Master Thesis

Sounds Not Invented Here

An Understanding of Sound Art Informed by Speculative Realism

In Partial Fulfillment of the Requirements for the Degree
Master of Arts

Presented to the Master's program Sound Studies
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Introductory remarks

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Declaration

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Hiermit versichere ich, die vorliegende Arbeit selbstständig und unter ausschließlicher Verwendung der angegebenen Literatur und Hilfsmittel erstellt zu haben.

Die Arbeit wurde bisher in gleicher oder ähnlicher Form keiner anderen Prüfungsbehörde vorgelegt und auch nicht veröffentlicht.

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Hereby I declare that I wrote this thesis myself with the help of no more than the mentioned literature and auxiliary means.

Up to now, this thesis was not published or presented to another examination's office in the same or similar shape.

Berlin, 1st. March 2018

Place, Date

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Abstract

In the theoretical part of the thesis I apply the framework of the philosophical movement known as Speculative Realism to Sound Art. This experience informs the practical part of the thesis. The research project makes sense in relation to a collaborative methodology of work, where family, friends, colleagues, advisers, music, objects, machines, circuits, feedback, conversations, Internet, emails, phones, micro-controllers, wiring cables, electric fans, huge plants, passionate specialists, old art and sonic fictional futures, among a very large, although finite list of actors, agents and sentient entities, shapes something that I did not do: inventing a sound installation entitled *Aristotle's Jungle*.

The title of this thesis operates in two different ways that lead to a collision in a sort of sonic feedback system[1], a forced sound collaboration between several entities, objects, concepts, theory and practice. Two chosen directions; on the title: a hint on the problem of authenticity in creativity productions of knowledge, and on the subtitle: an interdisciplinary research project drawing from contemporary philosophies and Sound Art practices searching to increase the qualities of perception.

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[1] Feedback and oscillation are two key terms in the study of cybernetics, field of science long studied and documented by mathematician and philosopher Norbert Wiener who contemplate cybernetics as effective messages of control (*Cybernetics: or control and communication in the animal and the machine, 1948. 95-98*). This approach to feedback systems requires several agents for its operation, among which stand out: sender, receiver, message, transmission, sense.

Acknowledgments

I would like to thank all the people and entities in general that made this research project and the publication of this text possible. Also, to those who helped me in a very disinterested way in the production of the art installation that derived from this theoretical research. Without forgetting those who always support me no matter what happens, and those who do not. Thank you very much.

Julio Lugon

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1 Sounds Not Invented Here

Nothing is new, but temporarily unknown to some.
►from a conversation with R.P.[2]

Summary. This section covers the extremely difficult task of defining the notion of authenticity in the world of sound creativity via a series of philosophical interplays with time.

1.1 NIH-Syndrome

The not-invented-here-syndrome describes the depreciation of already existing knowledge by companies or institutions due to the place of origin. In computer programming, this kind of disorder is understood as a stance adopted by social, corporate, or institutional cultures who avoid using or buying pre-existing software, products, research or standards because of their external origins and costs. An example of this would be avoiding paying for royalties. Also, can derive to as the tendency towards "reinventing the wheel", situations in which the effort to solve a seemingly new problem is redundant and meaningless, since the solution already exists but is unknown or denied.

A good example, as a consequence of this type of syndrome, could be seen in the so-called War of the Currents, an economic and technological competition produced in the decade of 1880 and 1890, by the control of the incipient market of the generation and distribution of electrical energy. It centered on the opposition of Thomas Edison, a proponent of the use of direct current (DC) to George Westinghouse and Nikola Tesla, who promoted the use of alternating current (AC).

[2] Rafael Pereira Denegri, musician and designer.

Referencing technology, science and the computer programming world is not gratuitous when addressing philosophical matters, since the study of the mind is enhanced by the use of cutting-edge technology. Some contemporary philosophies used in the subsequent pages attempt to explain their position with examples coming from other areas of knowledge production, such as mathematics, science-fiction literature, physics and ecology.

In the title of this chapter, sound is added to this syndrome to activate a double reading of its operational force. One interpretation can be that speaking about sounds that one have not invented is a vain undertaking, as in, "these sounds were not invented here". Apart from being impossible, the pride of saying, "I invented this sound" is more appealing to some. One can't simply invent a sound, although in the production of sound, authenticity can still prevail.

The second reading takes place in a present tense mode while it operates as an active motion, as in, *"this thing sounds as something that was not invented here"*. Without passing judgment, one can really approach an external commitment to systems of creativity without failing in the trauma of saying: *can I use this sound?*, *is this appropriation?.* No sound is really being invented, or would be ever invented, but no sound would ever be the same. Therefore, without contradiction, nothing is new and nothing is old. Or, as philosopher Ray Brassier mentions in the film Hyperstition, "you're always at the beginning and always at the end." Iain Hamilton Grant wryly responded to Brassier by asking "and, what if there was no beginning?."[3]

Here, it is done a sort of temporality play of words in order to get the idea through the fact that inventions are just rearrangements of something that already existed, but was somehow not perceptively

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[3] Ray Brassier and Iain Hamilton Grant are two of the four philosophers from the original Speculative Realism Goldsmiths event that articulated the movement in 2007. These two citations are taken from a series of interviews from a 2016 film called *Hyperstition, Truth is Science is Fiction.*

available yet to a particular person. Or, in other words, inventions seen as compositions of the unknown. This is just a comment on the general use of words such as *discoveries* or the one we are dealing with now, *inventions*, that perhaps will not help to discuss the further project in this paper.

So, when we choose to give a motion, or, modal activeness to this type of statement via an unorthodox use of sound -as a material that one cannot invent or discover- we can start to better understand some notions and concepts such as *time, temporality, frequency, vibration or recurrence,* among other important terms to understand sound in itself.

1.2 Sounding in time

The belief that all events of the past lead to the present is questionable. There are certainly many black holes, many empty periods of history that are not actively contained in what we perceive as the present moment. Recent science proposes that history is not linear, and that each specific moment contains a particular combination of past and future that mesh together in a fluctuating way. Directionality is irrelevant. It can be that when things are happening, it is the case that time is passing. Conversely, when nothing has happened, time has indeed not passed at all[4].

There is an impetus to give a narrative to what has happened so far in the past, and with the help of science fiction, a narrative of the future also becomes relevant. We can make a narrative of the present by making a series of appreciations of what we are perceiving at a precise moment in which we are emitting our voice. The interesting thing is to realize how that temporal mismatch -the instant that is no longer there when we are describing it- on a micro-temporal scale, also happens on a macro-cosmic scale. We count the spatial distance with light years, and

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[4] Here the reference is important to forgotten episodes in history where all memory seems to be erased, therefore producing a gap in what we understand as a timeline of events in life.

objects that perhaps no longer exist are used as markers, while we just perceive the glare of light or ancient glow of a star that has already expired. But who tells us that perhaps this glare of ancient glow is not coming from the past, but is rather from a star that have not existed just yet for us.

When we describe what we are thinking at a particular point in time, we surely are committing serious performative contradictions. Consequently, we are not thinking exactly on the sound we are emitting anymore. But this type of contradiction is only effective if we count time as a narrative sequential line of events. Let's remember when we wrote that, in time, directionality is irrelevant, so then we can welcome to say that performative acts are sometimes coming from a future.

We might think that something similar happens with sound[5], that temporal mismatch of a non-linear time still makes sense in some cases of music for example. There are certain sounds in a set or piece of music that seem to come from the future (or the past) and are unfolding in the exact present moment we enjoy the piece of music. This is by no means certainly a mystical phenomenon; it is very technical in a way as these micro-temporal jumps are working to meet a sense, towards a sort of manifestation of the identity in a specific musical entity. In this case it can be a song, a poem or an experimental sound composition. The composition takes form, sense, depth and matter when it finally manages to mesh all those temporal units that may be already given to any abstract object, and with great sophistication seeks successfully to make that temporal mismatch expand in all directions leaving its static plane, to be finally perceived as a finished and defined product of a forced collaborative work.

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[5] A concise account of sound thought as time is carefully addressed in a selection of texts assembled by Sabine Sanio in "Sound as a Model of Time: Thinking Time as Sound. Music, Sound Art and French Philosophies of Time." (Verlag der Universität der Künste Berlin, 2014).

These artistic manifestations are very important, because they are in a way preparing us towards the moment of the end of a specific space-time arrival. These are all small manifestations of a special type of air blowing from a distant future preparing us for a substantial, essential, material, physical and spiritual change when, if it really will happen as Ray Brassier explains, a *"disintegration of space-time in itself"* will indeed take place.[6]

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[6] Ray Brassier mentions that this will occur in 96,688,365,498,695 stellar signals (unit) that are in a countdown towards the complete annihilation of space-time. The stars are saying goodbye to us. By the time these figures reach zero, the universe will be over. Of course, then Ian Hamilton Grant clarifies that the human being can continue to exist even after the disappearance of the universe, and this could happen when our bodies are completely redesigned.

2 An Understanding of Sound Art Informed by Speculative Realism

Summary: This section explains the subtitle of the thesis. It is a dialogue among the main research interests of this project, sound and philosophy. Specifically, Sound Art as the philosophical art practice of temporality, and Speculative Realism as a way of using sound as a tool to understand this time.

2.1 Sound Art as Time

Here, we will use Sound Art understanding it as a philosophy of art in a historical context where sonic power is generally taken for granted and put aside for the relevant discussions in the so called art world. While in the past few decades sound is finally getting the auditorium it deserves -nevertheless still neglected by the traditional ways of addressing art- it is an indicator of how sound can be the tool to arrange the conditions towards an understanding of our newly acknowledged emergency of catastrophic occurrences in the ecosystem of planet Earth, known as the Anthropocene era[7]. Climate change, mass species extinction and global warming are some of these events.

How can be sound useful? These ecological crises can be well presented by sonic means and thorough ways of sound aesthetics. The rise of a conscious awareness can be increased with the help of frequencies that can go beyond up or down the human perception of sound, a sound that we humans cannot hear. The sounds we can't hear are formally related to these ecological threats as we can't know or make sense of a catastrophic incident until after it has happened.

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[7] The word Anthropocene refers to a geological period, not yet officially recognized, characterized by an ecological disturbance produced directly by human impact.

Earthquakes, tsunamis, or the slow disappearance of a known animal species are some examples of this. Being aware of the impossibility of an accurate prediction of events, it is just after an incident has happened when we finally gain data and knowledge from it. The awareness of a potential imminent crisis can be raised then by ways of presenting it with sound materials, as a fearful or dreadful sonic event. Sound, as Steve Goodman writes, is a great tool to meet these goals:

"Sound is often understood as generally having a privileged role in the production and modulation of fear, activating instinctive responses, triggering an evolutionary functional nervousness."[8]

This fear of course is not to be taken as an obstacle of sorts; moreover, it can be successfully used as a call for awareness in a fictional listening of the not heard yet, before is too late. That is how sound can help humanity, not just in the case of artistic circles, but in any group of people living in some kind of precarious reality. And we know we are already some of us situated in this group.

Another interesting use of sound can be noticed, by most of us, when recalling precisely ordered sound sequences from memory. More or less exactly as the original pace, very close to be in the same rhythm and variations of tempo as the source sound message we are evoking[9]. These systems of auditory memory inherent in the human being can be used as one of many practices in the tradition of Sound Art, in favor of a scientific diffusion oriented to environmental education. It may be that the auditory memory of an audience, activated by a Sound Art work plays a much more important role than another type of artistic manifestation of environmental awareness production. Sound Art,

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[8] Steve Goodman, *Sonic Warfare, Sound Affect and the Ecology of Fear (*Massachusetts: MIT Press, 2010), 65.
[9] This sometimes can be explained as the faculty of having a very good auditive memory. Joáo Ribas, "Nothing to See, Nothing to Sound," in *Florian Hecker/John McCracken*, (Berlin: Sternberg Press, 2016), 12.

therefore, can manifest itself as a very sophisticated tool of political awareness.

Moving a bit further on the discussion of the uses of Sound Art, we can speculate that Sound Art is also understood beyond the human. There is something that Goodman calls *Vibrational Ontology,* and these vibrations can be detected and found before and after our perception, he mentions that if we subtract human perception then suddenly everything seems to be moving:

"...anything static is so only at the level of perceptibility. At the molecular or quantum level, everything is in motion, is vibrating."[10]

This vibrational phenomenon is a very important point to understand the next chapter where we would try to get a better sense of the ontological state of what is called *reality*, or in other words, what we understand as universe. In this case it is a universe that is constructed and constituted through the tuning of frequencies and vibrations of strange agents.

2.2 Speculative Realism (SR)

Speculative Realism is a philosophical movement taking its name from a Goldsmiths College´s conference held in 2007 featuring four of its main figures: Quentin Meillassoux, Graham Harman, Ray Brassier[11] and Iain Grant Hamilton.

All four thinkers have very different powerful philosophical positions, nevertheless they all share a mutual kind of enemy. In this instance it is what Meillassoux coined as *correlationism*. After ten years of the naming of the term, Speculative Realism has been proven to be a powerful field of contemporary philosophy that resonates in several fields of aesthetics, as design, music and the arts in general. Both

[10] Goodman, *Sonic Warfare*, 83.
[11] Ray Brassier is no longer subscribed to the label of being considered a Speculative Realist philosopher.

reaping followers and detractors, there is no doubt that it is a potent way to position oneself in the search towards a special love for wisdom.

In a selection of essays published in 2016, *Genealogies of Speculation: Materialism and Subjectivity since Structuralism*, several authors give a critical look at the advancements of the philosophical movement from varied points of view and intertwined ways of approaching this thought; some approach this critical view from a position oriented towards mathematics and numerology (as in the case of Meillassoux), others approach this critical stance through the study of social sciences; it is certainly an interesting account for determining the opportunities and possibilities of thought arising from these positions without leaving aside the dangers that could attract the misuse of these.

2.2.1 Correlationism

The term correlationism can be described and characterized as the anthropocentric understanding of the universe. Mostly all of philosophies from the last centuries maintain that human thought is the only way of making sense of the world. Correlationism denies total access to what is called *things-in-themselves* (autonomous objects existing beyond human thought), and the only access human mind can have then, with this line of reasoning, is only whatever appear to us. The correlationist type of philosophies consider then that things exist only insofar they appear to us. So you could easily intuit here that everything else that has never appeared to our human mind, does not really make any sense whatsoever, in the correlationist thought.

The Speculative Realism way of addressing this impossible task of thinking outside our human mind is exactly by ways of philosophical speculation. Meillassoux, reviving an old Kantian question[12], addresses it

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[12] Meillassoux explain how he thinks he has resurrected the old Kantian problem, following Diderot, that is a scandal that philosophy can't proof the existence of things outside the subject. So, in his words, Kant did not actually deny the existence of an *outsideness,* but is just not able to formulate a potential elaborated question to the problem (Quentin Meillassoux, *Time without Becoming*, Middlesex University, London 08 May 2008).

in a very refreshing way, and draws a critique to the correlation of the mind to the world. He tries to expand a vision of reality where the human condition is not obligatory to try to understand the existence of things. How can we understand then things before life? In Meillassoux´s *After Finitude*, we are confronted by the notion of *ancestrality*, in order to exemplify any reality located in a time anterior to the actual emergence of the human species or any form of life on earth.[13] Derived from this view on *ancestrality,* Meillassoux coined another very important term to indicate the traces of this ancestral time, traces manifested in a type of process matter known as *arche-fossils*.

2.2.2 Arche-fossils

Fossils are understood as petrified impressions of life much prior to humans. With the additional information mentioned above with relation to the position of *ancestrality*, we can now begin to work with a kind of process material that performed even in a time before life on earth, *arche-fossils* (also known as *fossil-matter*). These *arche-fossils* are sometimes data that has been detected only in recent years by ways of up-to-date technologies. These include for instance, the exact date of when a star was formed -the technical notion of stellar luminescence-, and know the precise rate of decay of a radioactive isotope or the year when earth was created[14].

Science has long been perfecting dating techniques, and today we are being witnesses of -by having accurate archaeological statements of ancestrality- a powerful proof that the correlationist idea governing western philosophy is unable to account for phenomena performing before (or after) human beings. This accounts for a generous and broad look into myriad events helping to a better understanding of the universe. This newly state of universal potentiality is explained by a term that charges itself with a powerful performative flow, *contingency*.

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[13] Quentin Meillassoux, *After Finitude, An Essay on the Necessity of Contingency* (London: Continuum, 2008), 10.
[14] Meillassoux, *After Finitude*, 16

2.2.3 Contingency

A contingent state of occurrence can be described as a potential event that is plausible to happen, but can't really be predicted with all certainty. This is a key term in Speculative Realism and the philosophies that go beyond the correlation of human-world finitude. Whereas things that can't be described with facts or sufficient reason still can be taken as something real, in order to be open for accounts of knowledge production. Again, a correlative thought (mind-world) can't really accept the reality of a potential, while this thing remains outside of our perceptual apparatus.

Considering this acceptance of a contingent reality outside of human thought -the potentially real existence of the unknown- we open up a *"weird world, foreign to human experience and commonsense."*[15] An alien phenomenology therefore can emerge from the dust of a finite world of existence, and activate new methods of doing philosophy through means of practical work. This is sometimes outside of the academia, and what Ian Bogost develops as the term *carpentry*, or *"constructing artifacts that do philosophy."*[16] This obscure world beyond human perception can be approached by speculative practices, and perhaps by waking up these instances from the unknown, many readers could alert the appearance of monsters.

2.2.4 Horrors of sounding speculative

In horror films, an audience usually gets specially scared when the monster never shows itself, and when the monster is only shown on the screen indirectly. As we never get a sight of the cause of terror, a scary story gets enhanced and can utilize us as a disarmed audience in order to get the most of an impact and impression by the effect of a very well

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[15] Mark Fisher, "Speculative Realism: A report from the recent 'Speculative Realism and Speculative Materialism' conference at the UWE, Bristol", 12 May 2009, https://frieze.com/article/speculative-realism

[16] Ian Bogost, *Alien Phenomenology, or What it´s Like to be a Thing* (Minneapolis: University of Minnesota Press, 2012), 85-112.

played order of actions on screen. Sound therefore helps effectively to build up the sensational space around the perceptual dimension of an immersed and attentive spectator. While this multi-directional auditory matter articulated as an income of air can physically cover a person all around -in contrast of the image on the screen that stays always in the front, it makes it easy for a viewer to cover her eyes- it finally gets the desired effect of producing a mode of fictional fear.

That is why so much has been written on behalf of science fiction and horror to explain the fundamentals of the SR thought. This is a move forward from the reflexive philosophies that gain reception in the twentieth century, towards an urge to action. Speculative practices, in theoretical and artistic manifestations, aim at the *other* (or at the *alien)* to become thinkable and knowable. So, it could be said to be operating as a sort of controlled charting of *the possible*.[17]

Such manifestations of the obscure can surely produce terror and discomfort, and one has to be very careful to be aware of the several readings that even a word like *speculation* could produce as reaction. The meaning of this notion when referring to land speculation in economics and finance is well-known. This word has negative connotations for some. So it is very important to make clear the intentions of using the word speculation as a philosophical, aesthetic, political and artistic metaphor to explain the action of taming the weird, eerie[18] and strange field that coexist within ourselves and the others. We are finally getting closer to learn how to care for these monsters, with all the fears that this has the potential to create.

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[17] Sam Lewitt, "On the Advantages and Disadvantages of Working Speculatively: A survey with statements by Diedrich Diederichsen, Karin Harrasser, Jenny Jaskey, Jutta Koether, and Sam Lewitt," *Texte zur Kunst*, no. 93 (March 2014): 144-165.

[18] The term "weird" is used here under the magnifying glass of "the unknown," (or that which remains outside our knowledge.) Mark Fisher, in his book *The Weird and the Eerie (2016),* delves into the task of singling out both concepts, proposing that even while these two terms are related to each other, each one has its own particular properties and are treated as two different modes of "the unknown."

2.2.5 Object Oriented Ontology (OOO)

One part of the SR thought lead towards what Graham Harman and Timothy Morton practice as Object Oriented Ontology (OOO). This strain of SR explain how life discloses itself into a sort of horizontal ontology where all living and nonliving beings share the same ontological level. This point of view calls for a democratic stance on all objects or entities (humans are also seen as objects), being alive or death, being processes or matter, being microscopic or interstellar, all objects or entities may have a subjective position and are to be considered having their own kind of agency. For OOO, no object can't have complete access to other objects (or to themselves) while these objects are withdrawing constantly from each other. The only way to have some kind of account on the existence of these are by ways of what Harman calls *allure*, which is understood as an exchange of sensual qualities that would never exhaust the real objects in themselves.

Quadruple objects:

Harman holds that any of these objects are four fold. These contain real qualities and sensual qualities and they are being at the same time a real object and a sensual object. This fourfold structure of an object can have ten different combinations to be granted with some amount of access to the object itself. This encounter is limited while Harman state that these objects are constantly withdrawing and never touching each other.[19]

Hyperobjects:

Ecologist and philosopher Timothy Morton is committed to a philosophy that doesn't fail to address some issues related to the atmospheric disasters with which we share living in the Anthropocene era. He constantly reminds us to take action towards these matters even if is just acknowledging about changing our ways on how we think our environment.

Morton explains many phenomena that goes beyond our total grasp as *Hyperobjects.*[20] This is a way of understanding processes that are so expanded

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[19] Graham Harman, *The Quadruple Object* (London: Zero Books, 2011).
[20] Timothy Morton, *Hyperobjects: Philosophy and Ecology after the End of the World* (Minneapolis: University of Minnesota Press, 2013).

in space and time that our human perception fails to understand its totality. He mentions that we inhabit these *hyperobjects* and the more we learn about them the more strange and open they are to us.

Hyperobjects are a good example of how we can approach Sound Art and Sound Studies, and let go of the constant search for authenticity in sound practices while opening a whole new way of working sound coming from all sources without discriminating. If we acknowledge that we live inside a *hyperobject*, sound could be seen then as a main life support that must be well performed.

2.3 SR informing Sound Studies

The study of Sound Art is well inscribed in the Sound Studies field, as an almost scientific approach to sound. Much theoretical work has been written in the last decade that effectively assembles the materialist and realist aspects of SR to Sound Studies with some good results. In the following paragraphs I will note four authors related to the study of sound, who in some way have been informed by the general lines of SR for their own academic research.

One such case of this comes from the scholar Will Schrimshaw, who gives an account on the differentiation of two terms too often confused, Immanence and Immersion. With a particular facility to synthesize Sound Art, music and Sound Studies, Scrimshaw gives a very exciting and decentralized position on the fields related to different schools of philosophy and shows how SR can be productively employed in the Sound Studies field.[21]

Another author to mention would be Budhaditya Chattopadhyay, who has written on the notion of the possibility of sound as an artistic object, and draws from the schools of thought of the Object Oriented Ontologists. Chattopadhyay goes on and explains, in a very open way, how sound can be taken as a subject matter to actually dissolve the gap between composer and audience by ways of what he calls *"auto-curational"* methodologies.[22]

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[21] Will Schrimshaw, *Immanence and Immersion: on the acoustic condition in contemporary art* (London: Bloomsbury Academic, 2017).

[22] Budhaditya Chattopadhya, "Beyond Matter: Object-Disoriented Sound Art," *Seismograf/DMT* (special issue: Sound Art Matters), November 2017. http://seismograf.org/fokus/sound-art-matters/beyond-matter-object-disoriented-sound-art

Also, worth mentioning is the work of Tobias Linneman Ewé, who in addition to his comments about what is known as Xenofeminism (understood as the abolition of gender), goes and talks about the possibility of going beyond the boundaries of what is considered Sound Art, using sounds outside of the human auditory apparatus. With the help of concepts such as *transduction*, which is a way of translating different types of energy, his rigorous study of speculative tools delves into the central themes of a discussion about Sound Studies related to today's urgent issues.[23]

The last name to mention in this chapter is author of "Machine Music: A Media Archaeological Excavation", Morten Riis. He says that sound and music are a product of technology[24], and lays a clear focus on the view on machines from which a very technical reading can be inferred towards the understanding of sensory speculation. In his essay for the *Journal of Sonic Studies*, Riis rises the provocative question: *"Where are the Ears of the Machine?"*[25]. This is provocative because of what the author does with his text is quite the opposite; he provides a thesis on how machines may have a non-anthropomorphic apparatus to perceive sonic data. This approach also meet the philosophical grounds of the OOO school. This study operates both on its delicate use of the academic method of research, and in the well use of aesthetic practices towards a technological design referred to his installations with objects drawn from a tradition of Sound Art.[26]

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[23] "Mountains Moving to Speculative Vibrations: The Sonic Experience of Object" a Paper by Tobias Linneman Ewé, AU-Arts Sound Art Matters 2017, accessed February 21th. 2018, https://www.youtube.com/watch?v=2Qvqwn_KURU.

[24] Here is the abstract of the mentioned book: "Sound and music is a product of technology. Whether we are enjoying a concert, working in a sound studio or listening with headphones on, technical equipment lays the foundation of our musical experience. In Machine Music. A Media Archaeological Excavation postdoc, composer and PhD Morten Riis tunes into normally undetected layers of music. Musical machines -be it ancient or modern instruments, computers, loudspeakers or amplifiers- are not just silent mediators of sounds. They all have their own unique voices. We simply have to learn to listen to them."

[25] Morten Riis, "Where are the Ears of the Machine: Towards a sounding micro-temporal object-oriented ontology," *Journal of Sonic Studies* (Research exposition, 2015)

[26] It is fair to comment however, that perhaps Riis's article could have used other examples from the school of Object Oriented Ontology that take the machines as a main case of study, overlooking for instance, the works of Levi Bryant with his take on Machine Oriented Ontology (MOO).

3 Sound Installation: *Aristotle´s Jungle*

> *If, for example, we suppose a radical disunity of philosophies, and radical dissociations in its history, then it is said that there can be no "translations" in philosophy at all.*
>
> ►*Rajchman, pp.5*

Summary. The theoretical research work exposed in the previous pages gives way for the realization of an artwork entitled *Aristotle´s Jungle*, a philosophical sound-machine entity. This practice-oriented work made its way from the premise of using electric fans as initial material for its execution. In the following pages, a method of listing the objects employed in the sound installation will be used as a tool to explain the agency of the same, and how the work operates.

3.1 Electric Fans (and light)

The idea of using electric fans as the central material for a Sound Art installation came from contemplating the rotational movement of a ceiling fan installed in a hotel room located in the Amazonian rainforest. This reflection elucidated the potential use of air as a metaphor for sound, and covered essential objects of study from the theoretical framework that was marking the project, Speculative Realism.

In the rainforest, the soundscape is not only populated by beautiful bird songs, sounds made by insects of all kinds or the warm air blowing tree leaves. Also, we hear the sounds of motors that are almost omnipresent. Engine generators, motors of precarious boats, chainsaws, cars, and motorcycles. So, the use of fans as sound generators, in this case, serves in relevant ways, not only for the emulation of industrial sounds, but finally to resemble sounds that are denominated as natural. The mechanical sound emulates the animals and plants.

Each of the fans are linked to a light lamp that serves as a guide within the overall sound composition. Each individual fan sound is then related to a light generator to reinforce the aforementioned sonic effect.

Once decided, the object of study deployed many folds to be taken into account: first, the function of the electric fan. Second, its history and importance in some geographies. Third, the fact that the sound design of an electric fan must diminish its noise production in order to create the sensation of comfort that is expected when purchasing such an industrial product. Then, in a fairly relevant deconstructionist move, it is intended, on the contrary, to amplify the noise produced by the fans with contact microphone transducers and to prepare them with sticks and cardboards to try to encounter the not so shown side of the object itself, namely the noisy hidden qualities of its motions.

3.2 Contact Microphones

The use of piezo contact microphone transducers in Sound Art tradition is widespread. This method of amplifying vibrational forces to convert them into sound opened a whole new perspective in the development of new ways of perceiving sound, music, and new technologies related to art production as sonic experiments.

In the case of *Aristotle's Jungle*, the use of these transducers go in line with a general use of devices that have the ability to translate one type of energy into a different one. This play of translations refer to the kind of narrative drawn from the readings of speculative fiction, where different kind of species could communicate with a common language. In this case this common language is characterized by the electricity.

The amplified *voice* of the electric fans is then routed to a professional multichannel mixer where all individual qualities of the electric fans are then composed sonically to give each one of them its own sound space in time.

3.3 Sound Mixer

A sound mixer receives eight different amplified *voices* from the contact microphones. These different *voices* are modeled by filtering the sound

frequencies to give a different character to each voice. This is done respecting and maintaining the original sound qualities of the prepared electric fans. Here a sort of sound sculpturing is required.

The stereo output of the mixer is then projected and spatialized with the use of four loudspeakers.

3.4 Loudspeakers

Loudspeakers are electroacoustic transducers that convert electric signals into audible mechanical waves, or sound. In *Aristotle's Jungle* the use of these devices are contemplated to reinforce the level of the feedback system where the humans are ultimately confronted by an explicit force, and are expressed by sound's vibrational energy.

The visitor is then exposed not only to the amplified sound of the different fans coming from the sound mixer, but also to the electric current jump noises produced by the switching on and off of the electrical outlets that provide power to them. The result is a constant sound flow that resembles wave variations of machines with some kind of life. The switching on and off of the electrical outlets are activated by the reading of the electrical bio-resistance of a series of plants inhabiting the same environment as the machines.

3.5 Plants

When it was decided to invite plants to collaborate on the production of the sound installation, it was necessary to integrate their presence explicitly with the other elements of the staging. Although, the particularity of vegetal living beings undoubtedly already alter any space in which they are found[27], the definition of their presence would be more justified if there is a common thread, in this case, electricity, to link them with the machines populating the ecosystem of the sound installation.

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[27] In *The Language of Plants: Science, Philosophy, Literature (2017)*, a series of academic articles by authors from different fields such as ecocriticism, neurobiology and posthumanist philosophy, reason about the ability of plants to actively communicate, thus raising new political and ethical ways of how we relate to the plant world.

The use of pairs of electrode pad transducers connected to a clocked differential amplifier was an effective way of solving the explicit staging requirement. These electrode pads sticked to plant leaves gave a reading of the electrical bio-resistance of the plant in every particular moment. The electrical messages were triggering every time the activation of a software housed in a micro-controller, the basis of what we will call a *translation device*.

3.6 Translation Device

A medium-sized wooden box, with the *translator device* inscription on its lid, rests as the core of the installation space. This box contains the aforementioned bio-resistance reading device that connects to the plant as well as the microprocessor hosting an edited version of the open-source software originally designed by Sam Cusumano (Electricity for Progress). This edited software gets activated by the fluctuating messages impulsed by the plant. It is a program informing the activation or deactivation of a high voltage switch system module designed to be controlled by low voltage electricity coming from the microcontroller. The switch system module is known as a relay.

3.7 Relays

A series of electromagnetic relays were employed to operate the electricity passage of the switches that activate and deactivate the fans and their related lights. The use of relays, in addition to being a safe tool for the manipulation of high voltages of electricity without becoming a threat, also operate in conceptual fashion since it presents the possibility of continuing with the general philosophical and conceptual lines of the project. These conceptual lines are those of translating one type of energy into another and the relationship between two forces, without even touching, and always withdrawing from each other.

Robin Mackay, director of UK publisher and arts organization Urbanomic, developed the notion of an *interrupted relay* as in how the idea of a collaboration in contemporary creative processes act indirectly between its actors. He explains this notion as follows:

"...there is the idea here that you take work from one person, and insert it into (...) alien context, and then give something back to them. It's like a relay, in which there is not collaboration in the sense of people working together, but there is people's work being worked together."[28]

The idea of a forced collaboration that emerges from Mackay's interrupted relay works well with the dialogue of the sound installation and the theoretical research project presented here. Although, Mackay is supposedly only mentioning humans, we could take some risk to include non-humans within this system of action and agency.

3.8 Chairs

Two chairs are strategically positioned in the environment of the sound installation. This deployment of an anthropomorphic utilitarian object acts as a marker of comfort towards the audience. The inclusion of chairs goes hand in hand with the invitation of human and non-human entities to this designed ecosystem of forced collaborations.

It is worth mentioning that although in a first version of the installation, the chairs would have been used to deny the access of a potential visitor, this prototypical version was finally discarded to enhance the quality of openness instead of that inaccessibility trait of different species to collaborate with each other, or the impossibility to translate different modes of language (interspecies). The environment was then constructed as a bio-cybernetic ecosystem, open for human interaction.

3.9 Cables & Wires

All these aforementioned objects constituting *Aristotle's Jungle* have a particularity, which is the use of different types of electric cables for their interconnection. Although -in the philosophical field- it is intuited that finally there will be a telepathic communication between the different entities that make up this sound installation as a jungle ecosystem, such as living plants

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[28] Robin Mackay, "Urbanomic", text presented in the Seminar-Meeting: "Publicaciones (no solo) de arte: usos culturales, sociales y políticos" (Seville, June 15-18, 2011) http://ayp.unia.es/dmdocuments/public_doc05.pdf.

and humans, cybernetic machines, wooden furniture and the rest of objects, in this case it is indeed necessary the use of cables and wires, while wireless technology was not yet being contemplated for this specific project.[29]

3.10 Predicting the past

A text accompanying the installation articulated a fictional exercise in predicting the past.[30] This refers to new technological discoveries that help specialists in the field of archeology to determine historical events and know much better the details on how humans lived in old times. That is why the non-linear temporal exercise remains as an important comment on that, potentially in the future, we could know what happened in the jungles of the planet in years when it is understood the philosopher Aristotle lived.

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[29] There are research results gathered from the process of this work, which will include the use of wireless technology as well as the so-called Internet of Things, and this approach will be addressed in the author's future projects.
[30] Exhibition hand-out document available in attached electronic data section.

4 Conclusion

Although the present thesis began with a project of theoretical orientation, it became increasingly evident that it was necessary to include a substantial practice that functions as a mechanism to generate both philosophical and artistic knowledge. This practice follows the guidelines of philosophical *carpentry*[31], and begins to make sense as the practical work is contrasted with the readings of books and academic articles of the chosen theoretical framework, Speculative Realism.

The inclusion of plant elements was a key decision to clarify that what was being shown was a system of unscheduled communications. In other words, when inviting vegetal entities, the rhythmic variation of the sounds emitted by the electric fans would be in charge of living sentient beings, and thus enhancing the aesthetics of a sensitive system. It also intuits that mechanical objects could also have a mode of sentience[32].

After experiencing the unfolding of events produced by the sound installation, and operating as a whole as a sensitive entity with a special kind of agency, we could conclude that the combination of what is known as natural elements as well as artificial devices have a kind of relationship with each other. This relationship has its own kind of sonic communication that goes beyond human understanding.

It should be noted that the logistics in the production of the sound installation acted in favor of what is understood as part of the creative process. The creativity in the search for specific sounding elements, which are adequate for the potential of the sound installation, was meticulously curated within the experimental framework of the searching for sources that could provide with efficient material.

A sense about natural and artificial objects arises from the knowledge produced from both the theoretical and the practical aspects of the present

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[31] Ian Bogost, "Carpentry vs. Art: What's the Difference? A preview of an answer that might be forthcoming," published March 19th, 2013, http://bogost.com/writing/blog/carpentry_vs_art_whats_the_dif/

[32] In *Discognition (2016)*, philosopher Steven Shaviro with a very serious look on science fiction novels, paves the way to a radical exploration of what could be considered the possible sentience of non-human entities, unicellular organisms known as slime molds, aliens, machines, or software generated avatars, among others.

work. There is a sense that perhaps comes to integrate these two modes of objective existence, natural and artificial. In other words, it remains in a contingent position that perhaps even the artificial can be considered within the universe of the natural, thus opening the sonic perception of our environment towards a future in which the acceptance of new technologies and respect for non-human beings is exemplified in an ecological thought. This position could be landed thanks to the experimentally and non-orthodox use of sound: a sonic approach to philosophy and the arts.

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Content of Data DVD

Description of attached files[33]

File Name	Description
Julio Lugon_Abstract.pdf	Digital version of the Abstract.
Julio Lugon_Master Thesis_Sound Studies 2018.pdf	Digital version of the written Thesis.
Project Documentation	**Folder containing the project's image and video documentation.**
Image	**Folder containing the project's image documentation.**
Julio Lugon_ARISTOTLE´S JUNGLE_EXHIBITION HANDOUT.pdf	Exhibition handout text for Aristotle's Jungle.
Julio Lugon_ARISTOTLE´S JUNGLE_PHOTO-DOCUMENTATION.pdf	Aristotle's Jungle photo documentation.
Video	**Folder containing the project's video documentation.**
Julio Lugon_Video 01.mov	Video Documentation with installation views.
Julio Lugon_Video 02.mov	Video Documentation of theoretical and practical work.
Website Content Files	**Folder containing Website content cited in this Thesis.**
Bogost_Ian-Carpentry vs Art.pdf	Bogost's "Carpentry vs. Art: What's the Difference?" article.
Fisher_Mark-Speculative Realism _ Frieze.pdf	Fisher's "Speculative Realism" article.
Mackay_Ian-Urbanomic.pdf	Mackay's "Urbanomic" presentation slides.

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[33] You will find the documentation files for download at this thesis' web location:
http://soundsnotinventedhere.hotglue.me/

<u>Accessing the attached electronic data</u>

The paper version of this thesis contain an envelope with an optical data medium (Data DVD) here. You will find the digital version of the thesis, the abstract, the documentation of the project (image and video) and the website content used on the Thesis.