

Border-Listening/ Escucha-Liminal

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Cannibalistic Vocalities. Post-human vocal politics

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“They were very surprised to hear that we did not eat our enemies”

Amerigo Vespucci¹

chew devour gnaw dismember

The purpose of this work is to address speech and singing techniques in connection with post-humanism and new materialisms to conceive the manner of sound production from the vocal tract differently and to approach the speech apparatus in all its complexity, considering this as a post-human biopolitical machine of ethical and aesthetic production.

We view the body as deeply related to technical devices and telecommunications systems that modulate and alter perceptions of time and space. The body is intimately intertwined with the pharmaceutical production system that works with technological and biological processes in an indiscernible way. Pharmaceutical products modulate, re-invent, adapt and prepare corporeality and cognition for various daily tasks, from the most extreme (staying awake more than 20 hours without suffering from fatigue) to the most common (producing sleep). Along these lines, we reflect upon the body as something defined by the performative abilities that establish regimes of hegemonic visibility and concealment of corporeality, technical and political subjectivities.

The voice, indeed the entire speech apparatus, is considered an axis for the construction of this corporeality. In this sense, Voice is a space for action and for the problematization of those performative production processes. Within vocal production, the emergence of a combat system with the potential to allow the disengagement of the production of the dominant subjectivity from the concepts of human, man, subject and their respective vocal images is needed.

A vocal image is an expectation of speech/singing, implying a certain position and intervention in the world for a specific being. Such images, as well as expectations of performance in a mechanical sense (how should a technical apparatus react effectively?), and bodily and

¹ Blanco Villalta, J.G., 1948. *Antropofagia ritual americana*. Buenos Aires: Emecé Editores. (P. 13)

social performance expectations, delimit a field of action and production of consciousness.

In this case, the practice of cannibalism can be invoked, focusing on the way it generates both a relationship with otherness, and an assimilation of the other. From this perspective, cannibalism becomes a political tool for the development of inhuman production, assimilation, and dissemination strategies. The practice of cannibalism can be regarded as the moment in which Western European society collapses. Based on experimental practices and artworks on speech and singing, it seems important to rescue certain elements of cannibalistic practice in order to produce a space for experimentation in which instances of vocal production that may function as disseminators of an impersonal, inhuman, technical and political production can be generated.

Vocal geometries, geotechnics and geopolitics of the voice

The well-tempered musical system, from the point of view of vocalism, is a structure of tones and notes internalized through a series of somatic-political technical repetition and assimilation operations. Academically, aesthetically and professionally, these repetition processes are consciously internalized to distribute the bodily, technical and symbolic abilities of vocal and corporal production, resulting in dynamic behaviors around which vocalicity is built. This gives rise to individual vocal capacity, as well as to the social tools required for the production and assimilation of vocal images - namely, to the sound and material dimensions that shape such images.

Since the Renaissance, vocal musical technique has been a fundamental vector in the construction of the subject/human image. There is an intrinsic relationship between the evolution of the human as an articulating specimen who re-distributes the symbolic and political elements of the world, and the sound image of an angelic vocalicity. The construction of the definition of the vocally angelic is an aesthetic and political process of visibility and enthronement.

It seems appropriate that this construction process of human vocalicity is developed on an architecture that stakes itself on the political hegemony of this new figure - the human - deriving something from

the greatness and admiration of greatness that were considered to be the distinguishing features of humanity at that time. The Renaissance pantheon, harmonically Greek and spiritually transcendent, allows this human figure and its 'greatness' to fly above and command other extant beings. To skillfully produce pure sounds distributed on a geometrically coherent harmonic grid is one of the most important (and socially internalized) strategies in the construction of this figure.

This compendium of images, which articulate sound, corporality and technique, end up providing the coordinates of the plane on which human vocalism is ordered: from its most visible archetypes, such as *bel canto* or chamber music, to specific contemporary experiences of electronic pop.

The subjectless voice

Taking this analysis as a starting point, and in relation to a series of tools that will be developed, the aim is to remove vocal sound construction from the center of human subjectivity. The robot and the animal are the initial conceptual couple that will complete - by subtraction (i.e., excommunication from the human kingdom) - the image of the human subject. Both the robot and the animal define the perimeter of the human: the former distinguishes the human from a dystopian mechanical negativity, a logical preeminence that banishes subjectivity and human free will, the pure number; the latter, from the pre-cultural darkness of wild and immoral animalism, corporeality without conscience.

The relationship between this triangle of figures (human, robot, animal) is at the center of the distribution of living beings in our western urban societies. Operating as a geopolitical regime of consciences and corporeality, this triangle outlines a political, corporal and sensitive distribution of beings. The demarcation of the borders and definition of the human figure requires the existence of the other two figures. For this reason, it is vital to move away from this triangle. Additionally, achieving a more accurate definition of the other regimes of existence - of the two other vertices of the triangle, robot and animal - is just as important as the definition of the human itself. Their distance is designed by a geopolitics of tensions.

Vocal images play an important role in this system of tensions, the construction of typologies of robotic and animalistic vocalism is crucial for keeping these borders in place. A geopolitics of vocality related to the construction of the image of the human being exists, built on a series of operations that also support the fiction of robotic and animal vocality. That is our field of operations.

From this perspective, the construction of "strange-vocalities" aspires to address a series of questions that are the key to our practice. Where are we vocally inhuman? Why? What for? What is a robotic vocal capacity? What is an animal vocal capacity? If our practice rejects that system of borders and we are therefore able to experience transitions between various vocalities, to what extent are we discernible as beings? To what extent does participating in a robotic vocality not equal being a robot? To what extent are certain deep learning systems that go beyond the frontiers of any vocal Turing test not human?

Trans-synthesis

Since 2009 I have been dedicated to experimental vocal work, participating in contemporary music ensembles and various projects involving voice and digital processes. The Trans-Synthetic Vocality Workshops (TSVW) arose from the need to build a new perspective regarding vocality and contemporary voices. The first experience was carried out in the art and community space "IF" (Investigations of the Future²) in the town of San Martín in January of 2018. Since then, similar experiences have taken place in several states of Argentina, Latin America and Europe. In the workshops, we experiment with the production of vocal others using a series of exercises that involve a technique I have named "trans-synthetic vocality". This technique is applied alongside the use of multiple technological devices (microphones, amplification systems, effects and software specifically programmed in Max/MSP for collective experimentation in the workshop). The workshops are meant to reflect upon the technological, symbolic, corporal and expressive frameworks that produce voice practices, without ignoring the political

2 Investigaciones del Futuro - <https://www.facebook.com/investigacionesdelfuturo/>

ideas that create the very concepts of technology, communication and corporeality.

The TSVW aims to produce a space whose axis is corporeality, specifically as regards corporeal vocal capacity. This vocal capacity is a tiny but strategic module in which the differences between individual and collective, sound and meaning, technique and nature, are not recognized. These definitions and categories are foreign to that space in which vocality happens. Strategically, we think of vocal production as a post-human biopolitical machine capable of articulating sound – diverse ethical, aesthetic and political concepts expressed by means of bodily, technological and symbolic techniques.

Starting from the relationship between the subject/human concept and the animal/robot couple, we begin to generate a body map of inhuman voice production. This body map is a guide to develop the exercises carried out in the workshop. This map allows the isolation of a series of modules of the speech and vocal apparatus, resulting in electronic synthesis modules. From this viewpoint, the body's tone and noise generating capabilities are sound generators and oscillators. Vocal technique models are produced by using information derived from the sounds made by different animal species (insects, mammals, birds). We work with the speech apparatus as a producer of modular sound designs in real time.

In the TSVW the relationship between the concepts of technical apparatus (computational machine, electronic device, combustion engine) and biological apparatus (digestive, genital, excretory, speech) is taken literally. At the workshops, discrimination between the biological and the mechanical is an exercise, the only purpose of which is to point out the operations that determine the common understanding of these definitions and how they build a voice that we eventually consider our own, as well as a series of vocalities that we call alien.

Our trans-synthetic speech apparatus does not attempt at all to isolate the compendium of organs that constitutes the human specimen from its environment. We think of amplification systems and resonance enclosures (architecture, natural faults, spatial arrangement of

the environment, environmental conditions, etc.) as elements of the very same system that produces phonation, rather than as external technical elements that belong to a biological system.

The process of sound “amplification” belongs to the projection of the voice in the same way as the vocal cords do. This can be easily explained and exemplified by a practical exercise. Through a series of muscular movements, a human can generate a noise based on the relationship between a tone and the arrangement of the glottic cavity. The microphone membrane, with a specific frequency response, then amplifies this sound and the space in which the human stands responds with a series of harmonic resonances based on the production of those frequencies (the set of frequencies generated by the muscles and the frequency response of the microphone). In this situation, at what specific point is demarcation of the natural from the technical speech apparatus possible? In this context, the human being is only one of the elements involved in the sound production chain, and his or her vocal production could simply be replaced by a tone and a series of resonators generated by various digital or analog sound synthesizers, or a system of reeds and membranes.

In the situation described above, sound production is carried out through a series of technical articulations. Air circulation and modulation through the oral cavities and resonators of the body do not escape these dynamics of technical production.

The synthetic voice

The concept of synthesis, like any concept, is essentially ambiguous. It must be framed within a series of structures so that it retains a relatively univocal sense each time it is brought into play³.

At TSVW we use avant-garde vocal repertoire techniques developed during the last hundred years. These techniques are taken from the

3 Cambridge Dictionary defines synthesis as: “The mixing of different ideas, influences, or things to make a whole that is different, or new”.

ground-breaking works of Kurt Schwitters⁴ and the recent work of Edgerton⁵ and Sun Eidsheim⁶, as well as Isherwood's⁷ classic repertoire for expanded voice in contemporary music, and the fundamental "On sonic art" by Trevor Wishart⁸, in dialogue with canonical works of sound synthesis by pioneers such as Puckette⁹, Roads^{10 11}, and Wishart¹². These techniques are essential to the development of a relevant concept of sound synthesis based on non-human factors. The above-mentioned works are the fundamental basis of our exercises; however, our approach to vocal production differs from the that of the "extended music" canon, which usually centers on "music" or on the concept of a "vocal interpreter" based on the human-subject. The analysis and production of sound by synthetic and parametric methods is at the center of our trans-synthetic work, but we apply these to vocal production. Our purpose is not to extend or expand human vocal production skills, but to develop another vector: a tangential topology of the vocal space, the technique and

4 Schwitters, Kurt. *Kurt Schwitters: das Literarische Werk*. DuMont Buchverlag 1974

5 Edgerton, Michael Edward. *The 21st-century voice: contemporary and traditional extra-normal voice*. Scarecrow Press 2015.

6 Eidsheim, Nina Sun. *Sensing sound: Singing and listening as vibrational practice*. Duke University Press 2015.

7 Isherwood, Nicholas. *Die Techniken des Gesangs*. Deutschland: Bärenreiter 2013.

8 Wishart, Trevor. *On sonic art*, *Psychology Press*, Vol. 12. 1996

9 Puckette, Miller. *The Theory and Techniques of Electronic Music*. World Scientific Publishing Company, 2007.

10 Roads, Curtis. *The computer music tutorial*. MIT Press, 1996.

11 Roads, Curtis. *Microsound*. MIT Press, 2004.

12 Wishart, Trevor. *Audible Design*. Orpheus the Pantomime, 1994.

production of which may disarticulate the architectures that support the acoustic vocal image of the human and the respective robotic and animal equivalents.

Certain aspects of the speech apparatus are considered from the perspective of nodes of sound production that can be modulated amongst themselves. Resorting to flow diagrams (first used in the study of cybernetics and later borrowed by the developers of analog synthesizers and sound synthesis techniques) we produce a series of generators and modulators that we use for sound design with the speech apparatus.

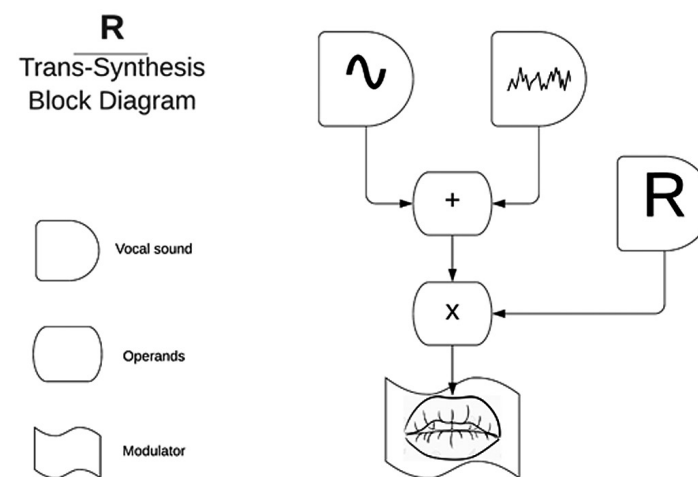


Fig. 1 – Trans-Synthesis Black Diagram – R module. Genoud, TVTS 2020.

The **R** module is based on a classic Moog-type analog synthesizer module, in which a highly complex tonal wave is generated before modulation is applied from a cascade of filters and oscillators.

Module **K** is based on a study of insect sound models and a cross-over with the sound of a helicopter. The position of the mouth and the overlap of synchronously-generated sounds and noises in the

palate allow modulation of the overall timbre of the sound in complex ways.

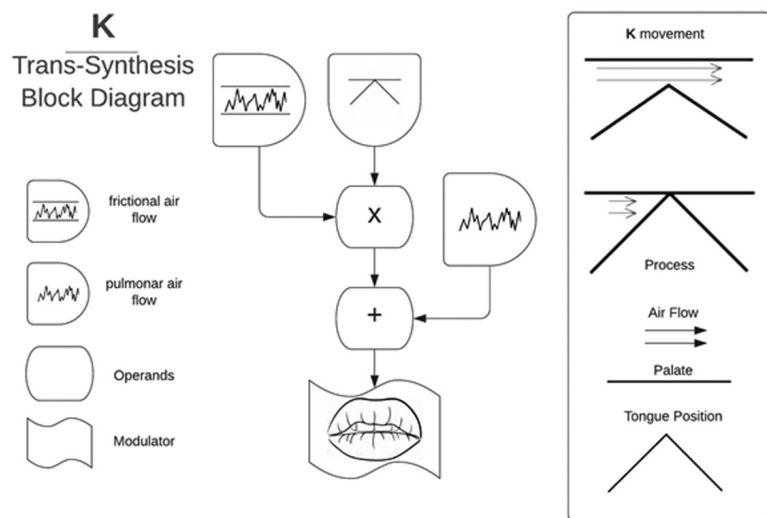


Fig. 2 – Trans-Synthesis Black Diagram – K module. Genoud, TVTS 2020.

This development system is not only a way of articulating the technical abilities of the speech apparatus. Nor is it intended to be a new graphic or conceptual way of thinking about the sounds that are already available to contemporary vocal work. It is intended to articulate voices that do not respect the frontiers between human, robotic and animal sounds. In fact, the aim of this proposal is to make a strategic contribution to the development of a device that can smuggle itself across this triple human-robot-animal border - a tool for geopolitical terrorism designed to retrace that boundary and transform it, creating a new territory of its own. A somatic-political geotechnics in operation¹³.

New methods of vocalism need new techniques, and a new technique needs a new language. The re-articulation of these elements is a source of interest; it would be fundamentally useless to try to

¹³ The redistribution of the technical land, the territorial geopolitics of technology.

reproduce the sounds of contemporary musical works from the 20th century, the 19th century or pop with the schemes that we propose. These are symbolic and technical elements that promote practices that aspire to build other vocal images.

Space cannibalism

The processes of trans-synthesis aim to dismantle an individual and natural vocal production that takes the path of vibrations. By following the vibrational system in which the voice resonates, this process can be experienced.

The center of this practical relationship is the point at which vocal resonance interrelates with space. If the center in which sonority is constructed ceases to be the emitting subject, then the vibrational distinction between a sound generator (perhaps one of the modules we have previously described) and the space in which these sounds resonate is irrelevant. It makes a little more sense to consider the sound event as a vibrational process of which we are part, as modulators of the acoustic events that precede us and in which we perform. In this respect, *vibrational spaces* devour subjects and detach them from their humanoid abilities, turning them into small vibrational elements within a resonance system - a cannibalistic space that transforms the singer's flesh into vibrational energy. If the vocal interpreter, from a sound perspective, understands the role of his body in space as that of a vibrational transformer¹⁴, they could melt into that role as a modulation of the vibrational space.

Extending this process, we consider the voice and the microphone membrane, the hand around this membrane and the amplification system as a continuum of vibrational modulation. The relationship between the oral cavity, the microphone membrane and the hand cavity produces an acoustic micro space, a portable cavern, connected to the characteristics of the space in which it is projected, within the amplification possibilities of the acoustic system.

¹⁴ It is worth remembering a premise taken from the physics of the last century: the difference between various materials lies in their vibrational differential, i.e., in the difference in the movements and density of their atomic components.



Fig. 3 - Micro electroacoustic spaces.

Working with this technique with the appropriate amplification system can generate complex articulations between the voice, the amplification system, and the space. This allows the building of acoustic spaces that resemble climatic and geographic phenomena such as breezes, storms, caves, etc., understood not from a symbolic perspective but as a physical point of view. These techniques are expanded with ad-hoc programmed software that makes it possible to modulate and spatialize them in real time, in order to create a sound environment; an immersive system of pedagogical experiences that enables the collective and transdisciplinary experience of post-human vocal production.

The cannibal voice

As mentioned in Viveiros De Castro's seminar *Variações do Corpo Selvagem*¹⁵, in the work of De Andrade, cannibalization is the gesture of seeing oneself through another, and anthropophagy is the gesture of becoming other. The expression "I Am He" carries this meaning within Viveiros De Castro's *Cannibal Metaphysics*¹⁶, enabling us to

15 Sesc São Paulo Youtube Channel. 2018. *Variações do Corpo Selvagem* Conferência com Eduardo Viveiros de Castro. Last modified August 23, 2018. <https://youtu.be/neWz33m6dgl>

16 Eduardo Viveiros de Castro, *Métaphysiques cannibales: lignes d'anthropologie*

launch practices of dehumanization of singing and speech, to experience robotic, savage, mestizo and post-colonial alterities, and to rearticulate technical, geopolitical, and symbolic spaces.

I Am He <> Voice Becoming Other <> Human Becoming Robot/Animal

In *La Mirada del Jaguar*¹⁷ Viveiros De Castro states that "the very shaman of Western civilization is science." From this formula we are urged to take an anthropological approach to the myths of western society, instead of demystifying or rationalizing them; to find in them an *other* that eventually, with the help of the correct rituals, could end up merging with us without losing its otherness. Electronic music was born in the last century as an engagement with a musical hyper-rationality accompanied by a series of investigations, carried out by radio and telecommunications companies, and state-owned European media, but the elements used to produce this music (mathematics, electronics, and computer systems) have not always been (nor are they yet completely) rational. Developing production spaces that articulate technique and aesthetics, politics, corporeality and matter from a non-hegemonic perspective may lead us to explore electronic music not as a case study of rationality in musical discourse, but as the material basis for a music of invocation, a relational politicization of art against fascism and a psychotropic weapon against cognitive semiological capitalism.

post-structurale. PUF, 2009.

17 Eduardo Viveiros de Castro *La mirada del jaguar. Introducción al perspectivismo amerindio. Entrevistas*. Buenos Aires: Tinta Limón, 2013