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The audible truth: Reflections on the phonographic real

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Abstract. Taking Rodolfo Caesar's *Círuclos Ceifados* (1997) and Francisco López's *La Selva* (1998) as starting points, this article proposes a discussion of the implications of representing the real through phonography. For this purpose, we bring examples of how an idea of "the real" has surrounded many discourses in sound studies, and also suggest a parallel between phonography and photography, drawing from ideas introduced by André Bazin in his 1945 article *Ontology of the Photographic Image.*

Keywords: Reality, Imitation, Representation, Phonography, Sound Studies.

1. INTRODUCTION

It isn't hard to point out similarities between Rodolfo Caesar's *Círculos Ceifados* (1997) and Francisco López's *La Selva* (1998). Both pieces work as acousmatic music, that is, a kind of music in which the source of the sounds is invisible, creating a split between the sonic image and its visual referent. Besides, both works distance themselves from a significant part of the electroacoustic tradition by their employment of explicit extramusical references. If we try listening to the first three minutes of each piece, we shall recognize a dense nocturnal fauna with crickets, frogs, large conglomerates of insects – we don't see them, but we identify them immediately through causal listening (cf. CHION, 2008).

There is, however, a fundamental difference between these two fragments, that may not easily reveal itself through an uninformed listening experience. The sounds heard in *La Selva* were recorded by Francisco López in the reserve forest of the same name, in the north of Costa Rica (LÓPEZ, 1998). Meanwhile, in *Círculos Ceifados*, the majority of the sounds were digitally synthesized by the composer through techniques of FM and Granular Synthesis (CAESAR, 2008: 37), generating a type of material that Caesar himself refers to as 'artificial' (CAESAR, 2008: 62). Would it be reasonable to argue that, knowing the source of the sounds being heard, López's fauna is

more real than Caesar's? Or even that one is real while the other isn't? In which ways does this knowledge affects our listenings of these works?

This article investigates how an idea of the "real" has surrounded many discourses in sound studies. This extends from investigations on the origins of phonography, all the way through the more recent practices of field recordings, sonic art and electroacoustic music. We propose a parallel between phonography and photography, showing how both have been historically marked by a particular relationship to reality. Finally, we examine Francisco López and Rodolfo Caesar's writings to point out how both composers have dealt with the matter of reality when thinking about their artistic production.

2. REALISM AND IMITATION

Distinctly from the visual arts, the imitation of soundscapes and quotidian sounds appears as a minor interest in the tradition of European classical music at least until the second half of the twentieth-century. Although the sounds of nature have been occasionally used as sources of inspiration for many composers, the representation of these phenomenons has operated more often in a symbolic form than in an imitative one. For British anthropologist Georgina Born, this characteristic manifests itself as result of a fragility of the musical medium, in comparison with literature or the plastic arts, in creating denotative meanings, which would lead it to privilege connotative modes of signification (BORN; HESMONDHALGH, 2000, p. 32). We might raise the hypothesis that this incapacity, or this lack of interest, is due to a certain inadequacy of the musical instruments to convincingly replicate these types of sounds; or perhaps that, on the contrary, musical instruments (and, by consequence, the very concept of music) have purposely evolved in opposition to this type of representation.

Since the end of the nineteenth-century, the perspective of an essentially non-representational music has crystallized – a kind of music that would refer to nothing except itself, concerned with internal aspects such as form and structure – as result of the conflict between *programmatic music* and *absolute music* that has led to the prevalence of the last (IAZZETTA, 2016: 384). According to Douglas Kahn (2003: 78-79), sounds perceived as imitative or carrying explicit referentiality to external phenomena encounter great resistance in the musical tradition, often being considered a "lower life form", appearing only as sound effects or mere curiosity.

We might also connect this apparent lack of interest in imitation to the ephemerality characteristic of sound production. For French cinema theorist André Bazin, imitation in the plastic arts originates itself from a desire of embalming, of saving the body from its mortality, therefore fixating its appearance in a medium that could guarantee the permanence of the image (BAZIN, 1974: 9-10). At least until the development of phonography, the sonic image could not be immortalized in an analogous way to what painters and sculptors did, and consequently any attempt at creating a sonic imitation would be no less fleeting than its original and, therefore, ineffective.

The development of perspective in the fifteenth-century marks, for Bazin, the "original sin of Western painting", which would lead to a long-time obsession for the imitation of the visible world, for the illusion of forms, for an attempt to replace the exterior world for its double and therefore save it from its finitude – an obsession that could only be redeemed centuries later, with the emergence of photography and cinema (BAZIN, 1974: 12).

In 1878, when Thomas Edison made the first demonstration of his phonograph, the inventor believed his machine to be "practically perfected" in what concerned the fidelity of its reproduction (THOMPSON, 1995: 135). It's safe to say that Edison's criteria of fidelity were probably very different from those that would mark countless generations of audiophiles and *Hi-Fi* enthusiasts, insatiable consumers of modern sound reproduction devices promoted by the phonographic industry.

Emily Thompson (1995: 137-138) shows that the criteria of fidelity are directly associated to the function attributed to the phonograph in different periods of its history: when Edison proposed that the machine could serve offices as a kind of "aural letter" in transmitting messages or registering contracts, the intelligibility of the spoken word was the most important parameter to be considered when judging the success of his technology. However, when the same machine became a vehicle for the notorious voices of famous opera singers, these criteria become immediately insufficient, bringing up new concerns such as the particular kind of timbre produced by the system.

A higher bet on the equipment's fidelity appears with the *tone tests*, events for promoting the phonograph organized between 1915 and 1925, on which Edison's company proposes the spectator a comparison between the music as reproduced through the phonograph and the same piece being performed live by the recorded artist. In some of these presentations, the experience was further reinforced by an acousmatic listening session, on

which the lights were turned off so that spectator was unable to know if the musician was or wasn't on stage, conceding his judgment entirely on his auditive perception (THOMPSON, 1995: 152). The criteria of fidelity, now, becomes an illusion of presence, brought by an incapacity of the listener's ears to distinguish between the authentic and it's copy.

New criteria would appear through the history of phonography to progressively revive the quest for ideas of fidelity and realism. Although recently many technologies dedicated to musical listening have privileged portability and accessibility, often in despite of sound quality (IAZZETTA, 2009: 127-129), a great deal of electroacoustic music and audiovisual systems have manifested the desire to simulate the perception of different listening spaces, in an analogous form to the quest for space introduced by perspective in painting.

For German media theorist Friedrich Kittler, "hi-fi stereophony can simulate any acoustic space, from the real space inside a submarine to the psychedelic space inside the brain itself" (KITTLER, 1999, p. 103). However, this conviction on the spatiality of the stereophonic system doesn't seem to be shared by artists and engineers who keep searching, through new technologies such as *ambisonics*, for a sense of space in phonographic reproduction that seems closer to the one we're able obtain in our daily listening. According to engineer and researcher Peter Lennox, for example, there's still a long way to be tracked in the direction of a faithful representation of spatiality:

> We do not have control (or the capacity to display, yet) of attributes such as virtual objects' sizes, orientation, and precise position within a virtual location. We also do not have particularly good audible depiction of virtual places – with a wall over there, a door opening here, the ceiling so high, the floor cluttered with furniture, and so on. There attributes are all audible in the real world, and we should be able to have them in our artificial one. (LENNOX, 2009: 266-267)

Anyway, the promise of fidelity in imitation didn't seem to be enough to sustain the marketing campaign for the Edison phonograph. As Emily Thompson (1995) argues, the campaign gradually shifts from the idea of phonography as an imitation of reality to the idea of phonography as *reality itself*, aiming at positioning the experience of phonographic listening in the same realm as the experience of music produced by live musicians. The author also points out that some journalistic reviews of the *tone tests* campaign reveal a curious inversion between original and imitation:

> Yet the *Transcript* reported that [the singer Christine Miller] "adjusted the power of her voice to that of the 'record' with skill and the reproduction was closely imitative." It is not clear what "the reproduction" refers to here; is it Miller's reproduction of the recording or the recording's reproduction of her? (THOMPSON, 1995: 156)

In this way, the *tone tests* campaign seems to predate a common phenomenon in the transformation of reproductive technologies into productive technologies, that came to mark not only electroacoustic music, but also the majority of pop music in the second half of the twentieth-century. It's not unlikely to observe, recently, criticisms of musical performances that praise the interpreters for their capacity to adequately reproduce the nuances of the song such as they have been made in its phonographic version, that is, the capacity of the musician to present a faithful copy of his own song. Phonography acquires the status of the real, leaving for the performer the task of producing, as faithfully as possible, its imitation.

3. FROM REALISM TO THE REAL

For André Bazin, the greatest strength of the photographic representation is less related to the image's fidelity than to a certain *objectivity* inherent to this particular type of representation:

> For the first time, between the originating object and its reproduction there intervenes only the instrumentality of a nonliving agent. For the first time an image of the world is formed automatically, without the creative intervention of man. (...) All the arts are based on the presence of man, only photography derives an advantage from his absence. Photography affects us like a phenomenon in nature, like a flower or a snowflake whose vegetable or earthly origins are an inseparable part of their beauty. (BAZIN, 1974: 13)

Thus, for the author, the photographic image is capable of obliterating all subjectivity, manifesting itself as an indisputable proof that the represented image existed and has appeared in front of the photographic machine:

> The objective nature of photography confers on it a quality of credibility absent from all other picture-making. In spite of any objections our critical spirit may offer, we are forced to accept as real the existence of the object reproduced, actually *re*-presented, set before us, that is to say, in time and space. Photography enjoys a

certain advantage in virtue of this transference of reality from the thing to its reproduction.

A very faithful drawing may actually tell us more about the model but despite the promptings of our critical intelligence it will never have the irrational power of the photograph to bear away our faith. (BAZIN, 1974: 13-14)

French philosopher Roland Barthes would also support a similar view, arguing that the photographic image has as its very essence the ability to "ratify what it represents" (BARTHES, 2000: 85). Therefore, Barthes distinguishes the photographic referent from other types of representations:

I call "photographic referent" not the *optionally* real thing to which an image or a sign refers but the *necessarily* real thing which has been placed before the lens, without which there would be no photograph. Painting can feign reality without having seen it. Discourse combines signs which have referents, of course, but these referents can be and are most often "chimeras". Contrary to these imitations, in Photography I can never deny that *the thing has been there*. (BARTHES, 2000: 76)

Both Barthes (2000: 82)[1] and Bazin (1974: 14) mention the Shroud of Turin as a mythical example of quasi-photographic objectivity in representation. This Christian relic is said to have revolved Christ's body after his crucifixion, and somehow preserved his image on the cloth. Although the image that remains is faint and barely identifiable, the possibility of having originated directly through bodily contact, and not through an artist's hand, concedes the image a higher degree of credibility, from which it derives its mythical status. After conducting a reconstruction of Christ's body based on the image left on the Shroud, Professor Giulio Fanti of the University of Padua claimed to have produced "a precise image of what Jesus looked like on this earth" and was even able to add that "according to our studies, Jesus was a man of extraordinary beauty" (MARTINENGO, 2018). No matter how artistically inspired Leonardo da Vinci or Caravaggio's representations might have been, they can never be as reliable a source of information as the acheiropoieta, as these magical proto-photographies are known.

This particularity of photography that, as we will argue, is also often perceived in phonography, is independent of any apparent similarity or fidelity

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[1] The English translation of Barthes' *La Chambre Claire* by Richard Howard, however, replaces the original text's Shroud of Turin for St. Veronica's napkin, a different *acheiropoietos*.

of the representation to its model, but connects instead to the way in which these image were (re-)produced. It's located not in the final product, but in its origin. Thus, the perception of this "index of reality" depends on the spectator's awareness of the processes that precede these particular types of representation, a shared belief in the objectivity of the photo/phonographic devices.

Similarly to Barthes' reading of photography as being able to testify to what it represents, Friedrich Kittler identifies the inscription of "wavelike shapes into the phonographic plate" as a reproduction "authenticated by the object itself" (KITTLER, 1999: 11-12). Like Bazin, the German author argues for the objectivity of phonography as a result of its ability to bypass any subjectivity in its mediation of sound: "The phonograph does not hear as do ears that have been trained immediately to filter voices, words, and sounds out of noise; it registers acoustic events as such" (KITTLER, 1999: 23).

Kittler borrows from Lacan's distinction between the symbolic, the imaginary and the real, and then goes on to identify the first with the typewriter, the second with cinema and the last with phonography. "The real", writes Kittler, "has the status of phonography" (KITTLER, 1999: 16). The unprecedented type of reproduction provided by media is therefore able to escape all linguistic or symbolic grids. As Seth Kim-Cohen has pointed out, for Kittler:

> Visual and sound recordings, as exemplary instances, are not obligated to resemble a preexistent referent. Instead, they are products of an object: of light in the case of photography; of sound waves in the case of phonography. In this sense, they are purely indexical: the physical imprint of a material catalyst, *not* the iconographic likeness of an external referent. (KIM-COHEN, 2009: 94-95)

As an earlier example of sound mediation providing access to "the real", Jonathan Sterne's description of the introduction of the stethoscope in medicine shows how the instrument allowed doctors to access information from the insides of patient's bodies that previously could only be available through an autopsy (STERNE, 2003: 99-128). Sterne argues that the stethoscope's success was based both in its ability to increase the physician's listening skills, allowing for previously unheard sounds to appear, and also in the possibility of maintaining a physical and social distance from the patient. Like Kittler's reading of the phonograph as being able to avoid the subjective "filtering and censoring" (KITTLER, 1999, p. 89) of listening, the

stethoscope allowed medicine to replace the patient's subjective descriptions of his or her own symptoms for a more objective and therefore reliable access to the body itself:

> It offered a way of constructing knowledge of patients independent of patients' knowledge of themselves or what they might say about themselves. *The truth of a patient's body became audible* to the listener at the other end of the stethoscope. (...) The sounds of the patient's body were independent of the patient's free will: patients could not "conceal, exaggerate or lessen" the sounds that their bodies yielded on examination by mediate auscultation. (STERNE, 2003: 122; italics added)

This act of mediate auscultation, which in Sterne's account provides sonic information that surpasses the ones provided by the patient's talking, resembles many qualities attributed to phonographic recording. In his *In the Blink of an Ear* (2009), music theorist Seth Kim-Cohen brings forwards interesting reflections on how changes in the social context allowed the emergence of new meanings in Stephen Vitiello's *World Trade Center Recordings*. This project, made in 1999, involved a series of recordings made in the World Trade Center's 91st floor, in New York. Vitiello set up contact microphones in the building's windows, allowing the capturing of the city's vibrations reverberating through the edifice (KIM-COHEN, 2009: 128-129). Kim-Cohen argues that, following the terrorist attacks in 2001 that caused the building's destruction, Vitiello's work acquires a new layer of meanings, being rewritten as a document of a violently extinguished reality, which radically affects the ways in which it's perceived:

> Vitiello's World Trade Center Recordings act as aural portraits of the world pre-9/11. (...) Vitiello's recordings are the reminiscences of the fallen towers "in their own voices," the last words, not of the legion dead, but of the buildings themselves, of the architecture that, for the terrorists, symbolizes America's capitalist empire, and which now, for the rest of us, symbolizes the multitude lost and the zero from which the new world begins to reaccumulate itself. (KIM-COHEN, 2009: 130)

It is only through the particular kind of connection that phonography establishes with its represented object that Vitiello's work can acquire this strength of representation, in a way that allows Kim-Cohen to read it as a register of the "last words" of these buildings. Not Vitiello's words on the World Trade Center, but the building's own sounds. Furthermore, the

attaching of contact microphones to the windows of a building that would soon be dead is strangely reminiscent of auscultation. Even if the captured sounds tell us nothing about the place where they were registered, the attack that was soon to happen, or even about what kind of sound people who worked really there heard in its interior, the work still acquires an intensity that could hardly be grasped by any attempt of posthumous representation. It is in this sense that Vitiello's field recordings resound Bazin's considerations on photography: "No matter how fuzzy, distorted, or discolored, no matter how lacking in documentary value the image may be, it shares, by virtue of the very process of its becoming, the being of the model of which it is the reproduction; it *is* the model" (BAZIN, 1974: 14).

The most significant part of the work's textuality depends on a tacit agreement between the listener and the composer, an informal contract that confirms the presented sound to be not necessarily 'faithful', but 'authentic'. This information doesn't simply appear through 'sound itself', but through a discourse that precedes the work, informing the listener on the way it was produced.

4. FROM REAL TO REALISM

The emergence of the real through photographic objectivity is well portrayed in Michaelangelo Antonioni's *Blow-Up* (1966), in which David Hemmings interprets a London photographer who, after taking a series of pictures of a couple while walking through a park, attempts to unveil a murder that seems to be hidden in the background of his photographs. The murder is invisible to the photographer's naked eye, but can't avoid being caught by the camera's lenses. On the foreground, one sees only the couple and the park. After a series of enlargements (*blow-up*), however, the truth is revealed hidden in the image's background: a hand holding a gun, traces of a body lying on the ground.

The picture, now with its image blurred due to successive enlargements, looses realism, but allows the photographer no notice things that had escaped him in the ephemerality of that short moment while taking the picture. Even photographic manipulation, in this specific case, does not cause the image to lose its quality as an "index of reality" that allows the photographer to convince himself that a crime has happened. On the contrary, it is precisely the possibility of manipulation that allows the murder to noticed, conceding the photograph an authority over the real that exceeds the naked eye's, allowing an unveiling of the world.

A phonographic counterpart to Antonioni's film would be portrayed in cinema fifteen years later, with Brian de Palma's *Blow Out* (1981). John Travolta plays Jack Terry, a sound designer for low-budget movies who seeks new sounds for his latest production. After field recording in a park at night, Jack realizes he might have unknowingly recorded an attempt to murder a presidential candidate. The death is widely reported as a car accident, but the media's biased discourse is unable to convince the Travolta's character. As in Jonathan Sterne's essay on the stethoscope, sound mediated by technology is preferred over the spoken word, for it presents itself as less influenced by human subjectivities and, consequently, more trustworthy. The field recordist listens to the recordings multiple times, replaying the scene, thus allowing himself to grasp what couldn't be heard by the naked year: the sound of a gunshot that precedes the explosion (*blowout*) of the vehicle.

As in Antonioni's film, technological mediation is portrayed as being able to unveil a reality hidden by the fallibility of human perception. The sound designer is equipped with highly sensitive microphones, allowing him to hear at a longer distance, and a tape recorder which allows him to register and reproduce the event, disclosing sounds that would have otherwise passed unnoticed.

A different connection between phonography and the real is outlined later on in the movie, when Jack and his partner Sally (Nancy Allen) try to send a copy of his recording to a journalist, as a proof of the murder. In order to avoid that the recording gets stolen, Jack wires Sally by attaching a microphone and a transmitter on her coat, monitoring her from a distance while she attempts to deliver the magnetic tape. Allen's character ends up being deceived and murdered by the same man who planned the killing of the presidential nominee, while Travolta helplessly listens to transmission through his headphones. The phonograph is unable to save Sally's life, but her last whispers, captured by the microphone, are permanently stored into another of the sound designer's magnetic tapes.

Back to the film studio, Jack employs Sally's death scream as dubbing for the voice of a bad actress in his new production. As part of the cinematographic fiction, the sound becomes highly convincing and realistic, pleasing the film producer; for the sound designer who is aware of the sound's origin, however, the sound is not only realistic but also terrifyingly real. Throughout the movie, De Palma successively transports us back and forth between the aspects of realism and reality in the magnetic tape. Although the phonograph fails to save the real from its necessary finitude, it allows the sound

designer to immortalize its appearance, as suggested by Bazin, and make it into an art object. Furthermore, in Blow Out, it is the murdering of the real which allows the emergence of realism in the artistic production.

5. ON *CÍRCULOS CEIFADOS* AND *LA SELVA*

The contrasting ways of representing nature employed by Caesar and López – digital synthesis and field recording, respectively – are directly related to the musical intentions of each composer. *Círculos Ceifados* comes out of Rodolfo's ongoing research in Bioacoustics, which would also result in works such as Ranap-Gaô (2001) and Bioacústica (2005) (SVIDZINSKI, BONARDI, 2016: 74). The composer takes animal sounds as his original reference, and then reconstructs them through FM and Granular Synthesis processes, well described in his 2008 book that shares the composition's title. By working this way, Caesar is able to obtain a higher degree of control over his materials, allowing him to manipulate them according to his compositional project. However, the composer's writings also demonstrate his concern with the achieving of a certain 'naturalness' in the synthesized sounds, which might also be interpreted as a quest for fidelity in representation: "the only 'disadvantage' in this technique (which might be an 'advantage' in another compositional context) is that the result is not very 'natural': the sounds (and their behaviours) seem too perfect, clean and isolated from an acoustic ambient"[2] (CAESAR: 2008: 48).

Part of the compositional project behind Círculos Ceifados concentrates on the establishing of an instability between two pairs of categories of sounds (and listening): the 'natural/artificial' and the 'sonorous/musical'. With the first pair, Caesar initially seems to refer to the sound material's origin: either by synthesis (therefore *artificial*) or by sound recording[3] (therefore *natural*). However, by admitting his efforts to maintain a 'naturalness' in synthesized sounds, Caesar implicitly considers an idea of naturalness related to a perceived realism in representation, now only partly related to its production means. The text therefore alternates between the comprehension of the 'natural' as being located in the sound's origin (in its means of production) and the natural as located in the sonic result (through a listening

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[2] "[a] única 'desvantagem' dessa técnica (que pode ser 'vantajosa' em outro contexto de composição) é o resultado pouco 'natural': os sons (e seus comportamentos) parecem muito perfeitos, limpos e isolados de um ambiente acústico".

[3] Caesar's preferred expression is "*morfo-microfonado*" ('morpho-miked'), which emphasizes the understanding of the microphone as an instrument and of the act of miking as marked by creative, authorial decisions. (CAESAR, 2008: 136)

judgment). The paragraph quoted below illustrates the construction and deconstruction of an ideal of realism (fidelity of imitation as perceived through listening) as a characteristic mark of phonographic objectivity:

The different origins of the sound material ('natural' – by recording, – or 'artificial – by synthesis or processing) get mixed in various combinations not always intended. Recorded sounds (*morfo-microfonados*) find similarities in synthetic sounds; some synthetic sounds try to look 'natural' while others not so much; and some recorded sounds 'seem synthetic'. All this network of comparisons goes to show that, in electroacoustic composition, sometimes it doesn't matter if what presents itself as material has its origin through synthesis or through recording.[4] (CAESAR, 2008: 62)

The second pair of categories, 'sonorous/musical', suggests a distinction between "the sounds perceived for their referential characteristics (indexical)" and "a listening of sounds as participants and agents in a more recognizably 'musical' text"[5] (CAESAR, 2008: 61). The passage from one of the extremes to the other in this axis constitutes the teleology of the first section of the piece, which the composer calls *Hermetologia* ("hermetology"), through a progressive 'musicalization' of 'natural' sounds (CAESAR, 2008: 60). From a compositional point of view, this opposition echoes Simon Emmerson's distinction between *mimetic discourse* (which privileges the images evoked by the sound's extramusical references on the listener's mind) and *aural discourse* (which avoids directly evoked images, privileging the internal relationships between sounds) (EMMERSON, 2003). From the listener's perspective, it is reminiscent of Michel Chion's distinction between causal listening, on the one side, and semantic and reduced listening, on the other (CHION, 2008).

Therefore (although being careful to always write these terms between quotation marks, as to reveal his consciousness of possible ambiguities), Caesar's writing sometimes seems to announce an identification between the 'musical' and the 'artificial'. The artificialization of biological sounds is

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4 "As diferentes origens do material sonoro ('natural' – por gravação –, ou 'artificial' – por síntese ou processamento) se confundem em diversas combinações nem sempre voluntárias. Sons gravados (morfo-microfonados) encontram semelhança em sons sintéticos; alguns sons sintéticos tentam parecer 'naturais' enquanto outros nem tanto; e alguns sons gravados 'parecem sintéticos'. Toda essa rede de comparações serve para fazer surgir a noção de que, em composição eletroacústica, às vezes tanto faz se o que se apresenta como material tem sua origem em síntese ou por gravação."

5 "os sons percebidos por suas características referenciais (indiciais)"; "uma escuta dos sons como participantes e agentes de um texto mais reconhecidamente 'musical'".

proposed as a method to inflict a transformation from an indexical listening to a reduced one, more focused on the inner ('musical') characteristics of sound. This identification is further reinforced in João Sridzinski and Alain Bonardi's analysis of the *Hermetologia* presented in the Musica Theorica journal:

> This 'landscape' is progressively transformed and conducted into a 'musical' listening. That is, the animals introduced in the first moment now have an 'anti-natural' or 'artificial' *allure*. This happens due to musical operations: crickets sing in minimalist rythms, and frogs dialog with a panning effect.[6] (SRIDZINSKI; BONARDI, 2016: 77)

And also appears in the opposition between the 'hermetic / real' and the 'musical', suggested by Caesar in the following paragraph:

The musical realization of the project initially implied portraying *hermetic* situations in a directly *referential*, photographic mode, and then slowly shift to conditions more shaped by compositional intention. It starts from recognizable 'real' situations, narratives of fields in whose plantations potential circles await to emerge. And, when they appear, they develop until they get to the composed and abstract condition of complete circles, now musical.[7] (CAESAR, 2008: 105)

Distinctly from the gradual artificialization of bioacoustic sounds proposed in Caesar's composition, Francisco López's piece limits its materials to sounds recorded in the tropical forest of Costa Rica, without employing any synthetic sounds. Moreover, the composer affirms not having altered the recorded materials, not submitting them to any further mixing or additions (LÓPEZ, 1998: 1).

Despite exclusively employing sounds captured through phonographic

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[6] "Ce <<paysage>> est progressivement transformé et conduit à une écoute <<musicale>>. C'est-à-dire, les animaux introduits dans un premier temps ont désormais une allure sonore <<anti-naturelle>>, voir <<artificielle>>. Cela se fait grâce à des opérations musicales: les grillons chantent em rhytmes minimalistes et les grenouilles dialoguent avec un effect de *panning*."

[7] "A realização musical do projeto implicou inicialmente em retratar situações *herméticas* de modo diretamente *referencial*, 'fotográfico', para então ir passando lentamente a condições mais marcadas pela intenção composicional. Parte de situações 'reais' reconhecíveis, narrativas de campo em cujas plantações círculos potenciais esperam para surgir. E, quando surgem, desenvolvem-se até chegarem à condição composta e abstrata dos círculos prontos, agora 'musicais'."

technologies, López argues against the idea of technological 'objectivity' supported, for example, by André Bazin. For López, the microphone – one of the main instruments of the phonographic process – isn't a neutral technology: each microphone 'listens' differently, often influencing the sonic result just as much as post-production would. Any recording of a sound would be, consequently, nothing but one possible version of this sound. Besides, the composer considers that, even despite of phonography, there could be nothing like an 'objective' apprehension of reality, suggesting that the subjectivity of each particular listening and the temporality of our presence in space already constitute some kind of editing. Therefore, contrary to what he considers to be the predominating tendency in Bioacoustics, López claims for "the right to be 'unrealistic'" (LÓPEZ, 1998: 2).

Like Caesar, López also aims for a listening that could transcend a uniquely indexical perception of natural sounds, that is, a listening that isn't restricted to an identification of the context and agents that produced the sounds. However, in opposition to Caesar, López doesn't propose the manipulation or artificialization of the presented sounds as a means for that end:

> the essence of the creation of this sound work that I'm calling a piece of music is rooted on a 'sound matter' conception, as opposed to any documentative approach. (...) What I'm defending here is the transcendental dimension of the sound matter *by itself*. In my conception, the essence of sound recording is not that of documenting or representing a much richer and more significant world, but a way to focus on and access the inner world of sounds. (...) I'm thus straightforwardly attaching to the original 'sound object' concept of P. Schaeffer and his idea of the 'reduced listening'. (...) We have to shift the focus of our attention and understanding from representation to being. (LÓPEZ, 1998: 2)

Both López and Caesar adhere to a particular idea of 'music' as something distinct from a more general conception of 'sound'. The main difference, however, is that in *Círculos Ceifados* this musical construction occurs through compositional strategies, sonic manipulations that induce this passage from the 'merely sonorous' to the 'specifically musical':

> This passage is achieved through a kind of 'domestication' of the nocturnal beings that populate the acoustic scenario of the field, progressively giving each one of them *musical* life. The cricket, the frog, the bat, the mosquito, whoever was caught in a *pre-musical*

situation had to be studied in its habitual behaviour so that, gradually, abstracting their natural references, the particular of music emerged. By *pre-musical* I mean a kind of sonic expression in which we detect shades that, adequately developed, leave the 'hermetic' category and enter the musical.[8] (CAESAR, 2008: 105)

While, in *La Selva*, the accomplishment of this passage is an action exclusively attributed to listening:

> I consider *La Selva* to be a piece of music. (...) I think it's a sad simplification to restrict ourselves to this traditional concept to 'find' music in nature. (...) On the contrary, I believe in an expansion and transformation of our concept of music through nature (...) This doesn't mean an absolute assignment of sounds to music (either in any restricted traditionally academic sense or in the Cagean universal version). Instead, it refers to my belief that music is an aesthetic (in its widest sense) perception / understanding / conception of sound. It's our decision – subjective, intentional, non-universal, not necessarily permanent – what converts nature sounds into music. We don't need to transform or complement the sounds. (...) It will arise where our listening move away from any pragmatic representational 'use'. (LÓPEZ, 1998: 3)

Therefore, the types of representation chosen by Rodolfo Caesar and Francisco López contribute to the accomplishment of musical discourses that, through contrasting procedures, aim at a similar kind of listening: one that approaches the Schaefferian idea of the *écoute redouite* in its contemplation of the internal characteristics of sounds, but that doesn't require an abolishing of their referential dimensions. In *Círculos Ceifados*, the synthesizing of animal-like sounds allows the composer to create complex rhythmic and spatial relations among the materials, playing with the duality between 'natural' and 'artificial' sounds, and transporting them from a 'hermetic' or 'pre-musical' field to a highly composed one and, in Caesar's perspective, a 'musicalized' one. In *La Selva*, the recording of natural sounds through phonographic procedures and its subsequent

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8 "Essa passagem é efetuada através de uma espécie de 'domesticação' dos seres noturnos que povoam o cenário acústico de um campo, dando pouco a pouco vida musical a cada um deles. O grilo, o sapo, o morcego, o mosquito, quem quer que fosse apanhado numa situação *pré-musical* teve que ser estudado em seu comportamento habitual para que, aos poucos, abstraindo suas referências naturais, surgisse o insólito da música. Pelo termo pré-musical penso em um tipo de expressão sonora na qual se detectam esboços que, devidamente desenvolvidos, saem da categoria 'hermética' para entrarem na musical."

acousmatic reproduction allows the composer, and the listener, to listen to these sounds through a different perspective, musicalizing them through a resignification of listening.

6. CONCLUSIONS

With this article, we tried to highlight the effects caused by the particular relation established between phonographic representation and the real. This relationship, vastly discussed in photography and cinema studies, still occupies a rather reduced space in music, probably due to the non-representational tradition that still strongly prevails, but has gradually reappeared traversing many of the discourses in sound studies.

Although Caesar and López's works bring explicit referentiality to nature sounds, an analysis of their writings revealed little concern with proposing an unveiling of reality through sound recordings. In *Círculos Ceifados*'s narrative, realistic representations of nature sounds, particularly in the first few minutes of the piece, appear as a way of shaping an opposition between the 'musical' and the 'pre-musical' realms. Through the manipulation of referential sound materials, the composer creates a delicate balance between what Barry Truax has called music's inner and outer complexities (TRUAX, 2001). While being concerned with the compositional development of aspects such as texture, rhythm and sound mass (the *inner complexity*), Caesar's piece doesn't require the listener a suspension of referential focus, benefiting as well from his understanding of a narrative that involves sonic images such as frogs, flies and flying saucers (its *outer complexity*).

In the case of *La Selva*, both realism and the 'index of reality' suggested by André Bazin are put to doubt in Francisco López's writings, who also advocates for a 'musicalized' listening that approaches Pierre Schaeffer's *écoute redouite*, and shows little interest in the identification of whatever might be represented by the recordings. López demonstrates neither the intention of creating an illusionism of appearances, nor of bringing the listener any information on La Selva (the forest) through the objectivity of phonographic representation.

Although López's criticisms to phonographic objectivity and "the fallacy of the real" (LÓPEZ, 1998: 1) are pertinent, we shouldn't overlook the fact that these ideas persist in the quotidian use of recording and reproduction technologies, as exemplified in various segment of Brian de Palma's *Blow Out*, or in current uses of recordings as support for police or journalistic

investigations. Thus, we agree with Seth Kim-Cohen (2009) that textual layers of external, 'non-cochlear' signification cannot be neglected while thinking about music and sonic art, and therefore we believe that the appeal of the phonographic device both as a provider of realistic representations and as a mechanism for (re-)constructing the real shouldn't be ignored.

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