</sup>Ibid.

<sup>20</sup>Ibid.

<sup>21</sup>Ibid. p. 163

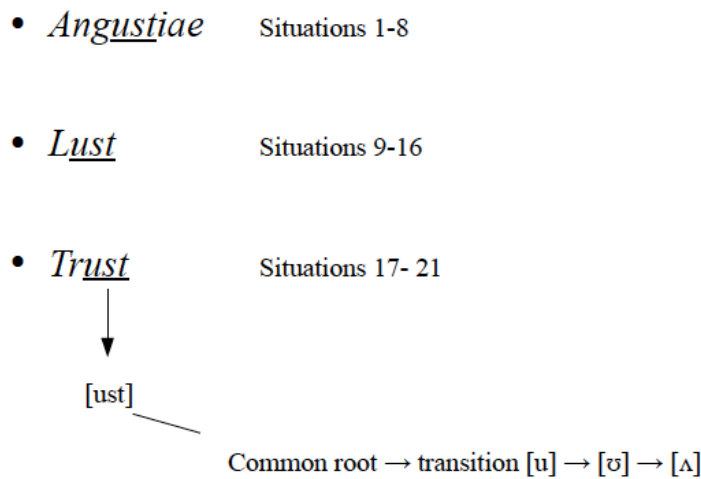
<sup>22</sup>See also: Cecile Fougeron, Caroline L. Smith, *Illustrations of the IPA: French*, in: *Journal of the International Phonetic Association* 23 (2), Cambridge, Cambridge University Press, 2009, p. 73-76



**Figure 6:** Analysis of *VOIX*.

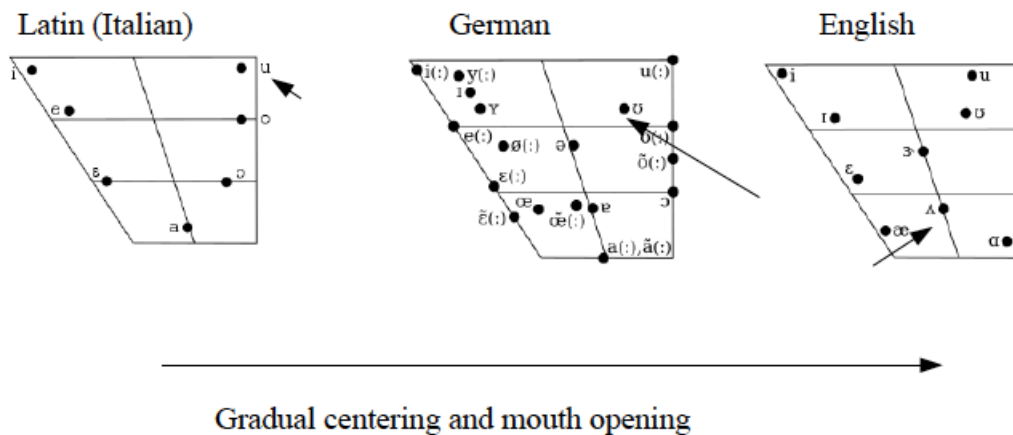
A comparison of the three elements leads to *voiced* as a factor, which all phones of the word *voix* have in common and a couple of distinctions, which are indicated with a minus sign in the lower part of the figure. While this short study has shown the phonological subtlety of Menezes' composition, the next step would be to identify, how he uses the pronunciation form in combination with other sound sources. Therefore, a more recent composition from 2007/08 will be examined: *Retrato Falado das Paixões*. This time, electroacoustic engineering is combined with a mixed choir with 32 voices and again three words from three languages: *angustiae* from Latin, *Lust* from German and the English word *trust*, divided into 21 "situations" (figure 7).<sup>23</sup>

<sup>23</sup> Flo Menezes, *Retrato Falado das Paixões*, 2009, III, in: [http://flomenezes.mus.br/flomenezes/flomenezes\\_scores/flomenezes\\_retrato\\_falado\\_das\\_paixoes.pdf](http://flomenezes.mus.br/flomenezes/flomenezes_scores/flomenezes_retrato_falado_das_paixoes.pdf)



**Figure 7:** Structure of *Retrato Falado das Paixões*.

As a new aspect, all three words have a phonetic common denominator: [ust]. Obviously, the sound is not the same in the individual articulation of each language. Instead, a gradual development from the vowel [u] can be traced, as it proceeds from Latin to German and finally to English. If we observe this development carefully, we see that the phonem [u] with an Italian-Latin articulation turns into a more open and central pronounced phone in German and finally an almost complete centered and mouth-opened [u] in English (figure 8).



**Figure 8:** Phonological transition of the vowel [u] through Latin, German and English.

While this is showing a linear progression, it was not just the intention of the composer to highlight a phonetic root, but rather to cover the whole word structure of all three word examples in this development.<sup>24</sup>

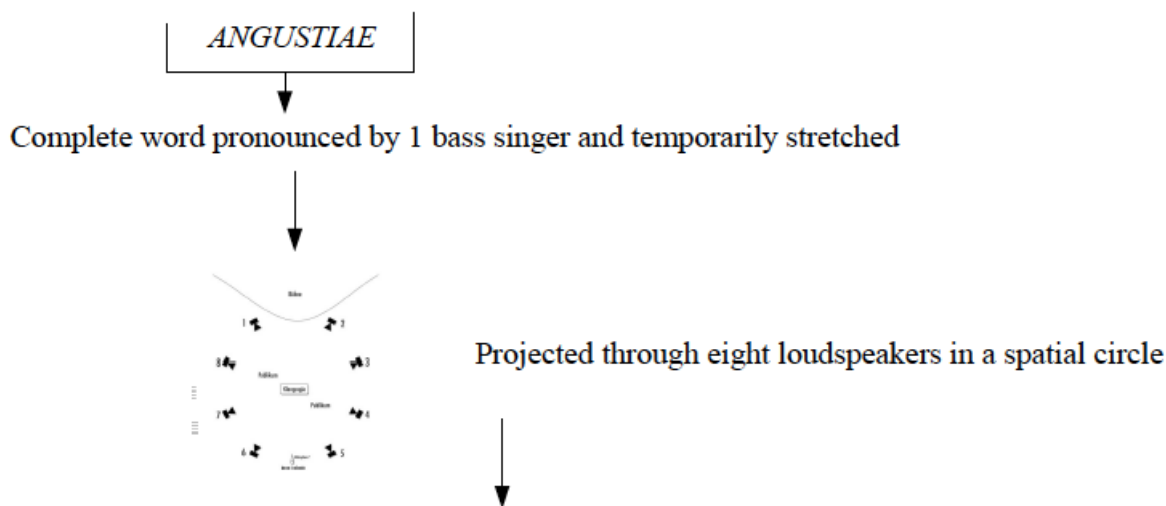
In situation 3, the Latin word *angustiae* is expanded with the help of electroacoustic engineering.<sup>25</sup> At the same time, this effect is spatially enhanced through octophonic

<sup>24</sup>Ibid.

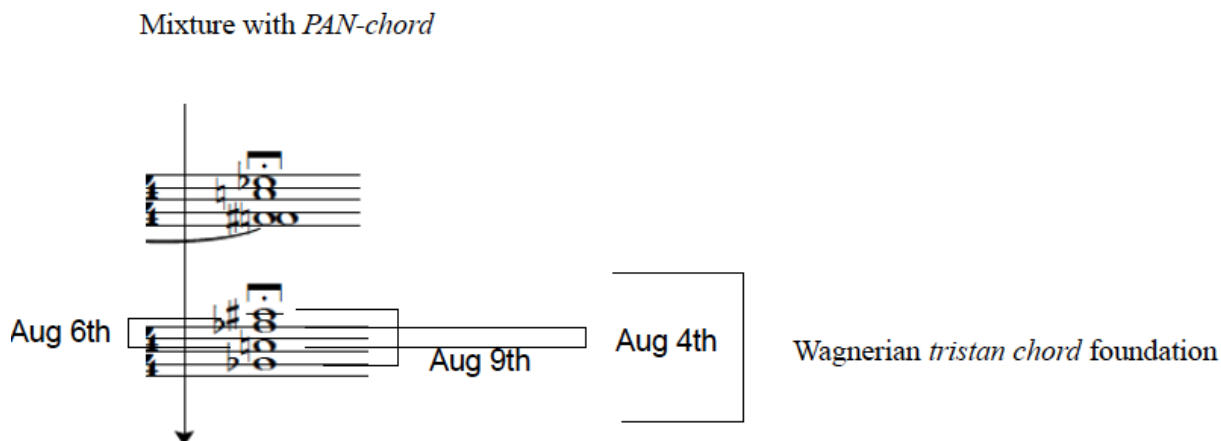
<sup>25</sup>Ibid.



projection with eight loudspeakers, which are distributed in the concert hall (figure 9).<sup>26</sup> Moreover, the entry of the word *angustiae* coincides with an eight-voiced chord from the choir, which Menezes called the *PAN-chord*. It includes the structure of the famous Wagnerian *tristan chord* with an augmented sixth and a fourth together with a ninth above the bass, as figure 10 shows.<sup>27</sup>



**Figure 9:** Situation 3 of *Retrato Falado das Paixões* with a stretched pronunciation of the Latin word *angustiae* supported by octophonic projection.



**Figure 10:** Analysis of the *PAN-chord* with the Wagnerian *tristan-chord*.

The study of the two compositions from Flo Menezes has shown, that his trip to Europe has influenced him through the experience of structural phonology, which had an impact in the later *forma pronúncia*. Thanks to the theories from Troubetzkoy and Jakobson, a differentiated thinking of phonological sound with sensitive hearing and thinking of audible language as a result was achieved. And for this reason, special techniques like combining phonological elements with an ambivalent harmonic entity were realized in the studio PANaroma. To say

<sup>26</sup>Ibid. p. 6

<sup>27</sup>Ibid. IV, p. 6

that this influence was achieved solely because of Luciano Berio would be wrong to conclude, but he was one of the biggest milestones among the European trail, where a Brazilian composer could experience the impressions and consequences of a huge scholarship, known today as the *Prague School of Phonology*, and take it as an imprint back to the vibrant city of São Paulo.