

SONIC, INFRASONIC AND ULTRASONIC FREQUENCIES: The use of waveforms as weapons, devices for psychological manipulation and as instruments of physiological influence by industrial organizations, the entertainment industry and military organizations

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The ear does not favor any particular "point of view". We are enveloped in sound. It forms a transparent web around us. We say, "Music fills the air. We never say, "Music fills a particular segment of the air. "

We hear sounds from everywhere without ever having to concentrate. Sounds come "from above", "from below", from "in front" of us, from "behind" us, from our "right", from our "left". We cannot mute the sound automatically. We just don't have ear muffs. Where a visual space is an organized continuum of a uniform and connected type, the world of the ear is a world of simultaneous relations.

Marshall McLuhan, Understanding the Media

Once is not customary, we will let the author, director of the School of Digital Arts (SODA) at Manchester Metropolitan University, present his text himself, a thesis presented in 2011 at Liverpool John Moores University for the "obtaining the diploma of professor of philosophy, not without having first tried to define, or, to use a term that comes up very often in the language he has forged to meet the needs of the investigation he is conducting at the limits of perception, "locate" the character, briefly retracing his current career.

Toby Heys participates in a dozen projects, subsidized or not. Consider six.

'AUDIENCE WITH A HERO: INNOVATE UK AUDIENCES OF THE FUTURE', which received a grant of £ 1million, aims to 'use virtual reality to develop and test new production processes inspired by the story, to allow the audience to meet a 'hero' in the virtual space, who will tell their personal story and answer questions in real time. (The project) is based on a National Holocaust Center program that allows the public to speak with a virtual witness to the Holocaust ".

"LIKELY STORIES: AHRC FUNDED STUDENTSHIP" "responds to a lack of research on the use of machine learning to understand the aesthetics of persuasion in audiovisual narratives made in short videos common in social media , in particular with regard to marginalized audiences ".

v UNHEALTHY BIAS: WELLCOME TRUST SEED FUND PROJECT "" uses media theory and its methods to inform machine learning approaches of the effectiveness of public health videos posted online by the NHS [UK Social Security] intended for the South Asian public ".

"MOOD / MUSIC: HELPING YOUNG CARERS COPE WITH LONELINESS" "is an artistic project (...) which seeks to bring a small group of young caregivers to co-create sensitive musical tools through artificial intelligence (emotion-sensing musical tools) who express their experiences as a group and as individuals

”.

“A HISTORY of ACOUSTIC SURVEILLANCE: COLLABORATION WITH THE DIGITAL STORYTELLING LAB” aims to “develop an interactive experience on acoustic surveillance and espionage in the context of AI-enabled listening devices that are ubiquitous in phones and digital homes”.

“AUDINT-UNSOUND-UNDEAD” is “a research unit that studies how ultrasonic, sonic and infrasonic frequencies are used to delimit territory in the soundscape and how their warlike and civilian deployments modulate psychological, physiological and architectural states”.

The second member of AUDINT (AUDIO INTELLIGENCE) is Steve Goodman, lecturer in musical culture at the School of Sciences, Media and Cultural Studies at the University of East London, member of the CCRU (Cybernetic Culture Research Unit) and founder of the Hyperdub label.

Not without humor, the only two current members of AUDINT affirm that this research unit was created in 1945 by former members of the "Ghost Army", a unit of the United States army responsible for carrying out war operations. psychological sound against German troops at the end of World War II (a).

AUDINT releases "encrypted" records, has its own record company, does concerts and videos, exhibits and art installations, gives lectures and maintains a website, creates computer software, etc., all forms of production techno-cultural which “bring together a mixture of whispers and non-sound in an audible journey which connects the underground groove of the Large Hadron Collider to the vaults of the Bank of Hell (c); connect the Dead Record Network (d) to the Phantom Hailer (e); and traces the evolution of Wandering Soul Tapes (f) into the viral dynamics of the online spectral software (spectrumware) named IREX2 (g).”

In other words: AUDINT studies the ways in which “ultrasonic, sonic and infrasound frequencies are used to delimit territory in the soundscape and the ways in which their civil and warlike (martial) deployments modulate psychological, physiological and architectural states” (h) . This exploration gave rise to the publication of an anthology entitled "Unsound: Undead (Urbanomic, 2019) (i), of which here is an excerpt from the introduction:" Since 2007, popular culture has been marked by the phenomenon of revivification. by the holographic technology of dead rap and rock stars. From Elvis to Tupac, these examples are emblematic of an emerging necromantic culture that problematizes the taken for granted idea that artists should not stop breathing and thus disrupts the relationship between sound / music and life. This technology-driven renaissance raises a series of intriguing questions, informed by theories of post- and in-humanism, regarding artificiality, mortality, and virtuality (what we call the living dead). From high-frequency crowd control systems and directional ultrasonic audio technology to haptic feedback devices using vibration in the context of Virtual Reality, our understanding of sound is constantly being restructured. These extensions of hearing to the imperceptible and the not-yet-audible (what we call Non-sound) and their relationship with the Undead, delimit the field of contributions (to this work). Ultimately, the book examines what is the sonic that has provided cultures throughout history with channels to the afterlife”.

That, assumption that we ourselves have taken up in the second part of <https://elementsdeducationraciale.wordpress.com/2019/04/25/marshall-mcluhan/>, sound, infrasound and ultrasound offer the possibility, particularly when produced by electricity, to access areas of transmission between the realms of the living and that of the dead or not, the fact is that Heys is not the only one to believe it, nor to make experiments in this direction, since what he calls the “military-

industrial complex” and the “military-recreational complex” are carrying out research in this field which resulted in the development and construction of acoustic, sound wave, infrasonic or ultrasonic weapons, whose power to bring the living to the dead is so important that, for some, they are capable of killing and, for others, of manipulate crowds and individuals.

The scarcity of works published in French on acoustic weapons (j) fully justify, despite everything (in particular, the samsâric and even demonic nature of the conceptual weapon, called "corps-emitter", which the author proposes to construct. and to use in response to sonic, ultrasonic and infrasound attacks), the publication of its investigation. It is an understatement to say that, like all "transcendent hysterics", an expression coined by Evola to designate those who "chose" to be born in a time as chaotic as ours to revel in and feast on an external chaos. which is only the reflection of their massive interior chaos, - it is therefore little to say that the author is on the same wavelength as his time and that he participates in the blindness of human material which is 'mass there,as evidenced by his involvement in the development and application of sub-human technologies such as Virtual Reality and Artificial Intelligence, yet most certainly due to the predominance of "vertical heredity" over "horizontal heredity" , lucidity prevails over blindness "on the bull's front" and makes it capable of illuminating particularly dark areas of shadow which remain impenetrable, not only to the most lucid of those who continue to strive to see, understand and explain the world through the single prism (s) of facts, causes and actors that belong to the two superficial dimensions of time and space:never has occult war raged as much as since the introduction and use of "new technologies" on a planetary scale - but also to those who, while being able to reduce historical events to their hidden causes , with regard to those which are of a political, cultural, economic or religious nature, in the field of information and communication technology, the knowledge necessary to grasp and circumscribe those which increasingly relate to this technology. more invasive and, consequently, to have an overview of the increasingly complex and virtual processes which become entangled to contribute to giving a character properly monstrous and even, let us say it again, with Down's syndrome, to the conditions of the current world and the corresponding state of existence.while being able to reduce historical events to their hidden causes, as regards those which are political, cultural, economic or religious, in terms of information and communication technology, the necessary knowledge is lacking to grasp and circumscribe those which come under this increasingly invasive technology and, consequently, to have an overview of the increasingly complex and virtual processes which become entangled to contribute to giving a truly monstrous and even , let us say it again, with Down's syndrome, under the conditions of the current world and the corresponding state of existence.while being able to reduce historical events to their hidden causes, as regards those which are political, cultural, economic or religious, in terms of information and communication technology, the necessary knowledge is lacking to grasp and circumscribe those which come under this increasingly invasive technology and, consequently, to have an overview of the increasingly complex and virtual processes which become entangled to contribute to giving a truly monstrous and even , let us say it again, with Down's syndrome, under the conditions of the current world and the corresponding state of existence.in the field of information and communication technology, the knowledge necessary to grasp and circumscribe those relating to this increasingly invasive technology and, consequently, to have an overview of the increasingly complex processes and virtual ones which become entangled to contribute to giving a character properly monstrous and even, let us say it again, with Down's syndrome, to the conditions of the current world and of the corresponding state of existence.in the field of information and communication technology, the knowledge necessary to grasp and circumscribe those relating to this increasingly invasive technology and, consequently, to have an overview of the increasingly complex processes and virtual ones which become entangled to contribute to giving a character properly monstrous and even, let us

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The author is an "insider".

The introduction, the examination of the documentation and the methodological part, in which the author exposes, or rather, to use a term which is dear to him, "composes" his philosophy, which constitutes neither a system, nor even a doctrine proper, are published to a certain extent to allow the reader who so wishes to become familiar with the rather unique terminology (here, all terms which have a scientific and technical meaning - whether it concerns music, physiology, surgery, geophysics, architecture, electro-acoustics or telecommunications - must be understood first in this sense) and the no less personal style of the author. Otherwise, it is possible to go directly to the first chapter.

This study is a transdisciplinary and trans-historical investigation into the civilian and military contexts in which loudspeaker systems have been used by military-industrial and military-entertainment complexes.) to put pressure on mass social groups and individual bodies. Inspired by authors such as historian and sociologist Michel Foucault, economist Jacques Attali, philosopher Michel Serres, political geographer and town planner Edward Soja, musician and sound theorist Steve Goodman, and cultural theorist and town planner Paul Virilio, this study orchestrates its arguments using a wide range of texts. By presenting viral theory in new forms that resonate with architectural, neurological and political fields, this research provides a new and original analysis of the composition of wave geography. Ultimately, this study looks at how the past and current use of sound frequencies, infrasound and ultrasound as weapons and devices for psychological manipulation and instruments of physiological influence by military, entertainment, civil and industrial organizations anticipates future techniques of socio-spatial organization. In the first chapter, it is argued that, since the appearance of wired radio speaker systems in American factories in 1922, the development of sound strategies based mainly on the orchestration of architectural spatiality, the cycles of repetition and enveloping dynamics of surround sound can be attributed to the practice of sonic torture at Guantanamo Bay during the first decade of the twenty-first century. This argument is developed in the second chapter through the exploration of the use that was made of surround sound techniques by the FBI during the siege of Waco. In the third chapter, it is further asserted that the acoustic techniques used in the torture cells of Guantanamo represent the last modality and the logical conclusion of the strategies which have been developed in the civilian and military contexts during the last eighty years. . In the fourth chapter, the instrumentality of the loudspeaker system of the ultra-directional HSS sound generators - put into service after Guantanamo - comes to symbolize an epistemic change in the application of wave pressure; because the dynamics of directional ultrasound technology signals the orchestration of a new set of frequency relationships between the transmitter and the receiver, between the speaker system and the architectural context as well as between the civil environment and the environment of war.

The final proposition of the study maintains that a wave cartography - a representation by diagrams of

the territorialization of the sound environment by the military-recreational complex - must be composed and arranged in such a way as to make coherent the forms of recording, amplification and resistance. Given the new set of non-sound policies announced by the HSS, this philosophy of frequency mapping will need to re-evaluate the taxonomy and index nature of spatial relationships. This discipline will be a wave psycho-geography, a frequency modality which heuristically maps the spatial concerns relating to the neuronal environment as well as to the surroundings of equipment and buildings. As a field of research, it will have the ambitious task of exploring spatial effects, psychological, physiological, social, economic and sexual that waveforms have on our subjectivity. Its methodology - as suggested by the structuring of this study - will be multidisciplinary and multi-track. It will create new forms of knowledge about LRADs, iPods, Mosquitos, Intonarumori, megaphones and Sequential Arc Discharge Acoustic Generators (see glossary) - a meta-network of speaker systems through which rhythms and cadences of power are transmitted, connected and modulated. Intonarumori, Megaphones and Sequential Arc Discharge Acoustic Generators (see glossary) - meta-network of speaker systems through which the rhythms and cadences of power are transmitted, connected and modulated. Intonarumori, Megaphones and Sequential Arc Discharge Acoustic Generators (see glossary) - meta-network of speaker systems through which the rhythms and cadences of power are transmitted, connected and modulated.

This study begins its investigation into the orchestration and territorialization of architectural soundscapes by the military-industrial complex at the time when, in 1922, cable radio was introduced in US factories to improve worker productivity rates. . It then follows in the footsteps of a line of speaker system deployments throughout the twentieth century, during which wave strategies were implemented to decrease body counts under spatially reducing circumstances - from the factory to the barracks through the cell. The break in this frequency path of sound effects occurred after detainees at Guantanamo Bay were subjected to sound torture. After Guantanamo, there is no architectural space smaller than a cell in which a loudspeaker system can be used, and it is not possible to channel music for purposes more violent than those of provoking the psychological and physical collapse of a targeted body, as illustrated in the diagram below.

picture

1. The radical change initiated by the military-recreation complex in the 20th century is that sound speakers have been replaced by ultrasonic speakers and that, instead of being arranged around the body, they are projected into the body, or, to be more precise, into the skull.

Sound, infrasound and ultrasound

It is commonly believed that everything in the known world has a resonant frequency. The frequencies that form our perception of sound, namely those between 20 Hz and 20,000 Hz, constitute only a small part of the complete spectrum in which we exist. There are three frequency ranges. Acoustic vibrations whose frequency is too low (20,000 hertz) to be perceived by the human ear are called infrasound. Like waveforms that are found near the ground, they are distinguished by their ability to travel long

distances, through and around objects, with minimal energy dissipation. Natural phenomena such as earthquakes, tornadoes, waterfalls and volcanic eruptions generate infrasound, which animals like alligators, elephants and whales are believed to perceive and use to communicate hundreds of miles away.

Acoustic vibration whose frequency exceeds 20,000 hertz is called ultrasound. As it is highly directional and very easy to control, the ultrasound array is used in medical imaging techniques such as ultrasound, to visualize internal organs and obtain information about the somatic structure. It was used by the 'Acoustic Squawk Box' (Rodwell, 1973) (a unit of the British Army responsible for dispersing the crowd and which was first tested in 1973 in Northern Ireland) and as a communication tool. / non-lethal weapon by the US military in the form of HyperSonic Sound® technology (also called HSS) (see glossary). The HSS system was developed by the company LRAD, which states on its website that it "uses ultrasonic energy to focus the sound of your choice on the intended listener and nowhere else." Ultrasonic waveforms are also exploited by the SOund NAVigation and Ranging. This system, known as SONAR, was developed in 1918 and is now operated by navies around the world. It is a technology that uses the propagation of sound (mainly ultrasonic frequencies) for navigation and underwater communications or for the detection of ships. Perceived by the whole organism, these ranges of infrasound and ultrasound - the acoustic vibrations that we cannot perceive -, which are called non-sound or sound-proof, are imperceptible to the ear, which means that we are literally affected by these types of frequencies. The notion of non-sound (non-sound) differs from that of unsound by the fact that it echoes the geographical notion of non-place. It is therefore a matter of sound spatiality which is made up of transitory behaviors and a negation of emotional associations. The notion of soundlessness can be understood as a vibratory cosmology of affect and embodied cognition proactive (1) at the periphery of perception (Steve Goodman discusses this in more detail in his *Sonic Warfare: Sound, Affect And The Ecology Of Fear* [2009]). Excessive or targeted amplification of either of these vibrations can cause unbearable nausea, looseness of bodily organs and, ultimately, death. Research into the effects that these three frequency bands (infrasound, sound and ultrasound) have on humans were not institutionalized, in every sense of the word, until the beginning of the 20th century. Officially, infrasound was only discovered in 1883 following the eruption of Krakatoa, which shows how new this field of study is.

While exploring the field of sounds perceptible to the human ear, this study also investigates ultrasonic and infrasonic phenomena, in order to detect the ways in which vibrations (a term which refers to all frequencies in the infrasound, sonic and ultrasonic) have been exploited as tools and weapons for delimiting physiological, spatial and psychological territories. This survey challenges the general cultural beliefs of Westerners about imperceptible phenomena and states of being and, by extension, emphasizes the importance of understanding marginal, liminal and peripheral phenomena. By adopting such a position, one has to ask phenomenological questions about the effects of frequencies on the somatic. Deepening this mode of inquiry will allow us to examine military, industrial, and civilian organizations that employ frequency strategies (see glossary) - spatial techniques that reshape our understanding of the sound environment as being audible. This study proposes to publicly amplify and make manifest technologies which, like HSS, operate at the limit of what can be perceived by the senses, so that our wave bodies can formulate their purpose, direction and socio-economic priorities. space. This study proposes to publicly amplify and make manifest technologies which, like HSS, operate at the limit of what can be perceived by the senses, so that our wave bodies can formulate their purpose, direction and socio-economic priorities. space. This study proposes to publicly amplify and make manifest technologies which, like HSS, operate at the limit of what can be perceived by the senses, so that our

wave bodies can formulate their purpose, direction and socio-economic priorities. space.

## The perception and phenomenology of the wave body

The phenomenological ground of the present study is presented here briefly to situate the arguments, questions and theories relating to the sensory perception of vibrations. This summary aims to determine how, when and where we fit in frequency environments and to understand the ways in which the strategies orchestrated by military-industrial and military-recreational complexes have been (and will be) used to manipulate conscious hearing, somatic knowledge and spatial orientation. From a phenomenological point of view, men understand themselves, understand their orientation and their interactions in the world, as well as the world itself, through the intermediary of the perceptions transmitted to them by a number of organs and physiological sensory systems. Of all the senses that perceive, transmit and process the information provided by the matrix of phenomena and stimuli in which man is daily immersed, those which, historically, have been the subject of the greatest number of studies, books and experiments are the sight, sound, touch, taste and smell. This traditional index of the sensory network can be attributed to Aristotle, whose three books "On the Soul" constitute a meditation on the nature of living beings and on the theory of the five senses (Rorty and Nussbaum, 1992). While it is safe to say that this interactive set of perceptual systems provides us with the ordinary information we need to feel like we are in control, it is the information provided to us by sight that is privileged and that dominates the construction of our understanding of the world. "... Sight is in a way the preferred meaning in philosophical discourse since the Enlightenment," writes Sterne (2002: 3).

Historically unrecognized, sometimes marginalized and often poorly understood, the other perceptual systems, which, such as equilibrioception (sense of balance), proprioception and kinesthesia (sense of movement), nociception (sense of pain), Magnetoception (sense of direction) and thermoception (sense of temperature), have been listed and studied more recently, have not been represented in the same way as sight. Neither have they received the attention they deserve, considering their importance in our knowledge of our states and actions. Because, culturally, the West tends to accept the belief that the known world can be explained by the sense of sight, it has to a large extent annexed a cartography, history and sociology of perception, of the experience and interpretation of sounds, as the German sociologist Georg Simmel noted at the start of the 20th century (Frisby and Featherstone, 1997: 109-120). The current discourses which define the spatiality of vibrations and make up acoustic psycho-geographies (see glossary) continue to be discreetly excluded from our

collective lexicon and our individual practice. This study engages in discourses that attempt to help restore a sensory balance within the philosophy of Western culture; to question, analyze and challenge the disproportionate importance given to ocular logic, with a view to erecting hearing and, to a lesser extent, touch as critical phenomenological indicators of agency, of urban spatiality, cultural chronology, collective psychological orientation and social relations.

Consequently, the introduction of this study is based on the affirmation that it is necessary to locate and amplify a set of sound, ultrasound and infrasound knowledge lost before giving substance, in the following chapters, to a wave discourse. Investigating this body of lost vibrational knowledge, which is at the same time empowered, alienated and networked by frequencies, requires that we sketch out its

characteristics sonically, in order to know what we are listening to and to understand the nature of the body. which will intervene in our later explorations of the soundscape. The Foucauldian notion of "oscillating subject" gives us, relative to vibrations, an idea of this body of lost frequency knowledge. Believing that the individual does not act simply as a passive receiver but also as an artisan - or sender - active in a network of power relations, Foucault asserts: "Power works in a network and on this network, no. only individuals circulate, but they are always able to endure and also to exercise power; they are never the inert or consenting target of power, they are always its relay (Foucault, 1980: 98)".

As it exists in a network of power relations, this vacillating subjectivity transmits, transforms and receives information according to the political micro-sound, noise and collective harmonies emitted by the surrounding network of embodied loudspeakers within which she is. It is within this distributed system of social influence that we are able to follow the evolution of spatial negotiations, methods of psychological alienation, and strategies of physiological manipulation that simultaneously locate and displace our bodies of lost vibrational knowledge. Now that we have discussed the capacities of our mute subjectivity and its possible localization, we can say that it is the body that will be studied, spatialized, historicized and finally enriched during the present study. We can also give it a name: the body-emitter (antenna body). The body-transmitter speaks to us of the being-in-the-world of vibrations. It is imbued with an agency that is lacking in contemporary media bodies, in subjects like those theorized by McKenzie Wark, who, living in virtual geographies, "no longer have roots" (because) "They have antennas (aerials)" (1994: xiv), thus constituting themselves into somatic models which can only receive signals, communications and information. Conversely, the body as an emitter is a subjectivity useful for this study, because it constitutes the mode of manifestation of two states of being at the same time, those of reception and of emission and, in doing so, reveals the power inherent in being both, of being neither and of being more than the two capacities which partly construct one's identity. Rather than being positioned statically, he asserts that we live under the influence of dualistic Manichean conceptions (see glossary) of good and evil, of sound and silence, of place and space; and, therefore, that we are constantly between stations and keep changing channels. The modulating nature, transforming and propagating the body-transmitter provides us with new ways of perceiving the social in wave space. And it is its past movements, spatialities, and mutations that form the body of lost knowledge that we must explore to determine whether it has ever been perceived or observed. A broader interrogation on Western thought of the last two centuries - in the form of a frequency identification parade - will help to carry out this investigation and will at the same time create a frequency episteme (see glossary). its past spatialities and mutations that form the body of lost knowledge that we must explore to determine whether it has ever been perceived or observed. A broader interrogation on Western thought of the last two centuries - in the form of a frequency identification parade - will help to carry out this investigation and will at the same time create a frequency episteme (see glossary). its past spatialities and mutations that form the body of lost knowledge that we must explore to determine whether it has ever been perceived or observed. A broader interrogation on Western thought of the last two centuries - in the form of a frequency identification parade - will help to carry out this investigation and will at the same time create a frequency episteme (see glossary).

The group of five thinkers who will provide us with clues as to the identity of the body of lost knowledge was chosen for a number of reasons. Schopenhauer, Nietzsche and Adorno were all chosen for their respect for musical sound and those who have the ability to channel it. All of these thinkers write about the mysteriously powerful effect music has on its listeners and thus confer a special status, even a status



of genius, on those who are able to compose and control these wave elements. In the scenarios presented by these three thinkers, the supposedly banal pattern of everyday life is transcended by high art, metaphysical power and the cathartic potential of organized sound.

This study examines how these philosophies identify waveforms with power, but instead of exploring the idea that waveforms are a cause of revelation and celebration, it analyzes the manner in which the full range of frequencies is used to organize, influence and torture human subjects in the circumstances of daily life as well as in those considered exceptional. Jacques Attali is selected because he breaks with the line of venerative thought and on the contrary characterizes music as being the mechanism which defines the capitalist organization of everyday life. Although Attali's sono-economic theory is not in the path followed by this study, its break with a centuries-old thought which attributed to music a special place inside and outside the social body (as well as, by inference, the capacity to bring society to a more utopian realization of itself) is important for the investigation carried out by this text on the location of the emitting body.

The subject of the nineteenth-century German philosopher Arthur Schopenhauer, who "music was the only art that not only copied ideas, but embodied the will itself" (Albright, 2004: 253), is therefore the first wave body to appear in our historic modern range of frequency thought bodies. Schopenhauer considered the will to be the ultimate madness of a humanity which the spasmodic expression of its desires only leads to confusion. He claimed that living a life of observation and reflection with detachment was the only way to understand and become autonomous from the seductive powers of emotional, physical and sexual desires; passions, which he said could never materialize anyway. The fact that Schopenhauer's tuned body is therefore much less engaged with external spatial concerns than with metaphysical concerns - those which bypass the will of the conscious mind, making the somatic a channel of pure expression - means that 'it cannot be the receiving and transmitting body of knowledge that we seek. Schopenhauer's body is presented as an instrument which channels the essences of humanity and which, as such, emits a signal too pure to be the displaced body in search of which we are and which is equally identified, territorialized and shaped by dissonance, feedback and distortion as by harmony, melody and tone.

The next possible witness / subject is the body of the unspeakable by Friedrich Nietzsche, a fervent admirer of composer and conductor Richard Wagner. This is a corporeality initially saturated with musical adoration (Nietzsche, 1967). Wagner "infinitely increased the expressive capacity of music," Nietzsche wrote passionately (1966: 919). Although this body of thought can help us express the ontological capacity of the unspeakable, it remains silent to the questions we ask it about our spatial research; such writings are unable to locate our body in a place, space or environment which has witnessed military, civil or industrial sound strategies. However, Nietzsche's veneration for Wagner ends up transforming into disdain and embarrassment and thus distanced himself from the Wagnerian subject of his undulating desires.

If the two bodies found so far have given us aesthetic indications, they have hardly provided us with socio-political or spatial bases that can allow us to move forward. The three phenomenological bodies theorized by Maurice Merleau-Ponty during his career are more relevant to our research. Its bodies of thought - the "lived body", the "habitual body" and the "flesh" - provide us with relevant insights into the role the senses play in the body's reintegration into critical thinking. The "lived body" expresses ideas about the role that perception plays in interpreting being-in-the-world and refers to how the nature of the body affects perception in a "real" world. where the realities are intimately linked. The "habitual body" is a somatic conceptualization that receives information and acts based on memories of the same

or similar activities, in relation to external stimuli. In this way, the previous modes of experience are sedimented into the behaviors of the "usual body". At the end of his career, Merleau-Ponty developed the ontological concept of "flesh" in order to study in more detail the influence of perception on the understanding of existence. Merleau-Ponty developed the ontological concept of "flesh" in order to study in more detail the influence of perception on the understanding of existence. Merleau-Ponty developed the ontological concept of "flesh" in order to study in more detail the influence of perception on the understanding of existence.

The flesh is therefore a materialism of the body which assimilates the somatic constituents to the physical composition of the outside world.

These three conceptualizations are the foundation of our wave body, open it to examination and clearly show that all that is somatic exists in a continuous state of negotiation between subject and object. Understanding how we interact with ourselves and with the world we perceive (in a state of constant transition) is certainly helpful, but, ultimately, it is not in Merleau-Ponty's eye metaphors, nor in his studies or theories on *The Visible and the Invisible* (1968), that we will locate our wave body. While directing us to observations that have been made of the body to which we are listening, the nature of the perception - the observation - of the somatic is precisely the problem here, for, as we know, our investigation is to looking for phenomena that can be heard and felt and not those that are recorded by visual observation.

The musically conditioned body of Theodor Adorno, theorist of the Frankfurt School, symbolizes the wounded and disenchanting witness to the emergence of mass culture in the 20th century. Adorno's distaste for frequencies organized according to standard musical schemes - popular compositions which he said negated the complexity, experimentation, and critical analysis that high art could offer - grew as 'spread consumerism. Like many thinkers influenced by Marxism, Adorno's very cultured witness localizes a utopian eschatology by establishing socio-historical trajectories in the wave environment rather than perceiving its psycho-geographic topologies. Once again, spatiality is at the origin of a temporal discourse which subjects our body to disappointing rotations, failing to strike in time with a musical promise of emancipation from its mechanical functioning.

The critical awareness of Adorno's body - individual embodiment of choreographed needs - spins apprehensively in his box, worried about being placed in a chain of production of acoustic identities. It is nonetheless revealing and information about wave bodies, whose movements were first heard in the socio-economic, psychological and political fields, are beginning to become noticeable. Adorno's musically conditioned body teaches us about how frequencies are mechanized to make societies function in repetitive cycles. He tells us about the strategic fabrication of psychology, of the collective orientation and physiology of the civilian population through music and the creation of desires that can only be fulfilled by a capitalist system that mutes those it cannot turn into potential markets. In a world where culture is accessible to all, music is used as a socio-economic instrument to relieve and appease people who have financial difficulties, by allowing them to consume and to identify with its expression collectively. commodified. Secret and insidious, the real goal of popular music is, according to Adorno, rendered imperceptible, camouflaged as it is by "the manipulation of taste and the official culture's claim to individualism" (1978: 280).

Manipulated and influenced by music, the mass social body of which Adorno speaks provides us with information on the capacity of frequencies - in the form of music - to organize spatiality and our movements within it. We are now able to perceive and monitor the repetitive movements performed by

our missing wave body, without however being able to listen to a more complex analysis because Adorno's interpreter follows only the binary rhythms that define either culture. scholarly, or popular culture. The antagonistic aesthetic of this body is appealing, as it echoes our concerns with wave manipulation, the cultivation of psychological needs, and industrial strategies of pseudo-individualization; but, in the end, the somatic character of the musically conditioned body sounds hollow, because it does not allow us to spatialize its presence. It centers the body in the perceptible, thus denying the dynamic ostensible imprinted on affect by the liminal, the marginal and the unknown. We cannot recognize in it any agency, influence or orientation, we can only listen to it through the logic of the totality of the locked groove from which it can never escape. Caught in repetitive cycles of existence, sometimes tense, sometimes relaxed, Adorno's musical body of thought forms a schematic interpretation of the cause-and-effect relationship, for his subject sometimes lets himself be lulled into Stravinsky's deep sleep, sometimes is awakened by the revolutionary appeal of Schoenberg (see glossary).because it does not allow us to spatialize its presence. It centers the body in the perceptible, thus denying the dynamic ostensible imprinted on affect by the liminal, the marginal and the unknown. We cannot recognize in it any agency, influence or orientation, we can only listen to it through the logic of the totality of the locked groove from which it can never escape. Caught in repetitive cycles of existence, sometimes tense, sometimes relaxed, Adorno's musical body of thought forms a schematic interpretation of the cause-and-effect relationship, for his subject sometimes lets himself be lulled into Stravinsky's deep sleep, sometimes is awakened by the revolutionary appeal of Schoenberg (see glossary).because it does not allow us to spatialize its presence. It centers the body in the perceptible, thus denying the dynamic ostensible imprinted on affect by the liminal, the marginal and the unknown. We cannot recognize in it any agency, influence or orientation, we can only listen to it through the logic of the totality of the locked groove from which it can never escape. Caught in repetitive cycles of existence, sometimes tense, sometimes relaxed, Adorno's musical body of thought forms a schematic interpretation of the cause-and-effect relationship, for his subject sometimes lets himself be lulled into Stravinsky's deep sleep, sometimes is awakened by the revolutionary appeal of Schoenberg (see glossary).the marginal and the unknown. We cannot recognize in it any agency, influence or orientation, we can only listen to it through the logic of the totality of the locked groove from which it can never escape. Caught in repetitive cycles of existence, sometimes tense, sometimes relaxed, Adorno's musical body of thought forms a schematic interpretation of the cause-and-effect relationship, for his subject sometimes lets himself be lulled into Stravinsky's deep sleep, sometimes is awakened by the revolutionary appeal of Schoenberg (see glossary).the marginal and the unknown. We cannot recognize in it any agency, influence or orientation, we can only listen to it through the logic of the totality of the locked groove from which it can never escape. Caught in repetitive cycles of existence, sometimes tense, sometimes relaxed, Adorno's musical body of thought forms a schematic interpretation of the cause-and-effect relationship, for his subject sometimes lets himself be lulled into Stravinsky's deep sleep, sometimes is awakened by the revolutionary appeal of Schoenberg (see glossary).Sometimes relaxed, Adorno's musical body of thought forms a schematic interpretation of the cause-and-effect relationship, for his subject sometimes lets himself be lulled into Stravinsky's deep sleep, sometimes is awakened by Schoenberg's revolutionary appeal (see glossary).Sometimes relaxed, Adorno's musical body of thought forms a schematic interpretation of the cause-and-effect relationship, for his subject sometimes lets himself be lulled into Stravinsky's deep sleep, sometimes is awakened by Schoenberg's revolutionary appeal (see glossary).

The three chronologically orchestrated witnesses of economist Jacques Attali report

the last characters of our poster. The sacrificial body, symbol of the original body of music, "[appears] (...)

as having its origin in ritual murder, of which it is a simulacrum, a minor form of sacrifice and herald of change. We will see that in this it was an attribute of political and religious power, that it signified order, but also announced subversion" (Attali, 1977: 10); the representative body - which, after having "(entered) into the commercial exchange, (...) participated in the growth and creation of capital and the spectacle" (Attali, 1977: 10): and the repetitive body, which saw music being "fetishized as a commodity" (Attali, 1977: 10); its consumption has become so widespread that it has become an object which "(is stored) until it loses its meaning" (Attali, 1977: 10).

While each of these bodies of thought is clothed with characteristics of a different historical period, all three are designed together to suggest that music is the most revealing and socially significant form of cultural expression, " because it is prophetic. It has always contained in its principles the announcement of the times to come " (Attali, 1977: 8). Attali suggests that all cultural modes of music creation, perception, and dissemination are implicitly linked to - and, even more, symbolically heralds of - broader social practices of production, storage and distribution. Each body therefore represents a model of musical coordination which informs the culture from which it comes, a model of future modes of social organization. Attali's three models of musical and social organization ultimately tend to reveal a more recent model, which he glimpsed in 1985; a body of thought without socio-economic theorization, which he had baptized "(body of) composition". Its analytical characteristics resemble those of the frequency subjectivity that we are looking for. Basically, it is a body of thought that considers the sound from the point of view of the logistics of social organization, the restructuring of economic networks, the paradigm shifts it creates in socio-registers. policies and the speculative potential of waveforms. Its analytical characteristics resemble those of the frequency subjectivity that we are looking for. Basically, it is a body of thought that considers the sound from the point of view of the logistics of social organization, the restructuring of economic networks, the paradigm shifts it creates in socio-registers. policies and the speculative potential of waveforms. Its analytical characteristics resemble those of the frequency subjectivity that we are looking for. Basically, it is a body of thought that considers the sound from the point of view of the logistics of social organization, the restructuring of economic networks, the paradigm shifts it creates in socio-registers. policies and the speculative potential of waveforms.

In the end, Attali makes a socio-economic reading of the musical construction of the body and its capacity to be ordered, directed and supervised according to the needs of the labor market. Faint murmurs from our lost body begin to resonate in Attali's statement (1977: 9) that he intended not only to "theorize about music but to theorize through music (...) Today, no theorizing through language or mathematics is no longer sufficient, because it is too heavy with prior signifiers, incapable of accounting for the essential part of time: the qualitative and the vague, the threat and the violence ".

These statements recognize the existence of the missing wave body and our collective need to define its capacities, movements and potentials. If our dislocated subject shares some of the characteristics of Attali's compositional body, he still does not represent what we expect. Urgent questions have still not been asked about the acoustic capacity of the composing body to organize itself in space - in the theater of operations, that is to say on the battlefield, in the place of work or on the street. The imperceptible waveforms are absolutely not taken into account by Attali and make of his fourth model a one-dimensional body of thought devoid of the dimensions that include ultrasound and infrasound. Most significantly, While detailing the socio-economic effects of music, Attali's missing fourth model fails to make any consistent statement about the body itself and the effect waveforms have on it.

Our list of somatic modalities of wave thinking has taught us a lot about the areas where we need to search for our missing wave body of knowledge, in order to perceive, spatialize, and record it socio-

politically. We must now explore new grounds and philosophical parameters in order to be able to give more information on the movements of the body-transmitter and the military, industrial and civilian networks within which it exists. A new series of questions must be addressed in order to locate its agency, its potential and its socio-political register; questions, the first of which is to know who is developing the frequency technologies in order to capture, to index and exploit imperceptible frequencies and how they are used to shape social, temporal and private space; how to define the behaviors, the carnal interface and the extension of the body in a field of vibratory relations; how to name, record and cross the thresholds between sound and silence, between presence and absence. It is only when we have answered these questions that we can say that we have started to map the sensory topologies of the body-transmitter; to map the influence, manipulation and torture that will allow us to better define its movements and transgressions as well as our own sense of space and orientation in relation to it. the carnal interface and the extension of the body in a field of vibratory relations; how to name, record and cross the thresholds between sound and silence, between presence and absence. It is only when we have answered these questions that we can say that we have started to map the sensory topologies of the body-transmitter; to map the influence, manipulation and torture that will allow us to better define its movements and transgressions as well as our own sense of space and orientation in relation to it. the carnal interface and the extension of the body in a field of vibratory relations; how to name, record and cross the thresholds between sound and silence, between presence and absence. It is only when we have answered these questions that we can say that we have started to map the sensory topologies of the body-transmitter; to map the influence, manipulation and torture that will allow us to better define its movements and transgressions as well as our own sense of space and orientation in relation to it. It is only when we have answered these questions that we can say that we have started to map the sensory topologies of the body-transmitter; to map the influence, manipulation and torture that will allow us to better define its movements and transgressions as well as our own sense of space and orientation in relation to it. It is only when we have answered these questions that we can say that we have started to map the sensory topologies of the body-transmitter; to map the influence, manipulation and torture that will allow us to better define its movements and transgressions as well as our own sense of space and orientation in relation to it. It is only when we have answered these questions that we can say that we have started to map the sensory topologies of the body-transmitter; to map the influence, manipulation and torture that will allow us to better define its movements and transgressions as well as our own sense of space and orientation in relation to it.

### Wave language and hearing

We cannot hear others hear. We can watch other people look and form an opinion about how they look, but we cannot do the same with sound. As such, the act of hearing is a mute interaction, for through the sensory register of hearing one person can never perceive another perceive. Hearing is therefore a sense which serves as a refuge for what is hidden, liminal and auricular; it creates a contradictory sensory spatial dynamic which is hidden and unspeakable, but whose limits are porous and malleable. Consequently, it is permissible to bring other types of discourse into the same analytical space occupied by physics, phenomenology and neurology, in an attempt to describe the characteristics of hearing. The territorial boundaries of the perception of wave space cannot therefore be effectively sealed by facts, observations or recordings. The intrinsic and constant negotiations of the unspeakable and the unspeakable carried out by the inhabitants of these environments mean that the borders are constantly recomposed and are never rigid. It is precisely this fluctuating dynamic that allows unofficial, unscientific and unrecognized languages to translate waveforms into exchangeable knowledge; stories that simultaneously tear apart and disrupt the definitions of these translations. Subsequently, it is in this

context - where the oscillatory and transient nature of meaning is highlighted - that conspiracy theories, religious conjectures and science fiction attempt to explain liminal frequency states. These discourses coexist with the official bodies of knowledge, rub against them and irritate them, because they undermine their rhythmic methods of erudition, their forms of rationalization and their epistemological assumptions about the soundscape.

Throughout this study, it is claimed that we have not yet fully developed a socially accepted language that explains the topological features, psychological orientation, and physiological violence of waveforms. The fact of not having words to explain the phenomena, whether they are supported by frequencies, objects or actions, has as a corollary the attribution to these same phenomena of a meaning which is anchored in the distressing discourses on the supernatural, the apparitions and the conspiracies. These offbeat and poorly understood interpretations are often not translatable into the existing wave language that is supposed to evaluate them. Therefore, narrative and interpretative discourses which aim to explain frequency phenomena are marginalized and linked to the nervous dispositions of culture. Not being able to name a thing, an experience or a vibration dislocates us as a rational and central subject of the world in which we live. Our comfortable position as individuals able to understand, judge, and apply ideas to their surroundings on the assumption that they are able to know and name is threatened by our inability to express what we perceive. It is the unspeakable that we violently bury in our subconscious, it is the unspeakable that we try to forget, because what we do not remember having spoken is what is half dead for us. It's here, between the transfer of the signal and the monotony of the flat line, which the wave memories, channels between the expressed and the unspeakable, operate in the undead networks of perception.

Being on the outskirts of the living and the dead is power. Part of the power of frequencies lies in their disorienting ability to displace the language, description and perception of the two states of being. From a spatial point of view, Foucault defines the cemetery as "a space which is (...) in connection with the set of all the sites of the city or of the society or of the village, since each individual, each family is found to have parents in the cemetery" (1967: 48). It is in this place of transition that he recognizes that a change occurs, a transmutation of the understanding, the cartography and the distinction between the living and the dead, because "from the moment one is no longer very sure of having a soul, that the body will resuscitate, perhaps we need to pay much more attention to this mortal remains, which is ultimately the only trace of our existence among the world and among words" (Foucault, 1967: 48). It is this feeling of uncertainty that also pushes us to characterize the soundscape as a refuge from the dark, an ambiguous spatiality that harbors phenomena and interactions that we are unable to rationalize, whether they are nocturnal noises that cannot be explained (and which are interpreted to be produced by the movements of the dead) or the inner voices that we attribute to the mentally ill to help us understand the multi-channel and noisy nature of schizophrenia (see glossary). If we take this account - which orders the sonic into the afterlife - to its abominable conclusion and listen to its musical composition, we find the typical example which testifies to our cultural anxiety and concern about the purging power of frequencies.

Allegations (often made by organizations affiliated with the Christian religion) of messages recorded backwards on vinyl records reveal the full extent of our moral, social and bestial fears about the ability of music to convey information from places of perdition. Many popular singers, including Britney Spears, ELO and Eminem, have been accused of recording songs using backmasking techniques. The most infamous of the trials of defendants who alleged backmasking inspired their actions is that of Charles Manson for the murder of Tate and LaBianca in 1969. During the court proceedings, it has been argued that Manson believed that an apocalyptic race war would engulf the country, and that the Beatles

incorporated hidden messages of this violence into songs like Helter Skelter.

Manson's delusional reaction (to these messages he believed he had picked up) was to record his own prophetic music and to murder (among others) Leno and Rosemary LaBianca as well as actress Sharon Tate, in order to spark the conflict. In question. In 1985, Vokey and Read performed psychological tests to determine whether subliminal messages in music influence behavior. Their study concluded that there was no evidence to support such an idea and that the perception of such messages in music tells us more about a subject's willingness to invent than about the actual existence of implicit content (Vokey and Read, 1985: 1231-1239) (2).

Fears about the power of organized sound are only fully satisfied when subliminal messages (see lexicon) are granted the ability to nudge mentally unstable subjects such as US serial killer Richard Ramirez into horrific acts. of violence. This anxious disposition then attributes to music - and by extension frequencies - the ability to elicit evil acts and, more importantly, the power to transfer the somatic and the spiritual to the surroundings of the underworld itself. In this context, music can be seen as a phenomenon that operates in the conduit between psychological suffering and its physical expression; between the state which is the subject of scientific monitoring and the unthinkable act; like a force that transgresses the material world of things, while influencing and deeply orienting actions within it. It is therefore the contradictory symbolic index of music - as an expression of religious celebration and transmission of the will of the devil - that makes waveforms phenomena to be feared and to be venerated at the same time. .

Anxiety about how frequencies move us and transfer us from place to place is still inherent in Western culture. As we have said before, part of this is because our ontological and epistemological lexicon lacks words to communicate and encourage feedback on the murderous, tumultuous, and embodied nature of waveforms. If so, it behooves the author who theorizes the spatiality of frequencies to understand why we need such words; to amplify the concepts already composed and to create a new syntax, new vocabularies and new registers to elaborate discourse on frequencies. Regarding the creation of words, terms and ideas relating to waveforms and their organization, a number of thinkers have had an impact on the writing of this study.

R. Murray Schafer (1977) coined several fundamental terms which are used regularly throughout this thesis; "Soundscape", "schizophonia" and "auditory witness" are among these neologisms; "Soundscape" can be paraphrased to mean the totally enveloping world of acoustic phenomena, including all environments (except vacuum) in which we might find ourselves; "schizophony" - which is to sound what schizophrenia is to the psyche - is defined by Schafer as the "split between an original sound and its electroacoustic transmission or reproduction" (1977: 90); the "hearing witness" is "one who testifies or can testify to what he or she has heard" (1977: 272). The composer, French writer and engineer Pierre Schaeffer coined the term "sound object", later interpreted by Michael Chion (1983) to mean any sound event that can be interpreted as a coherent sum, regardless of the production or interpretation of the sound .

There are already glossaries of terms relating to auditory effects, such as *Listening to the environment: repertoire of sound effects* (2005) by Jean-François Augoyard and Henri Torgue. The recent publication of numerous dictionaries of this genre expresses a broader desire to have indexes aimed at rehabilitating our sound knowledge by acoustically mapping the daily soundtrack of urban space. Before these new expressions of cultural interest in sound, Attali recalled the need to develop new forms of language which explain the mutation of being-in-the-world-of-waveforms. He had suggested that visual languages

had lost their responsiveness due to overuse and being overloaded with the belief that they could explain phenomena that were not within their purview. For Attali, this means that "(i) I must therefore imagine radically new theoretical forms to speak to new realities (...) It (music) reflects the making of society; it is the audible band of the vibrations and the signs which have the company. Instrument of knowledge, it encourages us to decipher a sound form of knowledge "(1977: 9). As we have understood, this form of sound knowledge remains necessary, but there are two other registers of comprehension to which Attali does not allude, those of the ultrasonic and the infrasound. So, the new form of knowledge transmitted by this thesis is third-party knowledge (thirded ), because it is composed of the three registers of wave perception; and it is the socio-spatialization of wave perception that is explored through the deployment of neologisms such as "third-sound" ( Thirdsound ), which refers to a sound spatiality that challenges our dualistic understanding of waveforms as being heard / unheard, real / imagined, painful / pleasant.

The study is indebted to a certain number of theoretical developments of the notion of "thirding" ("thirding ") As a methodologically and analytically formatted tool for disrupting dualistic thought. Of particular note is Michel Serres' proposition that noise is the inevitable "Third Man" between two parts connected to each other. He suggests that, in an exchange of sound information, noise finds itself in an ambiguous position, being a founding presence both peripheral and central in the formatting of communication. Serres therefore writes that "... we are immersed in noise (...) We are in the noise of the world, we cannot close the door to the receipt of this clamor (...) In the beginning is noise" (1980: 170). The "tierceisation" dynamic employed by Hélène Cixous in her novel *The Third Body*(1970) is also useful. She introduces it (in the first page of the text), in order to define the somatic relationship between two lovers, thus breaking the dualistic understanding of agency and sublimation, because the two bodies, both identical and different, end by building a third identity. For Homi K. Bhabha (1994), the third space represents a hybrid spatiality of antagonisms, constant tensions and potential chaos. He maintains that, from this place, it is possible to destabilize the binary oppositions that build the First and the Third World, including those that exist between the center and the margin, the civilized and the savage and capital and labor. . By this theoretical act of associative dislocation, according to him, it would be possible, by employing techniques of tierceisation, to reconstruct discursive political discourse, which would help to deprive the colonization systems of power.

## The viracoustic channel

The viracoustic channel of this study is a formalized instrument of inquiry into how viral dynamics can be mapped from the sound environment in order to provide new methods of navigation in its changing marginal and miasmatic territories. Since the virus modality within somatic, computer, and capitalist networks is generally recognized as the most efficient vehicle of propagation, it is useful to examine how this infectious paradigm functions in the organization of frequencies. Using the conceptual apparatus of viral modulation to analyze waveform phenomena allows us to understand the perpetual changes that are occurring in the way humans perceive the world. Documenting the transient and constantly changing nature of the soundscape also amplifies the problems inherent in virology, especially those related to prediction, detection and protection. The complex and difficult questions in attempting to classify the spread and spread of viruses can therefore be understood as being analogous to those that arise in exploring the evanescent nature of frequencies. Ultimately, it is the dilemmas and paradoxes implicit in



deploying a viral approach like the viracoustic channel that, as well as the more obvious metaphors that can be drawn from such an analysis, define its relevance to this wave study. .especially those related to prediction, detection and protection. The complex and difficult questions posed by attempting to classify the spread and spread of viruses can therefore be understood as being analogous to those which arise in exploring the evanescent nature of frequencies. Ultimately, it is the dilemmas and paradoxes implicit in deploying a viral approach like the viracoustic channel that, as well as the more obvious metaphors that can be drawn from such an analysis, define its relevance to this wave study. .especially those related to prediction, detection and protection. The complex and difficult questions posed by attempting to classify the spread and spread of viruses can therefore be understood as being analogous to those which arise in exploring the evanescent nature of frequencies. Ultimately, it is the dilemmas and paradoxes implicit in deploying a viral approach like the viracoustic channel that, as well as the more obvious metaphors that can be drawn from such an analysis, define its relevance to this wave study. .The complex and difficult questions posed by attempting to classify the spread and spread of viruses can therefore be understood as being analogous to those which arise in exploring the evanescent nature of frequencies. Ultimately, it is the dilemmas and paradoxes implicit in deploying a viral approach like the viracoustic channel that, as well as the more obvious metaphors that can be drawn from such an analysis, define its relevance to this wave study. .The complex and difficult questions posed by attempting to classify the spread and spread of viruses can therefore be understood as being analogous to those which arise in exploring the evanescent nature of frequencies. Ultimately, it is the dilemmas and paradoxes implicit in deploying a viral approach like the viracoustic channel that, as well as the more obvious metaphors that can be drawn from such an analysis, define its relevance to this wave study. .as much as the most obvious metaphors that can be drawn from such an analysis, define its relevance for this wave study.as much as the most obvious metaphors that can be drawn from such an analysis, define its relevance for this wave study.

The term "viracoustic" is a portmanteau word made up of "viral" and "acoustic". This is a conceptual methodology, which in this study leads information throughout the four chapters. Conceptually, the word "viracoustic" suggests that the traveling nature of frequencies gives them the amplitude necessary to mutate, modify and reconstruct systems of thought that give voice to space and its territorialization. . The new discourses, resulting from listening to the viral nature of space, aim to reveal the transmission networks orchestrated by the military-recreational complex to infect the social body with its psychological, socio-economic and physiological objectives. By deploying the viracoustic channel, we infect ourselves with viral speech that endows us with critical power - the ability to understand how volumes of dissonance, amplitudes of violence, and levels of behavior are modulated by organizations seeking to delineate the sound environment . The transient, emitting and disrupting spatiality expressed by the second part of the term - "channel" - is based on an inversion of Paul Virilio's notion of vector. The present study suggests that the dromological non-place of the vector no longer speaks to us of our socio-spatial environment nor of our being-in-the-world of waveforms. Our world embodied in frequencies is one that is spatialized by the discursive and degressive nature of the viral; and the absolute importance of speed (arrogated by the projectile) has been supplanted by the systematic breaking of linearity - by the techniques of deception, contagion and production modification that capitalism has transmitted around the world.

Transition device between chapters, the viracoustic channel connects the third sub-part of each chapter. It links disparate chronologies, spatialities and events and constitutes the transitory center of transmission of conceptualizations, arguments and speculative hypotheses of the thesis. He tells us about the unrealized possibilities offered by waveforms to build viral spatiality; communicating wave

networks which could contribute to resist those which would stifle the emission capacity of the body-emitter. The study maintains that we will better understand the organization of social space through a viracoustic channel than through a reflection on the temporal modality of the vector (see glossary) so ardently defended by Virilio. Very interesting is Attali's proposition that critical analyzes and philosophical disposition must be created from wave thinking, because "it (music) is a way of perceiving the world.... (and significantly) is there to make changes heard" (1985: 9). What is interesting here is the testimonial nature of Attali's "audible mutation", as it suggests that change can only be communicated through the composition of new ways of perceiving. Three leitmotifs shape, modify and transform the content that is introduced into the viracoustic channel. As critical codes of conduct, the three spatial concepts explain the topology (see glossary) of waveforms and their potential for shaping space, networks and bodies. The three leitmotifs are the Foucauldian conceptualization of "heterotopia", Marc Augé's conceptualization of "non-place" and that of Edward Soja of "third-space" (thirdspace).

Originally, the Foucauldian conceptualization of heterotopia was that of a space that exists between "real" space and "utopian" space. As such, it is an "other" space, which functions beyond the hegemonic order - a space which is both real and imaginary, mental and material, here and elsewhere. Examples are the mirror, the asylum - where deviant bodies are placed - and the ship. In his short article entitled "Other spaces" (1967) (published after his death), Michel Foucault established the blueprints of what we today call heterology: the study of the other. This has been used as a tool for critical analysis by a range of academics and specialists in cinema, poetry, urban planning, contemporary art and cartography. Architects like George Teyssot (1977) express the possibilities of heterotopia to communicate the socio-political dynamics of the built environment and thus unveil the subversive spatial criticism underlying this notion. It is useful for this study because it suggests that the identity, socio-political structure, and power relations of any wave space are in a state of constant mutation and renegotiation.

The term "non-lieu" was coined by the French anthropologist Marc Augé in *Non-lieu*. Introduction to an anthropology of supermodernity (1992). He conceives of non-place as a spatiality of transience; as social spaces that are devoid of emotional investments, have no cultural significance and, therefore, do not meet the definition of a place or space. According to Augé, "If a place can be defined as identity, relational and historical, a space which cannot be defined as identity, nor as relational, nor as historical, will define a non-place" (1992: 100). He cites highways, airports and hotel rooms as prime examples of non-places, which he says are increasingly becoming symptomatic of supermodernity - a postmodern era which (from Augé's point of view) is deeply committed to technology, transportation networks and information transfer.

Edward Soja conceptualizes "third space" as a principle of his postmodern geography. The term designates spaces that are both imaginary and real. He defines it as follows: "'third-space' is a deliberately provisional and flexible term that attempts to capture what is in fact a milieu of ideas, events, appearances in constant evolution and in perpetual change... it there is a growing awareness of the simultaneity and the interweaving of the social, the historical, the space, their inseparability and their interdependence.... The challenge that arises in Thirdspace therefore has a transdisciplinary scope. It touches all modes of thought" (1996: 2-3).

These three meditations on lived space, imagined space and crossed space function as conceptual vectors in the viracoustic channel. They raise questions such as whether "audiotopias" (wave version of heterotopia, in which a sound spatiality comes to represent other frequency sites within a culture, while being itself deliberately time or / and spatially displaced) exist and, if so, how they function conceptually;

how we perceive a non-sound in a non-place; where to critically situate the socio-political register of the third sound. Such surveys suggest that the sound environment must be textually re-mapped and that audible and inaudible mutations must be recorded, in order to produce new forms of language. Therefore, the messenger of this study is never static, disciplined, or susceptible to instruction. He is a corrupt perception carrier, who mutates what he comes into contact with, hybridizing existing terminologies, notions and formulations from various fields of study to form his own dynamic, complex and abstract character. The messenger in this study can then be analyzed and diagnosed as what we call the viral waveform; a contingent phenomenon that moves and changes in order to compose a space where its frequency discourses can reproduce culturally. disciplined or susceptible to instruction. He is a corrupt perception carrier, who mutates what he comes into contact with, hybridizing existing terminologies, notions and formulations from various fields of study to form his own dynamic, complex and abstract character. The messenger in this study can then be analyzed and diagnosed as what we call the viral waveform; a contingent phenomenon that moves and changes in order to compose a space where its frequency discourses can reproduce culturally. disciplined or susceptible to instruction. He is a corrupt perception carrier, who mutates what he comes into contact with, hybridizing existing terminologies, notions and formulations from various fields of study to form his own dynamic, complex and abstract character. The messenger in this study can then be analyzed and diagnosed as what we call the viral waveform; a contingent phenomenon that moves and changes in order to compose a space where its frequency discourses can reproduce culturally. complex and abstract. The messenger in this study can then be analyzed and diagnosed as what we call the viral waveform; a contingent phenomenon that moves and changes in order to compose a space where its frequency discourses can reproduce culturally. complex and abstract. The messenger in this study can then be analyzed and diagnosed as what we call the viral waveform; a contingent phenomenon that moves and changes in order to compose a space where its frequency discourses can reproduce culturally.

### The viral waveform

Many terms are used to describe the multiple carriers of the virus culture - worms, malware and Trojans, in computer systems; bacteriophages, microorganisms and pathogens, in the body matrix, where they are carried by fluids and air; and earworms, influencers and sneezers (sneezers), in the social networks targeted by viral marketing strategists (see glossary) (who seek people with the greatest Social Networking Potential (SNP)), in order to persuade them to convey the popularity of the products demographically relevant. Such a taxonomy of liminal, of the barely perceived, could also be attributed to the thresholds of oscillation, which refer to sound; to those blurring margins in the non-sonic spectra of ultrasound and infrasound, especially when used by those who work for the military-recreation complex for experiments on unsuspecting targets. The notion of barely perceived also evokes these thresholds which are at the intersection of the living, living dead and dead and the cultural belief that viral and waveforms can open conduits between these states of being. Viruses, like waveforms, are difficult to control, map and detect. As such, they both have the ability to move imperceptibly, infiltrate and unlock as well as enter without permission, creating networks of affect and unidentifiable evidence. Similarly, we can think of the virus that stealthily enters computer systems; renegotiate and rewrite the network protocol on the fly; creates cultures of fear and paranoia at the mere mention of his name. As for waveforms, we can ruminate equivalently on;- the long-range infrasound waveforms and their propensity to travel thousands of kilometers without being noticed by humans; the ability of ultrasound

to scan and make visible what cannot be seen with the naked eye; the agonizing culture of fear and suspicion that envelops the wave body and its vulnerability to the power of frequencies. Thus, we can say that waveforms and viruses have the capacity to propagate behaviors of a transgressive nature. The fact that these behaviors are orchestrated in networks where it is difficult to perceive where the action of the living ends and where the power of the dead begins gives them the right to be deepened throughout the thesis. the ability of ultrasound to scan and make visible what cannot be seen with the naked eye; the agonizing culture of fear and suspicion that envelops the wave body and its vulnerability to the power of frequencies. Thus, we can say that waveforms and viruses have the capacity to propagate behaviors of a transgressive nature. The fact that these behaviors are orchestrated in networks where it is difficult to perceive where the action of the living ends and where the power of the dead begins gives them the right to be deepened throughout the thesis. the ability of ultrasound to scan and make visible what cannot be seen with the naked eye; the agonizing culture of fear and suspicion that envelops the wave body and its vulnerability to the power of frequencies. Thus, we can say that waveforms and viruses have the ability to propagate behaviors of a transgressive nature. The fact that these behaviors are orchestrated in networks where it is difficult to perceive where the action of the living ends and where the power of the dead begins gives them the right to be deepened throughout the thesis. it can be said that waveforms and viruses have the capacity to propagate behaviors of a transgressive nature. The fact that these behaviors are orchestrated in networks where it is difficult to perceive where the action of the living ends and where the power of the dead begins gives them the right to be deepened throughout the thesis. it can be said that waveforms and viruses have the capacity to propagate behaviors of a transgressive nature. The fact that these behaviors are orchestrated in networks where it is difficult to perceive where the action of the living ends and where the power of the dead begins gives them the right to be deepened throughout the thesis. it can be said that waveforms and viruses have the capacity to propagate behaviors of a transgressive nature. The fact that these behaviors are orchestrated in networks where it is difficult to perceive where the action of the living ends and where the power of the dead begins gives them the right to be deepened throughout the thesis.

Eugene Thacker (2004: 43-47) analyzes the publicized links between living communication networks and dead communication networks, when he writes: "The horror of contemporary 'living dead' is not only the fear of to be reduced to being a body; in the 'networked society', the horror of the 'living dead' is undoubtedly also the fear of being reduced to just information - or of not being able to distinguish between contagion and transmission. In this sense, the paradox of the living dead is also the paradox of 'vital statistics', a sort of network of living dead that goes beyond and even replaces the 'pure and simple life' of the organism. "

If we take this meditation on the disappearance of the body in the data and the associated fear of losing the ability to perceive the somatic threshold of presence and transfer it to the networks of ultrasonic, infrasonic and sonic waves of the soundscape, it gives us more useful insight into the liminal nature of frequencies and their connection with the viral. We mainly perceive hauntings through the vibratory capacity of an entity to discreetly penetrate the network of living beings through the manipulation of voice and objects. Our fear is fueled by the threat of being touched and infected by liminal presences, of being transmuted ourselves into waveforms. This is the difficulty we face when we try to contain, to control and map the ephemeral nature of the viral and the waveform that makes these phenomena so agonizing, because this difficulty reminds us of the existence we lead to thresholds oscillating between sound and silent, ephemeral and static, the living and the dead.

Ultimately, in this thesis, the viral is speculatively formatted as a mode of communication; a discourse that mutates and propagates meaning between technological, somatic and social networks; the terrible child of a capitalist system that reproduces itself through channels of absolute transience, sublimely expressing the panting movement and the inevitable crisis of stasis in exchange systems. It is both the

perfect model of a socio-economic system that conducts its activities through the flexible organs of distributed power and its destroyer. Likewise, "music is the medicine of the mind" (Storr, 1992: unnumbered homepage) and the killer of the mind, all at the same time. She has in this respect a similar capacity to be the ultimate celebration of sound transmission as well as the ultimate agent of silent suffering. Through the combination of these seemingly oppositional phenomena which symbolize both creation and destruction, a critical modality of discursive reasoning is formed in the present study. A modality which is called the viral waveform and which constantly modifies its maneuvers, transforming itself according to its needs; highlighting the channels in which this power resides, all in (dis) order to make the changes in the environment in which it is located unrecognizable. a critical modality of discursive reasoning is formed in the present study. A modality which is called the viral waveform and which constantly modifies its maneuvers, transforming itself according to its needs; highlighting the channels in which this power resides, all in (dis) order to make the changes in the environment in which it is located unrecognizable. a critical modality of discursive reasoning is formed in the present study. A modality which is called the viral waveform and which constantly modifies its maneuvers, transforming itself according to its needs; highlighting the channels in which this power resides, all in (dis) order to make the changes in the environment in which it is located unrecognizable.

## DOCUMENTATION REVIEW

This review reflects the transdisciplinary nature of this thesis, as it focuses on texts by historian / sociologist Michel Foucault, economist Jacques Attali, philosopher Michel Serres, political geographer and town planner Edward Soja, musician and theorist sound Steve Goodman and cultural theorist and town planner Paul Virilio.

The first text examined will be "Monitor and Punish: Birth of the Prison", because its methodology and its theme were essential to the whole process of construction of this thesis. The archaeological-style methodology he employs to study knowledge formation serves to trace the beginnings of speaker system technologies and their use in conjunction with electronic amplification. While Foucault's investigation of the French penal system has a narrower objective than the present study, his systematic analysis of how power joints allow certain changes to occur and others to be thwarted has been a useful technique for revealing how speaker system strategies and technologies have been developed and transformed over the last century.

Of particular methodological help was the Foucauldian technique of mapping power relations in a continuum of thought and then explaining the epistemic change that mutates the expression of this power.

The structuring of this thesis is based mainly on this type of dynamic, because it traces the use of speaker systems that serve to transmit sound waveforms in the factory, around the barracks and in the cell, before to examine, in the fourth chapter, the change which occurs when a new loudspeaker system exploiting ultrasonic frequencies is introduced in the military and civilian areas of conflict relations. If Monitor and punish examines the ways in which the body is subdued and transformed into an object of knowledge under the impulse of a set of techniques, it offers little indication of how these strategies can be thwarted or diverted. While this thesis is not a frequency resistance manual, it challenges Foucault's

lack of commitment to resistance tactics, suggesting how ripple power could be used to question, re-map, and challenge hegemonic landscape mapping. sound currently orchestrated by the military-recreational complex.

The founding text of Jacques Attali *Bruits: Essay on the political economy of music* is also important for this thesis for structural reasons. Attali constructs his study by dividing the history of waveforms into three distinct periods - respectively characterized by "sacrifice", "representation" and "repetition" - and suggests that a fourth period, yet to be defined and which he calls that of the "composition", will open. As a result, this study takes a trans-historical approach, dividing the process of deploying speaker systems into three epochs, which open respectively with the commissioning of the Fordist factory, the Waco headquarters and the invention of the Guantanamo Bay torture cell, then predicts and theorizes a new period of wave transmission and politics, initiated by directional ultrasound beam technology. While Attali links the formatting of music to revolutions in capitalist modes of production, this study links the strategic deployment of waveforms and the technologies that transmit them to the mutating symbiotic relationships between military and civilian organizations.

Attali's maxim that music is prophetic and predicts future forms of social organization is important for this thesis, as it makes the study of waveforms a discipline that can expose and create knowledge about the past, present and future. It was useful in retransmitting the ways in which the rhythms of the wave strategies employed by the military-industrial complex mutated at the time when the military-recreational complex became the capitalist model for marrying the military and civilian contexts; future rhythms are examined in the fourth chapter. The most valuable lesson that has been drawn from the book of Attali and elaborated in this thesis is that it is no longer possible to depend on the eye to accumulate essential forms of knowledge necessary for understanding the world in which we are. live, because ocular information has been theorized into an incomprehensible and excessive abstraction. This task, according to him, must be accomplished by the ear and the act of listening, for we need a new philosophy that is open to listening to the changes predicted by music production. The problem of the philosophy of noise that Attali exposes is because we need a new philosophy that is open to listening to the changes predicted by music production. The problem of the philosophy of noise that Attali exposes is because we need a new philosophy that is open to listening to the changes predicted by music production. The problem of the philosophy of noise that Attali exposes in *Noise* (a philosophy challenged by this study) is its reluctance to examine the role that non-hearing waveforms play in our understanding of the future world, the present world, and the past world. Attali's philosophy is based on sound theory and not on the inclusive theory of waveforms proposed by this study; and this philosophy depends on understanding the roles sound and non-sound have in our perception of being-in-the-world.

*Le Parasite* (1982) influenced the overall transdisciplinary approach adopted in this thesis. Serres theorizes the relations between the parasite and the host through a wide range of disciplines such as theology, information theory, political economy, anthropology, philosophy and through literary works such as the *Fables of La Fontaine* and the *Tartuffe* by Molière. This study also uses a number of fields of study (including philosophy, sociology, psychology, musicology, physics, theology and geography) to examine the relationships between waveforms, spatiality and human presence. Serres uses this great diversity of knowledge to trace the convergences between the natural sciences and the human sciences. Philosophically, however, the most important argument advanced throughout his text is that the relations between parasite and host should not be taken for granted, since the dynamics generally attributed to each of these positions can easily be reversed. As such, individuals and groups perceived to be disenfranchised and deprived of their autonomy (individuals and groups which Serres sees as

represented by the plague) can also become important voices in wider public discourse, as they represent perspectives and diverse and essential ontologies. For the purposes of this study, this discursive model of social inclusion and empowerment of parts of the social body that were previously conceived of as passive and dependent is important for the composition of the body-transmitter; a subjectivity set in oscillation by external phenomena, but which also retains the power to orchestrate the movements and rhythms of activity within any network of relations in which it is found. are represented by the plague) can also become important voices in wider public discourse, as they represent diverse and essential perspectives and ontologies. For the purposes of this study, this discursive model of social inclusion and empowerment of parts of the social body that were previously conceived of as passive and dependent is important for the composition of the body-transmitter; a subjectivity set in oscillation by external phenomena, but which also retains the power to orchestrate the movements and rhythms of activity within any network of relations in which it is found. For the purposes of the present study, this discursive model of social inclusion and empowerment of parts of the social body that were previously conceived of as passive and dependent is important for the composition of the body-transmitter; a subjectivity set in oscillation by external phenomena, but which also retains the power to orchestrate the movements and rhythms of activity within any network of relationships in which it finds itself. but which also retains the power to orchestrate the movements and rhythms of activity within any network of relationships in which it finds itself.

The body-transmitter - the protagonist of this study - is a model of wave power, because it receives and transmits information, presences and affects in the sound environment. In this way, the body-transmitter is analogous to the Plague of Serres, as both subjects embody the ability to resist, hijack, and assimilate the technologies of subjugation and political pressures that writers like Foucault identify as controlling the somatic. The notion of parasite Serres as third man in all acts of communication is a crucial proposition for this study, in relation to the discourse initiated between the potential convergences of waveform theory and viral theory. The relationships formatted between music and the mass social body in the first two chapters of the thesis refer to the relational compositions of noise, which Serres defines as an inevitable third presence, but, in the fourth chapter, HSS technology refutes these assumptions, because the noise / third man is theorized as the third voice channeled to the subject. Thus, instead of being exteriorized in acts of communication, the noisy third-party viral subjectivity is theorized as constituting psychological ammunition transmitted in the interiority of communications within a subject's skull. HSS technology disproves these assumptions, as noise / third man is theorized to be the third voice channeled to the subject. Thus, instead of being exteriorized in acts of communication, the noisy third-party viral subjectivity is theorized as constituting psychological ammunition transmitted in the interiority of communications within a subject's skull. HSS technology disproves these assumptions,

as noise / third man is theorized to be the third voice channeled to the subject. Thus, instead of being exteriorized in acts of communication, noisy third-party viral subjectivity is theorized as constituting psychological ammunition transmitted into the interiority of communications within a subject's skull.

Methodologically, the text by Edward Soja *Thirdspace: Journeys to Los Angeles and Other Real and Imagined Places* is at the heart of the construction of this study. In *Thirdspace*, a trialectic approach based on the notion of space triad of Henri Lefebvre (1991) is adopted by Soja in order to reinsert spatiality in the lexicon of Western philosophical thought. By explaining the thirdcésiation as an altering methodological approach (othering), Soja proposes to disrupt the dualist modalities of thought that have reduced spatial theory to a footnote to temporal readings of the world and of human presence and movements within it. The present study accepts Soja's hypothesis that space is a crucial and implicit constituent of how all living things structure their lives and applies this spatial logic to the analysis of the geography of the soundscape. Therefore, the present study extends Soja's ideas to the field of sound studies by suggesting that it is essential to compose a wave geography in order to be able to explore, map and resist the territorialization of the soundscape carried out by organizations and individuals dedicated to the achievement of the objectives of the military-recreational complex. It is argued that this cartographic index would facilitate our understanding of waveforms, which are too often conceived binary as being heard or not heard, noisy or silent, painful or pleasant.

If it wants to be able to produce original knowledge, it is crucial that the present study applies the methodological technique of thirdcésiation of Soja, because it uses a discursive geographical instrumentality as an analytical tool to bring to light new relations between the periphery and the center. Since this study explores both the wave phenomena that are essential to our understanding of the world - sound phenomena - and those that do not reach our perception - ultrasound and infrasound - it is fundamental to compose a map enveloping the back-country of wave phenomena. Soja, relying on theorists like Bell Hooks, recognizes that the periphery or the margins are spatialities in which the modes of resistance can be formatted and arranged. The exploration by Soja of the phenomena which oscillate at the periphery of the social body is an important line of research, which will be followed throughout this study, as we evaluate how the limits of power are agitated by oscillatory movements, inverted and controlled by wave techniques. The fragmented postmodern body which, according to Soja, exists within these marginal spatialities, is however criticized in this study for being an inadequate model of transmission and reception in the contemporary soundscape. The thesis suggests that this fragmentary clue was assimilated by a US military determined to disrupt the psychological structure of Guantanamo detainees. In this study, what is being composed, it is the model of the body-transmitter which transmits and receives the complex arrangements of the sound environment, the synthetic body which will reveal in the future the peripheral and central concerns of a wave ecology.

In addition to theorizing the historical and current forms of affect, organization and wave violence, this study speculates on the future of ideologies and frequency technologies. For these reasons, Attali's writings played an important role in constructing the proactive sound discourse of this thesis, but first it is *Sonic Warfare: Sound, Affect, and the Ecology of Fear* (2009) by Steve Goodman who provides a futuristic wave theory (or vibrational ontology, to paraphrase the author) that is based on both non-sound and sound. To trace the ways in which the logistics of perception has been, is, and will be modulated by the military-recreation complex, Goodman draws on authors such as Kittler, Whitehead, Bergson and Eshun; and in doing so, it offers a segmented story that reveals the violent organization of the soundscape, while investigating the rhythmic orchestrations of fear that accompany these maneuvers. The trans-historical approach adopted by Goodman has an influence on the idea, developed



in this study, viracoustic channel - meta-chapter device that functions as a textual patch panel through which any event or phenomenon in time or space can connect to the wave ideas to which it serves as a transmitter.

While Goodman uses a fragmentary historical model in which each module can be read separately and in any order, this postmodern approach fails to narrate the inevitable sequencing and connection of sound strategies developed in the name of war by military complexes. -industrial and military-recreational. Ultimately, Goodman's indifference to the narrative arrangement means that he does not put the emphasis that should be on the sound torture strategies used in Iraq and Guantanamo Bay, where a many of the sonic trajectories of control, fear and violence that have been followed over the past century find their conclusions logical. This study then orchestrates a third-party methodology that tracks the evolution (and connection) of speaker system techniques and wave ideologies that influence, manipulate and torture the social body and the individual body. The usefulness of Goodman's text in constructing this thesis lies in his awareness that a new language and a new set of concepts such as his notions of "non-sound", "vibratory force" and "Audiovirology" must be conceived in order to compose a wave philosophy which explains to us the potential for anguish, violence and pressure that frequencies entail. The usefulness of Goodman's text in constructing this thesis lies in his awareness that a new language and a new set of concepts such as his notions of "non-sound", "vibratory force" and "Audiovirology" must be conceived in order to compose a wave philosophy which explains to us the potential for anguish, violence and pressure that frequencies entail. The usefulness of Goodman's text in constructing this thesis lies in his awareness that a new language and a new set of concepts such as his notions of "non-sound", "vibratory force" and "Audiovirology" must be conceived in order to compose a wave philosophy which explains to us the potential for anguish, violence and pressure that frequencies entail.

Since this study focuses on speaker system technologies that have been developed and used by military-industrial and military-recreational complexes since the installation of hard-wired radio systems in American factories in 1922, it was predictable that it would rely on *Speed and Politics* (1977) by Paul Virilio. Virilio's reputation as a philosopher of technology is comparable to that of any other postwar thinker and, as such, his proposition that the history of progress, modes of perception and information are directly linked to the speed of development of weapon systems, convinced us to make it the starting point for the study of strategic relations between military and industrial organizations and the entertainment industry. The fact that he said that a city constantly lives as if it is preparing for battle is seen by some as an invitation to technological determinism. For the purposes of this study, it is argued that this statement does not go far enough, because it is suggested that this state of preparation is more akin to an ambient violence in its own right which manifests its undulatory intention at all levels of civilian life. *Speed and Politics* is of great importance to this study, given his interest in notions of pure and total war, the speed of the war machine and the logistics of perception, but many of Virilio's assumptions are called into question. throughout the thesis.

The virilian hypothesis according to which, in times of conflict and urban preparation, the importance of spatial concerns fades before the importance of vector trajectories and the speeds associated with them is obviously problematic for a study which proposes the composition of 'a new waveform mapping. The present text therefore supports, in a frequency perspective which echoes the point of view expressed by Edward Said in *Culture and Imperialism* (1993), that geographic concerns are never completely foreign to us. As the peripheral terrains of ultrasonic and infrasonic vibrations are modulated by the military-recreational complex, the study suggests that it is imperative to compose an embodied spatial index of

wave pressure, cadence, violence and motion. In *Speed and Politics*, Virilio's excessive dependence on visual tropes (which are more particularly developed in later texts such as *The Machine of Vision* [1988] and *Aesthetics of Disappearance*[1980]), obliterates the vital roles that waveforms play in the composition of conflicts (both in the city and on the battlefield), in perceptions of war (on the Internet, on television and in the cinema) and in the potential capacity of sound and non-sound to map future theaters of violent engagement. This study therefore contradicts many of Virilio's ideas on how conflicts are generated, maintained, modulated and develops a wave theory to explain the *raison d'être* and the future of the war machine.

As for the texts which had a (negative) influence on the writing of this thesis, it is necessary to mention *Sound Targets: American Soldiers and Music in the Iraq War*(2009) by Jonathan Pieslak. This text reinforced the idea that the deployment of a system of musicological / sociological methodology to interpret the use of music in Iraq and Guantanamo Bay is inadequate for deciphering such complex phenomena.

The lack of theoretical analysis of the methods of sound torture used on detainees and the lack of serious documentation of those who have been subjected to torture make Pieslak's book a schematic and biased account (from the point of view of American soldiers who carried out the tortures) of sound torture. *Sound Targets* was useful for this thesis as it provided a contemporary example of the academic pitfalls in which a study of sound can fall. As such, the shortcomings of the book have confirmed the idea that a transdisciplinary approach offers the most coherent mode of investigation to create original knowledge on the organization of the soundscape.

Unlike *Sound Targets*, Suzanne Cusick's essay *Music as torture / Music as weapon*(2006) is a very engaging and clear testimony on the aural torture at Guantanamo Bay and Abu Ghraib. This is a concise overview of the sound pressure exerted by the military. Written from the perspective of socio-political, psychological and gender studies, it stands out as one of the first academic works on the US military's use of music as a weapon in its "fight against terrorism". While asking a plethora of questions about wave affect in torture practices, the book, by its brevity, refrains from analyzing the cultural significance of how music and other forms of culture have recently been assimilated by the military. The third chapter of this study takes up the questions posed by Cusick in 2006 and expands their scope to study in more depth the cultural, psychological and physiological contexts of applied wave violence and the co-optation of culture by the military.

The critical review of the literature relating to the subject of the present study ends with Julian Henriques' essay *Sonic Bodies: Reggae Sound Systems, Performance Techniques, and Ways of Knowing*, published in *The Auditory Culture Reader*. By emphasizing the potential for disembodiment and incarnation of waveforms; the role of music in changing the relationship between the rational and the irrational; the idea that music is an essentially transgressive phenomenon in all social, somatic and spatial contexts, Henriques' essay stands out as a conceptually influential text. The formation which is due to him of the very relevant concept of "sound body" and the analysis no less relevant than he makes of it (2003: 471) - creation and analysis through which the sound pressure systems in the concerts of reggae in Jamaica - have had considerable bearing on the composition this study undertakes of the historically indexed wave body, the currently active body-emitter, and the evolving futuristic synthetic body. For Henriques, the sound body is literally "the body touched by sound. It is a resonant, specific, shared, social, immediate and carnal body. The term 'sound body' implies either the body of the sound or the sound of the body or both. The corporeality of the sound body is expressed in sound and is accomplished through sound" (2003: 471). By broadening the historical, geographical and conceptual

scope of the sound body of Henriques, the new multidisciplinary body of knowledge which is composed in this study amplifies the silences, the oscillations and the noises which have served, serve and will serve to delimit the spatialities of the landscape. sound. The term 'sound body' implies either the body of the sound or the sound of the body or both. The corporeality of the sound body is expressed in sound and is accomplished through sound "(2003: 471). By broadening the historical, geographical and conceptual scope of the sound body of Henriques, the new multidisciplinary body of knowledge which is composed in this study amplifies the silences, the oscillations and the noises which have served, serve and will serve to delimit the spatialities of the landscape. sound. The term 'sound body' implies either the body of the sound or the sound of the body or both. The corporeality of the sound body is expressed in sound and is accomplished through sound "(2003: 471). By broadening the historical, geographical and conceptual scope of the sound body of Henriques, the new multidisciplinary body of knowledge which is composed in this study amplifies the silences, the oscillations and the noises which have served, serve and will serve to delimit the spatialities of the soundscape. the new multidisciplinary body of knowledge which is composed in this study amplifies the silences, the oscillations and the noises which have served, serve and will serve to delimit the spatialities of the soundscape. the new multidisciplinary body of knowledge which is composed in this study amplifies the silences, the oscillations and the noises which have served, serve and will serve to delimit the spatialities of the soundscape.

By orchestrating the viral theory, postmodern geography and sono-economic philosophy mentioned above within the framework of an interdisciplinary research apparatus, this thesis studies the soundscape and its territorialization in order to highlight the undulatory trajectories that have informed the deployment of loudspeaker systems since their introduction to industrial workplaces in the early 20th century. As the constituents of wave mapping which are developed throughout the study are informed, oscillated and modified by a wide range of pressures, the methodology deployed is necessarily composed of such diverse knowledge systems. The new and original knowledge that arises from the use of this methodology provides us with information about how we understand and traverse the frequencies that are considered local frequencies, but, more importantly, it amplifies the concerns carried by the forms of wave perceived as peripheral and liminal. As such, the present study develops new theories of the soundscape that advance the discipline of sound studies, by laying new foundations for reflection on wave spatiality and on the presences and pressures that shape it. As such, this study develops new theories of the soundscape that advance the discipline of sound studies, by laying new foundations for reflection on undulatory spatiality and on the presences and pressures that shape it. As such, this study develops new theories of the soundscape that advance the discipline of sound studies, by laying new foundations for reflection on undulatory spatiality and on the presences and pressures that shape it.

## METHODOLOGY

### Composition

This study is a transdisciplinary and trans-historical investigation into the civil and military contexts in which loudspeaker systems have been used by military-industrial and military-recreational complexes to

exert pressure on mass social groupings and corps individual. The thesis asks the following question: how do past and current deployments of sound, infrasound and ultrasound frequencies as instruments of torture, psychological manipulation devices and physiological influence mechanisms presage future techniques of socio-spatial organization? It is argued that, since the installation of wired radio speaker systems (see glossary) in US factories in 1922, the development of sound strategies based mainly on the orchestration of architectural spatiality, repetition cycles and the enveloping dynamics of the surround sound effect can be attributed to the establishment of sound torture practices at Guantanamo Bay during the first decade of the 21st century. It is further asserted that the acoustic techniques used in the torture cells of the Guantanamo Bay prison represent the final modality and the logical conclusion of the strategies that have been developed in the civilian and military contexts over the past eighty years. The instrumental character that the speaker system took after the Guantanamo Bay episode therefore comes to symbolize an epistemic change in the application of wave pressure; because the dynamics of directional ultrasound technology mark the orchestration of a new set of frequency relationships between the transmitter and the receiver, the speaker system and the architectural system, the civil context and the war environment.

The methodological approach deployed throughout the thesis reflects the transdisciplinary nature of the study, made up of three different academic perspectives. The first perspective is an epistemic approach based on Michel Foucault's research methods, which document the changes and differences that occur over time in a given system; the transformations which occur in a specific context which favors certain mutations while preventing others. Thus, Foucault's methodological approach is a historical, albeit radicalized, approach that reveals how truth is conceived and how circumstances are designed to authenticate and propagate certain discourses,

certain techniques and, ultimately, certain truths. The second perspective, politico-geographic, is based on Edward Soja's conception of trialectic efficiency. The study employs a trialectic model that relies on Soja's reinterpretation of Lefebvre's concept of a spatial triad. In Soja's trialectic system, three forces influence each other, suppressing the fixed nucleus of sublation ("Aufhebung») Localized by Hegel in his dialectical model (in a Hegelian framework, the conflict between thesis and antithesis is resolved by synthesis). According to Soja, "the starting point of this strategic reopening and redesign of new possibilities is the provocative reintegration of epistemology into ontology and more precisely into the trialectic ontology of Spatiality, Historicity and Sociality. This act of ontological rebalancing induces a radical skepticism with regard to all established epistemologies. Of all the means of acquiring with confidence a knowledge of the world" (1996: 81).

Thus, in the present thesis, a trialectic model of analysis seeks to initiate new methods of interpreting wave spatiality and sociality. The third perspective is a viral approach which refers to Michel Serres' transgressive reading of the oscillating power relations between host and parasite (1982).

This multichannel methodology was chosen because the present study, by its emphasis on temporality, technology, geography, politics and somatics considered from the frequency point of view, has a broad scope of application. . To explore the spatial, physiological, viral and psychological effects of the deployment of speaker technology in the past in the United States, in present-day Cuba and in the future globalized world, the only academic logic capable of tackling research of this magnitude is a multidisciplinary survey system. Consequently, it is by deploying a coherent multi-path methodology that the sprawling information networks studied will be made perceptible and can then be analyzed; as the connection points, transformation and disruption of waveforms within these information networks will be amplified in a coherent way in order to compose and transmit new and original knowledge on the

organization and territorialization of the soundscape.

The use of this multi-channel methodology makes it impossible for the present study to become simply a historical cultural investigation of waveforms. While this study explores past convergences that have legitimized the evolution of speaker system strategies from the factory to the globalized torture cell, it also speculates on how the breakthrough that HSS ultrasound technology has constituted in relation to sound technologies and their coercive ideologies will change our perception of frequencies, presence and reason. In this sense, the research carried out in this study is trans-historical, as it focuses as much on the future as it does on the present and the past. This temporal channel is combined in this study with a spatial channel that connects geographic contexts and divergent borders.

The spatial approach adopted by the study, like the temporal approach, sees its taxonomic criteria of investigation mutate in the epistemic rupture which occurs between the third and the fourth chapter. Thus, the wave geography mode which maps out the surround sound speaker systems in the first three chapters must be transformed into a neural mapping of the skull (fourth chapter), to give it the capacity to analyze an ultrasound technology which rewrites the rules of distance, connection and spatial transgression.

Until now, it has been argued that the temporal and spatial investigative channels

constitute the methodology of the thesis. The viral channel, the third and final mode of examination, completes the structural formatting of the text. It is convened to contribute to the transmission of original knowledge on the co-development, propagation and mutation of ideologies and wave technologies through the interaction of civil and military contexts; on the subtle and impressive movements that negated our ability to clearly differentiate the two spheres. So that the arguments advanced throughout this study do not become dualistic discussions between the temporal and / or spatial nature of waveforms, the viral channel is a third-party analytic device that helps bypass binary reflection on the landscape. sound. Avoiding such structural failures is crucial to crafting a cohesive discourse that is responsive to and aware of its own ability to transform by studying the oscillating, malleable and mobile nature of the soundscape.

The three-channel methodology formats the study such that the first part of each chapter establishes how the physiology of the mass social body and the physiology of the individual body have been influenced, manipulated and tortured by systems-based techniques. speakers. Theoretically (and not literally) the next part of each chapter is the third part (called the viracoustic channel), which bridges and blurs the distinctions between mind and spirit, propagating a spatial discourse that challenges the design. binary that the mind and spirit are differentiated elements. The third subsection is conceptually placed between the first subsection, which examines the physiological effect of waveforms, and the second subsection, which explores the psychological transformations that occur in those who are subjected to frequency strategies. Just as the sonic range of frequencies is between the oscillation thresholds of infrasound and ultrasound, so, by analogy, this subpart diffuses its conceptual load by elaborating the synthesis and dislocations that occur in the subparts that flank her. Thus the viracoustic chain re-evaluates the cleaving Manichean axioms that are used to explain the soundscape, such as the heard / inaudible, the internal voice / the external command, the music as torture / the music as pleasure. Just as the sonic range of frequencies is between the oscillation thresholds of infrasound and ultrasound, so, by analogy, this subpart diffuses its conceptual load by elaborating the synthesis and dislocations that occur in the subparts that flank her. Thus the viracoustic chain re-evaluates the cleaving Manichean axioms that are used to explain the soundscape, such as the heard / inaudible, the internal

voice / the external command, the music as torture / the music as pleasure. Just as the sonic range of frequencies is between the oscillation thresholds of infrasound and ultrasound, so, by analogy, this subpart diffuses its conceptual load by elaborating the synthesis and dislocations that occur in the subparts that flank her. Thus the viracoustic chain re-evaluates the cleaving Manichean axioms that are used to explain the soundscape, such as the heard / inaudible, the internal voice / the external command, music as torture / music as pleasure. such as heard / inaudible, internal voice / external command, music as torture / music as pleasure. such as heard / inaudible, internal voice / external command, music as torture / music as pleasure.

## Arguments

As noted above, the central argument of the present study is that an epistemic break in the ideology based on speaker systems occurs between the deployment of sound torture at Guantanamo Bay (Chapter 3) and the future direction of sonic pressure exerted by HSS technology (chapter 4). It is argued that the torture techniques deployed at Guantanamo Bay signify the unwinding of repetitive strategies which - since, with the invention of the phonograph in the 1870s, sound could be recorded and reproduced - have themselves become important wave tropes in Western culture. On the radio, we constantly hear songs in "heavy rotation" (see glossary), a sales technique used by record companies. The present study maintains that this civilian technique of rehearsal was co-opted by the military and carried to its ultimate consequences; the increase in rotations, the suppression of silences or conversations between musical transmissions thus transforms an infectious sales technique into a weapon of torture intended to infect the rational system of the mind.

Considering that repetition is the most visible organizing principle of production, storage, distribution and social control in the twentieth century, Attali writes: "The establishment of general replication then transforms the conditions for political control. . It is no longer a question of making people believe, as in representation. But, through direct, channeled control, through imposed silence instead of persuasion, to Silence "(1977: 242). The repetitive streaming of songs from Western musical genres - such as heavy-metal, disco, and country - night and day with the aim of depriving prisoners of sleep, disorienting them and ultimately driving them mad is a perfect embodiment of these practices. of torture, the feelings expressed by Attali three decades earlier. An important objective of this thesis is to monitor, record and analyze mimetic behaviors of military and civilian networks in order to understand how wave strategies and techniques are programmed and transmitted between these coding organisms.

This notion of cultural cooptation brings us to the second important argument made in this study. It is alleged that the assimilation of popular music to a weapon of torture at Guantanamo Bay is emblematic of a more widespread integration of cultural practices, products and tactics into the modus operandi of military organizations. The artistic installation techniques used in military training camps in the United States and Canada (Heys and Hennlich,

2010) and the exploitation of the philosophy of writers such as Paul Virilio, Deleuze

and Guattari by the Israel Defense Forces (Weizman, 2006) come to represent an organized movement of cultural ideology in military practice. This study argues that this drastic change - implemented by the military-recreation complex - in the way that culture (its products, ideas and behaviors) works means

that culture can no longer be seen as a debtor. the resistant, anti-hegemony and left-wing ideology with which it has always been traditionally associated. In other words, it is argued that after Guantanamo Bay, we will never again be able to view music (and by extension culture) in the same way.

The third major argument of the present study is that from 1922 onwards a network of wave techniques and strategies (which testify to corresponding wider cultural practices) was integrated into capitalism - thanks to the efficiency of military-industrial complexes. and military-recreational - to separate, isolate and alienate the subject from the social body of which he is a part. From the example of the factory and its workforce in the first chapter to that of the barracks and the extended family that is the sect in the second chapter, it is shown that the waveforms are deployed to manipulate the behaviors of a smaller number of subjects at increasingly decreasing spatial scales, while, in the third chapter, the example of the torture cell and the isolated detainee illustrates the outcome of this strategy. Unable to further reduce the space occupied by the target subject, the new wave techniques and technologies - symbolized by HSS - are composed to overcome open surround environments and penetrate the hidden cranial spatiality of the subject's brain. Although the single subject remained the target of military wave instrumentality, the external spatiality in which he was assigned was inverted. The ultrasound beam therefore foreshadows the alienating environment - future internalized geography of neuronal flows and transmissions - that its target will inhabit. new wave techniques and technologies - symbolized by HSS - are designed to go beyond open surround sound environments and penetrate the hidden cranial spatiality of the subject's brain. Although the single subject remained the target of military wave instrumentality, the external spatiality in which he was assigned was inverted. The ultrasound beam therefore foreshadows the alienating environment - future internalized geography of neuronal flows and transmissions - that its target will inhabit. new wave techniques and technologies - symbolized by HSS - are designed to go beyond open surround sound environments and penetrate the hidden cranial spatiality of the subject's brain. Although the single subject remained the target of military wave instrumentality, the external spatiality in which he was assigned was inverted. The ultrasound beam therefore foreshadows the alienating environment - future internalized geography of neuronal flows and transmissions - that its target will inhabit. The ultrasound beam therefore foreshadows the alienating environment - future internalized geography of neuronal flows and transmissions - that its target will inhabit. The ultrasound beam therefore foreshadows the alienating environment - future internalized geography of neuronal flows and transmissions - that its target will inhabit.

The crucial proposition of this study is that a wave cartography - cartography of the territorialization of the soundscape by the military-recreational complex - must be composed and arranged in order to make coherent the forms of recording, amplification and resistance. Given the new set of wave policies heralded by HSS technology, this philosophy of frequency mapping will need to re-evaluate the taxonomy and indexical nature of spatial relationships. This discipline must therefore be a wave psycho-geography; a frequency modality which heuristically traces the spatial concerns of the neuronal environment as well as the surroundings of equipment and buildings. As a field of research, it will have the ambitious task of exploring the spatial, psychological, physiological, social, economic and sexual that waveforms have on our subjectivity. Its methodology - as suggested by the structuring of this study - will be multidisciplinary and multi-track. They will create new forms of knowledge on LRADs (see glossary), iPods, Mosquitos (see glossary), Intonarumori (see glossary), megaphones and Acoustic Sequential Arc Discharge Generators (see glossary) - the meta-network of speaker systems through which the rhythms and cadences of power are transmitted, connected and modulated. They will create new forms of knowledge on LRADs (see glossary), iPods, Mosquitos (see glossary), Intonarumori (see glossary), megaphones and Acoustic Sequential Arc Discharge Generators (see glossary) - the meta-network of

speaker systems through which the rhythms and cadences of power are transmitted, connected and modulated. They will create new forms of knowledge on LRADs (see glossary), iPods, Mosquitos (see glossary), Intonarumori (see glossary), megaphones and Acoustic Sequential Arc Discharge Generators (see glossary) - the meta-network of speaker systems through which the rhythms and cadences of power are transmitted, connected and modulated.

## Location

This study is methodologically located on oscillating grounds similar to those of wave psycho-geography explained above, more particularly at the crossroads of spatial, psychological, physiological and viral disciplines. It is an interdisciplinary approach that draws on all of these areas of knowledge but is not subject to any of them in the sense that it does not rely on sets of principles or principles.

predetermined expectations. Steve Goodman's text titled *Sonic Warfare: Sound, Affect and the Ecology of Fear* mobilized related investigative modalities, which, crucially, were deployed from a radically different methodological point of view than that adopted in this study, resulting in the creation of forms of knowledge divergent. While Goodman has chosen to propagate his ideas by presenting fragmentary postmodern style modules, this study develops original knowledge by tracing the wave trajectories that led to the sonic torture techniques deployed at Guantanamo Bay. In this sense, the methodology of this study presents a meta-narrative of wave pressure, the origin of which it locates in the factory, the conflicts to which it is currently plagued in the epistemic rupture (crucial) caused by the torture cell of Guantanamo and the future in the ultrasonic haste of ventriloquistic transmissions.

While creating a viracoustic channel that functions as a nonlinear and ideologically changing device that allows the boundaries between chapters to be crossed, the overall structuring of this study is sequential precisely because the breadth of the research threatens to deviate it. of its narrative axis, axis which finds its most complete expression in the passage from sound efficiency to ultrasonic efficiency. The three fundamental arguments (cited above) of the study depend on the possibility of following the ideological, spatial, technological and political trajectories, on the highlighting of their evolutions between the military sphere and the civilian sphere and on the amplification of subsequent changes in the evolution of wave techniques, that occur when old strategies have reached their peak of usefulness. The methodological imperative of the study - the driving force behind this research and the desire to create original knowledge about the soundscape - explores the complex synthesis of phenomena, interactions, perceptions and indexes which make up any wave event, from listening to music on the radio to ultrasonic broadcasting of information camouflaged in the skull. from listening to music on the radio to ultrasonic broadcasting of information camouflaged in the skull. from listening to music on the radio to ultrasonic broadcasting of information camouflaged in the skull.

This is why the traditional meditative philosophical methodology of writers such as Anthony Storr in his book *Notes for Music and the Mind* (1992) is not used in this study; it does not have the capacity, contrary to the multidisciplinary investigation, to explore the convergences, the mutations and the ruptures which constitute the organization of the sound environment (of the whole range of frequencies and not simply of the audible frequencies). These are only noticeable when listened to from a wide variety of research perspectives. A new methodology, such as that presented in this study, is needed to understand the infectious, disembodied and transformational nature, not only of music, but also of the



waveforms that are located at the limits of perception. For similar reasons, a musicological / sociological methodology such as that used by academics like Jonathan Pieslak in *Sound Targets: American Soldiers and Music in the Iraq War* (2009) was not retained for this study, as the results of this approach are the presentation of statistical models of behavior that are based on an extremely schematic analysis of the causes and wave effects. The creation of original knowledge and detailed theorizations about waveforms, which are necessary to better understand the ephemeral and transformative nature of soundscape spatiality, cannot be recorded through digital diagrams and modes of sound. Anachronistic musical analysis, which are in particular the musicological approaches which do not come into contact with the somatic index of multiform frequency pressure.

After being considered, the wave philosophy linked to the methodological imperatives of socio-economic theory was rejected because it was not considered to have the qualities required to study the spatial and viral composition of the soundscape. If the temporal structuring of the theories proposed by Jacques Attali in *"Bruits"* is important for the methodology of the present study, the arguments he puts forward about the functionality of music are too determined. Attali's assumptions turn the composition into a *fait accompli*, which makes the (uniquely) sonorous instrumentality too smooth and linear from the point of view of the fiscal relationships that he believes exist between musical forms of production and the distribution and the rhythms of the social organization which they announce. Waveforms bleed and spread, that's their nature. As such, the philosophy which expresses all their possibilities will be able to convey their disorderly and chaotic tendencies as well as their capacity to be controlled and directed.

The approach adopted throughout this research is imbued with an ability to discern the spatially transgressive arrangement of frequencies and the strategies that exploit them. Indeed, the methodology employed - although multidisciplinary - is strongly indebted to the methods of inquiry transmitted by geographers such as Henri Lefebvre in texts such as *La Production de l'espace* (1974), by Edward Soja in *Thirdspace: Journeys to Los Angeles and Other Real-and-Imagined Places* (1996) and by Foucault in his essay *"Other spaces"* (1967). Alongside thinkers like Foucault, Soja and David Harvey (2001), Lefebvre presented philosophical reflections on what a methodology of wave psycho-geography might look like, when he developed his theory of "rhythmanalysis" (see glossary) and suggested that space is first perceived by the ear (1974: 200). It is precisely because waveforms must move in space that, more than any other phenomenon, they express the essential transient nature of spatiality and space and the violence inherent in the transgression of borders.

The pressure and force that are expressed through waveforms always seek to expand the interests, presence and action of those who convey them and they do so in a manner analogous to that in which the territory and the space are the object of conflicts and disputes. The methodology used in this study explores the claim that frequency violence is inextricably linked with the notion of extension and, by association, geography; because the wave pressure is always exerted in and on the space and, whether it is static or transitory, what inhabits it. Who says wave pressure inevitably says dynamics of the spatial conflict, that this space is interpreted as being psychological, geographical, social, sexual or economic. This study indicates that associations between sonic warfare, wave pressure and frequency violence were previously unrelated to the dynamics of geographic theory at such an essential level. This is why a multidisciplinary methodology endowed with a main channel of spatial analysis is the method of investigation chosen to amplify and conduct original knowledge on the soundscape and its organization. Postmodern geography and critical thinking on spatial analysis lacks in-depth investigations into how space, territory, and place are denoted by waveforms. This research on how architectural space has been, is and will be amplified, decomposed and modulated by frequencies offers unprecedented insights

into wave spatiality, which advance the disciplines of geographic, architectural and sound studies.

### The functioning of the body-transmitter

It is the discipline of the study of sound that is believed to primarily represent the areas of the sound environment. Since sound, infrasound and ultrasound territories are made up of physical, conceptual, ephemeral, political and geographic attributes, this field of research is necessarily interdisciplinary. This study creates new knowledge in the field of the study of sound by amplifying this diversity of investigative channels and by transmitting new theoretical orientations within this field. A somatic vehicle called "body-emitter" is used to explore these new evolutionary trajectories and is subsequently exploited throughout the text; its conceptual anatomy has been reformatted and those of its parts that produce a resonance effect have been transplanted, so that it reflects and reveals the synthesis of the constituent elements of wave environments.

If the skeletal characteristics of the political anatomy of this body of investigation have been preserved, its consciousness, its limbs, its desires and its nervous system have been taken from it and a set of philosophies taken from the somatic has been grafted to it.

The conceptual surgery performed throughout the present study makes the proposed body a sort of wave mutant - theoretical Frankenstein constructed from parts of a divergent range of writers' thoughts on the somatic viewed from a frequency perspective. It is essential that the body spatialized by the waveforms be grafted into the larger body of Western philosophy (just as it has been recognized that the "body of space" should be inserted into the tradition of Western thought. at the beginning of the last century). Our mutant form will be the arch-nemesis of the post-modern pinup - the fragmented body - as she will integrate a plethora of wave components and orchestrate them into a cohesive voice. In doing so, it will help form a wave ecology that neither scorns nor fear mixing up perceptions, pressures and arguments from all fields of research - from neurology to geography, from sociology to legal studies, from musicology to thermodynamics .

This conceptual surgery begins with the thinker who not only connects the spatialized body to the synthetic body, but who has also been instrumental in the efforts to bring their presences into the continuum of critical thinking. It is therefore from Henri Lefebvre that we transplant the first part of the body of our wave mutant, he who teaches us that "space does not consist of the projection of an intellectual representation, in readable-visible, but that he is first heard (listened to) and acted (by gestures and physical movements)" (1974: 231; [http://www.uppae.fr/wp-content/uploads/2015/05/Uppae\\_LeBris\\_Espace-et-politique .pdf](http://www.uppae.fr/wp-content/uploads/2015/05/Uppae_LeBris_Espace-et-politique.pdf)). Initially, therefore, space for Lefebvre is understood rather than seen and it is this essential affirmation that increases the effectiveness of the body of synthesis as a cartographer and wave ecologist of wave environments. In a spatiality where listening constitutes the predominant mode of cognitive association, it is the ear of Lefebvre's somatic modality which will be grafted onto our carnal structure.

The following procedure concerns the replacement of the eyes and it is therefore towards Michel de Certeau that we must turn, because the ocular system - the cornea, the iris and the pupil - will not be the dominant form of the sensory apparatus that informs our body. The hierarchy of the perceptual apparatus requires a radical revision, given that for de Certeau - who has an insightful vision of our

sensory behaviors - "our society cancels sight, measures all reality by its capacity to show or show itself and communications in travel of the eye. It is an epic of the eye and of the drive to read "(1980, t. 1: 23). The new measurement system proposed by this body of synthesis is vibratory in nature and concerns both what we can perceive and what we cannot register by our sensory organs. De Certeau explicitly affirms that it is necessary to compose an alternative set of relationships in order to be able to understand and speculate on our environment and our movements in our environment. As our mutant subject anticipates new modes of perception of spatiality, of the ego and of the evolution of all the relationships carrying presence, the body-transmitter offers an infectious and affective channel to re-imagine the practices of life. daily.the body-transmitter offers an infectious and affective channel for re-imagining the practices of daily life.the body-transmitter offers an infectious and affective channel for re-imagining the practices of daily life.

So that our investigating body is fully aware that it can transform again, its cognitive device will be provided by the British anthropologist Gregory Bateson who asserted that the "mental world - the mind - the world of information processing - is not limited by the skin "(1973: 429). For Bateson, the notions of perception and activity are not only orchestrated from the inside of the head and delegated to the carnal machinery of the body. They also depend on the modulating and oscillating presence of the subject within the environment and the relationships that are orchestrated by this form of incarnation. The synthetic body-emitter will never be limited by its dermal interface. He will constantly be listening to connections, confluences and echoes,given that his nervous system must be stratified by novelist Thomas Pynchon. The modes of instrumental neurosis which will occur thereafter will enter into sympathetic resonance with the general constitution of the body, which, provided by the modality of the parasite of Michel Serres, will be essential to the transmissible disposition of the subject, because all the newly grafted parts depend their relationship to the new host organism and their relationship to each other. Thus, the flow of the body will be viral, because they will interconnect the new wave organs that have been combined surgically; any idea of prosthetic anatomy is denied, because the viral plasma of the emitting body gradually gives it a coherent shape, without borders and without extension.It is not so much an assembled body as it is a positively infectious body - a subjectivity saturated with viral associations and mutations and third ends.

The essential instincts of our body will be replaced by the appetites of Spinoza, "the bodily conatus, the effort of the body to persevere in its power to affect and to be affected, to persevere in its possibilities. While instinct generally refers to a closed, pre-programmed system where there is no room for change, the appetite is forward-looking and always in tune with the body's relationship to an evolving ecology, with its open relationship "(Goodman, 2009: 70). If our changing subject is to convey to us information about the diversity of modulating factors within the new wave ecology, he will need such a system of innate sensitivities.Because we must endow our body with an unshakeable capacity to connect and to mutate in relation to its environment and the pressures exerted therein, so that "the stress is put, no longer on the body, even in its sense. large, technological, but on its powers - which it can do "(Goodman, 2009: 36). In order for our body-transmitter to also be able to wonder where it can be, it must have a curiosity - an intense desire to understand the hinterland of the sound environment and all those phenomena that vacillate at the limits of perception. To donate the last organ we need and thus conclude our first theoretical operation,we turn to radio wave specialist Heinrich Hertz (see glossary) who "spoke of the narrow sense boundary 'between consciousness and the' world of real things'. He said that for 'a good understanding of ourselves and the world around us, it is of the utmost importance that this frontier be fully explored' "(Johnson & Cloonan, 2009, p. 13).

As indicated, the body-emitter will have to undergo a further transformation, in order to be able to amplify, record and modulate the wave ecology. However, the operations undertaken will not free the somatic from its carnal and intense relationship with the world in which it finds itself. Because what we are proposing is a frequency fiction of the carnal which avoids the fetishism of “transhuman” predictions (see glossary) by writers such as Hans Moravec (2000) who praises the eschatology of the body (and its difficulties. ) through human upgrading - done by scientific and technological means. On the contrary, we are in the process of composing a body which listens to the way in which the political technologies of the somatic are implemented, because it is these extensions and these restrictions of the subject that threaten to "(invest), ( ) the (mark), (de) the (train), (de) the (supplicier), (de) the ( to oblige) to work, (to) (oblige) him to ceremonies, (to demand) signs from him "(Foucault, 1975: 30). When the protagonist of our frequency fiction will be able to detect these perceptible external pressures and these imperceptible external pressures; when he can hear the inaudible, touch the untouchable and his viral mechanics will allow him to predict future forms of socio-spatial organization, this will mean that he will have listened to the wave signal from the forest (3) - a bugle call, not only to arms, but also to ears, skin, hair, bones, neurons, muscles and nerves, to mutate - "the imperative to develop new organs, in order to expand our consciousness and our body to new dimensions, so far unimaginable and perhaps, ultimately, pipe dream" (Jameson, 1991, p. 80).

## CHAPTER 1: A Convergence of Electricity, Grid Amplification and Music: The Influence of Muzak in the Fordist Factory

### Section 1: The first movements of the musical body

At the beginning of the 20th century, after the start of the second industrial revolution (see glossary), there was an explosion in the mechanization of European factories, largely due to the pressure on the rhythms of agriculture, economy and craftsmanship by the advent of the First World War.

Mexican philosopher Manuel De Landa alludes to the need for fluid technological production systems in times of conflict, when he writes: "As the last two great wars have shown, victory lies with the nation most capable of mobilizing its industrial power "(1991, p. 34). As the war accentuated the need for industrialization to organize large numbers of bodies into labor, the cultural and political will to maintain steady production of goods and techniques for improving industrial efficiency took on capital importance. The social sciences, for their part, were mobilized in this effort to

organize and systematize the most economical means of making the individual body and the social body capable of carrying out specific tasks in their workplace. Methods for locating, ordering and disciplining the mass body - what Michel Foucault called the body politic - had already been institutionalized within the prison system and would then be transplanted into industrial environments. Foucault defines this somatic order as "the set of material elements and techniques which serve as weapons, relays, channels of communication and points of support for the relations of power and knowledge which invest and subjugate human bodies. by making them objects of knowledge "(1975: 33). Nowhere is the desire to mark the industrialized body as knowable and controllable capital more apparent than in the monograph published by the American mechanical engineer Frederick Winslow in 1911, *The Principles of Scientific*

Management ( Principles of Scientific Management ), which exposes the technique, later called Taylorism, which contributed the most to shape the capitalism of the twentieth century.

Influenced by military forms of command structures and by the inventions and writings of Charles Babbage (1835) - particularly his defense of the advantages of the "division of labor" - Taylorism was devoted to the organization of bodies and to the maximization of their work potential. This is clearly stated by De Landa, when he asserts that "the methods developed by the military to shorten the chain of command were later exported, through people like Frederick Taylor, to the civilian sector" (1991: 229). In the United States, it was the industrialist Henry Ford who employed the techniques determined by Taylor's studies of time and motion (see glossary). When Ford learned of Taylor's research, it had already initiated and developed the construction of mobile assembly lines in its automobile factories, which resulted in a substantial increase in production and sales. In 1914 he was responsible for introducing a revolutionary systematic re-evaluation of wages, which allowed the skilled worker to double his wages. It took another eight years for the reduced workweek to come into effect, which only added weight to Ford's observations that the rate of labor turnover at its manufacturing plants had become so low that it was not worth evaluating (Ford and Crowther, 1922). Not only did Taylor's monograph become the industrial manual of scientific rationalism, helping to shape what would become Fordist capitalism or Fordism, but again she announced the use of music media inside the factory for the purpose of achieving manufacturing goals and respecting industrial practices established by management. Although it is accepted that the successive transformations of the organizational principles of Fordism became the dominant model of the practice and understanding of mass production and consumption in the United States between the 1940s and 1960s, one can say that workers were influenced earlier by this model. The large increase in weekly wages (which doubled to \$ 5 a day) and the drastic reduction in the price of automobiles were intended to allow the worker to have enough money to be able to buy his own car and thus stimulate the economy. automotive market impact and potential growth. In line with this fundamental improvement in the condition of workers were the strategic restructuring of the working week (shortened to 48-40 hours) and the introduction of the principle of guaranteed employment. By 1922, all three of these anxieties - those of money, time, and the future - were gone, and the resulting employment practices became the dominant tenets within the Fordist factory. In line with this fundamental improvement in the condition of workers were the strategic restructuring of the working week (shortened to 48-40 hours) and the introduction of the principle of guaranteed employment. By 1922, all three of these anxieties - those of money, time, and the future - were gone, and the resulting employment practices became the dominant tenets within the Fordist factory. In line with this fundamental improvement in the condition of workers were the strategic restructuring of the working week (shortened to 48-40 hours) and the introduction of the principle of guaranteed employment. By 1922, all three of these anxieties - those of money, time, and the future - were gone, and the resulting employment practices became the dominant tenets within the Fordist factory. In time and in the future - had vanished and the resulting employment practices became the dominant tenets within the Fordist factory. In time and in the future - had vanished and the resulting employment practices became the dominant tenets within the Fordist factory.

Despite these advances in the working conditions of unskilled workers, many began to criticize the problematic work dynamics within the Taylorist-inspired Fordist factory. None was more incisive than the political theorist and Communist Antonio Gramsci, who became famous for having declared that industrialization had succeeded "in making the whole life of the country (the United States) revolve around production. Hegemony is born in the factory "(cited in [https://cras31.info/IMG/pdf/gramsci\\_textes.pdf](https://cras31.info/IMG/pdf/gramsci_textes.pdf)). In one of his many insightful analyzes of the plight of

the worker in his degrading role as a machine, Gramsci scholarly deconstructs the suppression of certain important psychological aspects of the work process and their submission to the body's singular ability to perform actions. monotonous and repetitive within the framework of the anemic technical regime of the conveyor belt and the associated mechanisms. In the summary that follows, Gramsci makes it clear that he viewed the process of constructing impersonal, standardized mechanical bodies - which in many ways reflects the status of produced objects - as a process that began with industrialization. "Taylor," he asserted, "indeed expresses with brutal cynicism the purpose of American society:develop to the highest degree in the worker mechanical and automatic attitudes, break the old set of psychophysical links of skilled professional work which required a certain active participation of the intelligence, imagination, initiative of the worker, and reduce the operations of production to their physical and mechanical aspect. But, in reality, these are not original novelties, they are only the most recent phase of a long process which began with the birth of industrialism itself (...)"and reduce the operations of production to their physical and mechanical aspect. But, in reality, these are not original novelties, they are only the most recent phase of a long process which began with the birth of industrialism itself (...)"and reduce the operations of production to their physical and mechanical aspect. But, in reality, these are not original novelties, they are only the most recent phase of a long process which began with the birth of industrialism itself (...)"

Womack, Jones and Roos sum up the historical and enduring importance of Ford's industrial methodologies, when they suggest that "twice in this century (the auto industry) has changed our most fundamental ideas about how we manufacture things. And the way we make things determines not only how we work, but also what we buy, how we think and how we live "(1990: 11). Most relevant for this thesis is how, in the early days of the automotive industry, factories, among others, shaped and composed the industrial workspace, the rhythms of work, the psychological breakdown of workers subjected to work alienating, collective and individual movements of the workforce with regard to automated processes and,ultimately, the workers' relationship with the soundscape inside the factory. All the relational dynamics that shape these criteria were irrevocably altered when the introduction of the electrically powered mobile assembly line was touted as the automated conductor of the rhythms, techniques and power of workers. As the sound environment of the worker, from natural, had become mechanical, the continuous flow of the conveyor belt became a sound signifier of this change. Never allowing silence or interruption, the industrialized sound environment had become repetitively noisy; he constantly demarcated the factory's territory and dumped its contents into the street and beyond.All the relational dynamics that shape these criteria were irrevocably altered when the introduction of the electrically powered mobile assembly line was touted as the automated conductor of the rhythms, techniques and power of workers. As the sound environment of the worker, from natural, had become mechanical, the continuous flow of the conveyor belt became a sound signifier of this change. Never allowing silence or interruption, the industrialized sound environment had become repeatedly noisy; he constantly demarcated the factory's territory and dumped its contents into the street and beyond.All the relational dynamics that shape these criteria were irrevocably altered when the introduction of the electrically powered mobile assembly line was touted as the automated conductor of the rhythms, techniques and power of workers. As the sound environment of the worker, from natural, had become mechanical, the continuous flow of the conveyor belt became a sound signifier of this change. Never allowing silence or interruption, the industrialized sound environment had become repetitively noisy; he constantly demarcated the factory's territory and dumped its contents into the street and beyond.

In 1922, the same year in which the Fordist doctrine of functional specialization and the division of labor spread and at a time when working conditions for the workforce had relatively improved, wire radio was

use of the spatiality of the automated factory. Created by US Major General George Owen Squier, the technology made it possible to connect factories, restaurants, small businesses and individual subscribers to radio broadcasts. Having overcome the problems of signal loss which too regularly affected broadcasts transmitted by means of radio waves, wire radio provided a continuous musical program, without commercials or interruptions, for which Squier did not hide his contempt. Nor could he stand the waves of privatization which had slowed the development of the telephone industry. Thus he patented his invention on behalf of the American public, in the hope that, by legally allowing any American to explore and develop it, improvements would be made.

Radio is often hailed for the driving role it played in the production of a coherent mediated social body by the simultaneous transmission of sound communications to large numbers of people over long distances. This desire to destroy space and time by technological means has long been a priority in the continuum of human ambition (this desire to break the spatio-temporal linearity is illustrated by the public development of the Internet by the US Army over the past three decades). The invention of wire radio would contribute to a certain extent to the formatting and shaping by sound of this coherent social body in the form of labor in its industrial environment. Squier did not live long enough to witness the first successful application of its broadcasting technology - to which it had meanwhile given the name muzak, by which it has been generally known ever since (see glossary) - in retail outlets. sales in New York in 1936. Soon after the sale of this technology to Warner Brothers and then to William Benton, World War II broke out and the ability of the muzak to help orchestrate and direct the rhythms of work in factories became evident. as it established itself as the natural soundtrack of the manufacturing complex environment. Soon after this technology was sold to Warner Brothers and then to William Benton, World War II broke out and the muzak's ability to help orchestrate and direct the rhythms of work in factories became evident as it developed. it stood out as the natural soundtrack of the manufacturing complex environment. Soon after this technology was sold to Warner Brothers and then to William Benton, World War II broke out and the ability of the muzak to help orchestrate and direct the rhythms of work in factories became evident as it stood out as the natural soundtrack of the manufacturing complex environment.

The electrically powered hard-wired arteries that carried music to all parts of the workplace became the sonic equivalent of the electrically powered assembly line that used and demarcated every space in the factory. The entire spatiality of the building was composed around the sequence of the production process of the assembly line. No industrial manufacturing space was spared by the logic of movement, rhythm and repetition of the assembly line. Thus, the factory space and its open layout deconstruct the cellular logic of the spatial organization, because the assembly line must be freely accessible to mark and touch each space, each subjectivity and its vocation is to bring together all those who are present around its modal logic of diffuse transience. The repetition imposed on this flow brings the body into a direct relationship with the movement, for the music orchestrates the body in a long symphony of staccato maneuvers.

In the new musical soundscape, rhythms, spaces and workers were linked by a cellular melodic structuring of time as the working day was reorganized and categorized by the harmonious formulas of the muzak and by the (musical silences) ) (the word is put in quotation marks because a factory was never silent unless machines were shut down) between music programs. This is how the architectural form of the cell, which is so important in Foucault's analysis of the history of the prison in "Surveiller et punir" (to such an extent that he declared that "the space of disciplines is always, fundamentally, cellular" [1975: 145]), was redeployed by the muzak in a comparable way, that is to say in the form of waves, in

the temporal ordering of the sound environment of the factory. As a result, the cellular programming of silence became a way of producing temporal, physiological and psychological effects within the factory and a way of classifying the logic of sound that preceded or followed them.

Analogous to the spatial networking capability of the conveyor belt, the wires of the speaker system construct and rationalize the architecture of the industrial sound environment by means of a new trans-cellular scheduling system. The speakers at the end of each set of wires became the sound portals through which workers entered and left the tangled soundscapes of natural machine noises and the amplified camouflage of parasitic music programming. Viral in nature, the epistemic modality of the soundscape created by the speaker system demanded that the systemic architecture of the spatial logic of capital function as a vector.

In these conditions, the factory finds itself strewn with a new nervous system, a network of threads capable of propagating and redistributing its sound load. The first edgy architecture of the industrial workplace was now able to cater to those within its walls. From the start, this sensory apparatus was effectively capable of restructuring the sound spatiality of the factory, which, until then embodied by the dislocated and chaotic sound by-products of the machines, was made submissive and predictable. Just as Ford was the first to use an electric motor to drive the assembly line, Squier's muzak was the first functional industrial music to be amplified and played by electricity throughout the work environment. In this way, electricity radically re-spatialized the flow of manufacturing in the Fordist workplace and, for the first time, allowed a piece of music to circulate simultaneously in all spaces of its architecture. As such, the spatial code of the industrial soundscape was rethought by Squier as the relationships between the peripheral latitudes of the factory and the centralized concerns were recomposed by the radio-controlled pathogens of the muzak. the spatial code of the industrial soundscape was redesigned by Squier as the relationships between the factory's peripheral latitudes and centralized concerns were recomposed by the radio-controlled pathogens of the muzak. the spatial code of the industrial soundscape was redesigned by Squier as the relationships between the factory's peripheral latitudes and centralized concerns were recomposed by the radio-controlled pathogens of the muzak.

#### Rhythmic sequencing of audio analgesia

The rationalization of time and space by the logic of capital had found its soundtrack in the muzak. For writers like Joseph Lanza, however, the muzak in the factory was more about healing the workers than organizing them, as evidenced by his assertion that "music was not entertainment but an 'audioanalgesia' aimed at killing the pain caused by the urban din" (2004: 11-12). In this analysis, the diffusion of muzak in the workplace is presented as a gesture of harmonic empathy on the part of the management, a wave-like method of appeasing the body in its new inhuman relationship with machines. This assertion is problematic in more than one respect. To begin, it is extremely revealing that the pain referred to by Lanza was not so much caused by the body being subjected to a new mechanical soundscape as by the need to respect those noisy new territories composed of staccatos that made the body a numb note throughout the production line symphony. The muzak would eventually become the lullaby of the automaton, the dystopia of random noise being covered by the capitalist utopia of repetitive melody. The factories were therefore the places where these incongruous modalities of sound spatiality would merge for the first time to produce bodies subject to a rule that went against their



natural rhythms; it was therefore the forced industrial choreography of the working day that required musicality in the sound environment to shape the new rhythms and mechanized movements of the body. The territory of the soundscape was cleverly understood by the French politician and economist Léon Faucher (cited by Foucault [1975: 246-7]) as being the spatiality where it was easiest to perceive the disjunctive balance of power between the machine and the body, when he gave us this invitation: "Enter a spinning mill; hear workers' conversations and the hiss of machines. Is there in the world a more distressing contrast than the regularity and the anticipation of these mechanical movements, compared with the disorder of ideas and mores, produced by the contact of so many men, women and children? The predictability of mechanical movement became the kinesthetic cornerstone of industrialization's relationship to the body, structuring and taming its activities from the minute employees arrived at their workplace until the minute they left it. According to De Landa (1991: 138), this process of subjecting the organic unpredictability of the human body to machine logic had been integrated into military practice for a very long time. This is what he affirms: "The military process of transforming soldiers into machines, together with campaigns aimed at organizing the management of human bodies (in military hospitals) made it possible to obtain a great deal of information on the internal mechanisms of the body.'The great book of the man-machine' was both the outline of the human body created by physicians and philosophers and the instruction manual for obedient individuals produced by the great Protestant military commanders - Maurice de Nassau, Gustave Adolphe and Frederick the Great, etc. De Landa maintains that the military-industrial complex materialized after centuries of dialogue, practice and logistical exchanges between the civilian economy and its military apparatus (its army). As economic and military organizations transformed and mutated according to their exchange relationship, it became clear that military inventions such as muzak could also contribute to the industrial organization of the labor body in order to support directly the war efforts. The ultimate goal was to have objects made up of interchangeable parts mass produced by a workforce that was itself dispensable and - through music - standardized; a set of pioneering techniques that highlight the contemporary obsolescence inherent in the production and distribution of music, architecture and objects in general.

The standardization of music marked the first historical attempt to quantify, categorize and classify waveforms by their functional arrangement in an industrial environment. This frequency ordering also concerned the movement of workers' bodies at specific times of the day (and night) and, as such, finds its *raison d'être* in work. the "scientific" logic which is at the crossroads of industrialized temporality, somatic engineering and architectural routines. While elucidating the founding principles of the penitentiary system, Foucault (1975: 139-40) identifies disciplinary strategies and techniques that would then be transferred to the industrial domain of the workplace. In the following quote, he clearly explains how the body was to be subjected to political, social and utilitarian political methods: "The human body enters into a machinery of power which searches it, disarticulates it and recomposes it. A 'political anatomy' which is also a 'mechanism of power' is emerging; it defines how we can have control over the bodies of others, not just so that they do what we want, but so that they operate as we want, with the techniques, according to the speed and the efficiency that we determine. The discipline thus produces submissive and exercised bodies, 'docile' bodies ". A 'political anatomy' which is also a 'mechanics of power' is emerging; it defines how we can have control over the bodies of others, not just so that they do what we want, but so that they operate as we want, with the techniques, according to the speed and the efficiency that we determine. The discipline thus produces submissive and exercised bodies, 'docile' bodies ". A 'political anatomy' which is also a 'mechanics of power' is emerging; it defines how we can have control over the bodies of others, not just so that they do what we want, but so that they operate as we want, with the techniques, according to the speed and the efficiency that we determine. The discipline thus produces submissive and exercised bodies, 'docile' bodies ".

To further reflect on the “docile body” it is helpful to refer to De Lanza's concept of audio analgesia and explore the composition of the numb body. Lanza inadvertently stumbles upon the notion of the calming body - the body that wants to kill pain by using music to soothe its industrial organs. The body is laid bare, vulnerable in its new composition, awaiting sound operations. What is interesting here is that the process that Ford applied to production and mass consumption, namely its standardization system - of manufacturing techniques and components - was also applied to the sound environment in order to "obtain a recorded spatiality of interchangeability and repetition. Serial numbers were inscribed on objects such as guns and cars, so that they could be classified and easily changed or repaired if necessary. In the production of the wave object that was the muzak, all the quarter hours of the working day were also serialized and categorized in much the same way, in order to be able to decompose, replace or repair the muzakales beaches, if they were considered dysfunctional (for example, because they were too stimulating or too little stimulating for workers). Just as the conveyor belt moved the object repeatedly so that it could be machined step by step, so the muzak transported sound parts one after the other in cycles of fifteen minutes, at the end of which was made a sound object which acted on the employee. The process is almost an inverted reflection of the conveyor belt technique, an embryonic wave heterotopia where all parts of the scientific logic of the muzak can be included in any song, as each of them propagates a related functionality. All other songs played during the fifteen minute segment, hour by hour, day by day. Simultaneously, on the fringes and at the crossroads of music, industry and social sciences, the muzak becomes an audiotopia - the sound equivalent of the contradictory mirror of which Foucault makes the paradigm of heterotopia. The muzak reflected the power of music to unite, motivate, to shape models of economic and social behavior and to compose somatic rhythms, but nevertheless it had no social connotation outside the workplace, which at the same time made it an unreal wave spatiality, because its contradictory identity, which resided in the fact that it expressed both the unity of employees and a logic of industrial work, meant that it was both a utopian analgesic and the dystopian agent of the embodied discipline. meant that she was both a utopian pain reliever and the dystopian agent of embodied discipline. meant that she was both a utopian pain reliever and the dystopian agent of embodied discipline.

By trying to quantify, temporalize and rationalize what was previously considered to be the most unscientific of spaces - the soundscape, the muzak aimed to make the undulating territories knowable, controllable, perceptible and available for use. indexing and stimulating human actions within their emotional limits. The body becomes the object of scrutiny, affect and, ultimately, control within those newly defined experimentation sites that constitute the industrial workplace. “The body,” writes Foucault, “by becoming a target for new mechanisms of power, offers itself to new forms of knowledge. Body of exercise, rather than speculative physics; body manipulated by authority, rather than crossed by animal spirits; body of useful training and not of rational mechanics, but in which, by that very fact, a certain number of requirements of nature and functional constraints will be announced” (1975: 157). The working body of the worker, who, alienated from the objects he produces and who, to quote Georg Lukacs, is "incorporated as a mechanized part in a mechanical system" (1922: 95), finds himself in a newly composed sound environment. new collective rhythms and coordinated movements. Such a somatic organization echoes the strategy of the production chain, a context that Georg Lukacs defines as "completed and functioning in total independence from him, to whose laws he must submit" (2002: 95). As the muzak ensures that these new laws, graphs and maps are consigned to libraries of knowledge, which aim to perceive, predict and ultimately know the behaviors of the organism, the somatic is recomposed into hitherto unknown waves of industrial movements. Through the filter of the muzak, the music was designed to draw the body in and bend it to relationships with disciplinary methods that would render the industrial subject even more unable to act independently in his workplace. music was

designed to draw the body in and bend it into relationships with disciplinary methods that would render the industrial subject even more unable to act independently in the workplace. music was designed to draw the body in and bend it into relationships with disciplinary methods that would render the industrial subject even more unable to act independently in the workplace.

### Transnational harmonies

Just as the muzak's "multiplexing" technology (see glossary) became cable - one of the ubiquitous communication technologies that gave rise to the notion of a global village (see glossary) - so Fordist standardization techniques became the modern practices that led to what we today call economic globalization within capitalism. Just as Squier dreamed of being able to amplify music in workplaces and homes across the United States and around the world, so Ford helped usher in a set of economic principles that defined an era of 'transnational exchanges. It was through the establishment of information systems such as cable and industrial mass production processes (starting with Fordism) that notions of what constituted a nation, territory and community irrevocably changed.

The American sociologist Saskia Sassen (1998: XXVIII), who follows a similar reasoning, points out that "(l) a globalization - as illustrated by the spatial economy of the advanced information industries - denationalizes the national territory. This denationalization, which, to a large extent, materializes in large cities, has become legitimate for capital and has indeed been presented in an advantageous manner by many government elites and their economic advisers".

By redefining the spatial dynamics of the soundscape and the landscape, industrialization and its concomitant information and productivist technologies definitively abstracted our relationship with the body and its place among waveforms. For the first time, the sound - with the secret intention of organizing the rhythms of the workers in space - was amplified on a large scale, announcing in the sound environment the ways in which bodies would be moved en masse through globally inspired treaties such as the North American Free Trade Treaty (NAFTA) (see glossary). Karl Marx and Friedrich Engels (1848: 18) were the first writers and philosophers to realize that capitalism would in the long run turn into a system of global expansionism, when they insightfully predicted: "What makes the characteristic mark of the bourgeois age is the incessant upheaval of production, it is the relentless upheaval of all social conditions, it is perpetual insecurity and agitation. Broken social ties, immutable until then and frozen in their rust, with their procession of ancient and respectable ideas and beliefs; worn out without even having had time to solidly ossify, the links of recent formation... The need to open ever wider outlets for its products incites the bourgeoisie to a frantic race over the surface of the globe. It must insinuate itself everywhere, install itself everywhere, hang up the network of its exchanges everywhere" [1901: 17-8]. Particularly relevant to this study is the last sentence of this quote, which could apply to the muzak and to the will of its creator to correlate a dense mass with the programming of a scientifically manufactured sound environment. The range of musical programs offered by the muzak - soundscapes designed for the workplace, home, and leisure time - demanded from those who listened to it permanent connection and validation, so that it could spread and proliferate. . Adherence to globalization does not demand so much according to Marx, for whom history would come to an end when Western technological development took place at an exponential rate. The rapid expansion that would ensue would lead to replication of the same processes and a subsequent drop in manufacturing and selling costs, which in turn would lead to lower profits. Using his insightful economic analysis, Marx predicted that the entrepreneurial answer to this puzzle would be to have goods manufactured in less technologically less developed countries, in regions where labor, land and resources available were cheaper, which would guarantee entrepreneurs higher profit margins and at the same time allow them to create economic systems based on global

logics of geographical appropriation. Transforming the less developed cultures with which it came into contact, the process of globalization would inevitably replicate the social and economic dynamics of the more technologically advanced Western states where it had emerged. This, in the mind of Marx, would lead all nations to dissolve into a progressive global matrix before the inevitable transmutation into a global communist system.

For globalization theorists such as Sassen, "globalization is a process which generates contradictory spaces, characterized by contestation, internal differentiation, continual border crossings" (1998: XXXIV). This notion of connected spaces which are by definition contradictory recalls the soundscape of the muzakale factory - the blueprint of industrial globalization - and the attempt to suppress noise and dissonance through melody and harmony. The muzak proposed to deny the haphazard, chaotic and disturbing nature of the industrial soundscape, instead arguing in favor of military-inspired technologies that could produce new malleable soundscapes; frequency formulas that could be arranged to work in any geographic context and orchestrated in such a way as to ensure orderly collective reasoning and harmonious compatibility in everything related to social life, leisure or working conditions. The context of the soundscape created by the muzak is therefore a context which produces new contradictory compositions, based on dynamics that were previously understood as oppositional, that of noise (of machines) and that of melody (of muzak). By electricity, the spatial partitions of juxtaposing aesthetics that we so readily accept today - that of harmoniously organized sound (i.e. what is connected) and that of randomly discordant cacophonies (i.e. what is alienated) - were for the first time forged into each other within the factory, the worker's body becoming the anatomical mixer that served as a channel and amplifier at all frequencies.

## Section 2: The industrial logic of "everything is in the head"

At the end of the 19th century, it was in cathedrals and churches that the mass social body gathered. Within these architectures, religious practice and instruction and community bonds were made manifest and validated by groups of believers who celebrated the visible signifiers of the faith - the cross, paintings, scripture - and, perhaps, more importantly, the frequency signifiers - choral singing, organ recitals, prayer, the very low infrasonic rolling frequencies of the bass notes of the organ, which created a sense of dread and apprehension in many believers. When industrialization took place and factories and workshops offered the mass social body new architectural places of gathering, wave techniques used to organize large numbers of people were transferred from the place of worship to the workplace. Aware that the methods used by religion to spatialize and territorialize the soundscape were assimilated by industry, Lanza argues that "modern capitalism has defeated religion. If the background music was enough to orchestrate the houses of God, why couldn't they orchestrate the trading houses? (2004: 11-12) Another way of looking at this rhetorical question would be to rephrase it as follows: As religious values were pushed into the background of everyday life by modern capitalism, how did music help orchestrate the psychological demands of business houses to the detriment of the needs of the houses of God? As a space for the diffusion of waves, the church - previously socially consecrated as the most important producer of sound in any city and village - lost its dominance over the architectural soundscape to the profit of industry. Suddenly, the frequency plans that had been worked out by religion were orchestrated by the socio-economic imperatives of capital. Of particular interest for our purpose are wave techniques which aim to psychologically influence and manipulate the mass social body;

practices intended to unite the individual in a collective composition of beliefs, while alienating it through the negation of the sound space necessary for individual expression. As workers developed new relationships with machines, they were drawn to the rhythms of automation instead of those produced by nature. This meant that they had to react to the demands of a factory manager or foreman (who did not want interaction, but simply submission) and no longer to the signs that previously made them sing collectively in the fields or to repeat the words of a priest. It was at this point that the industrial worker began to question the rural and religious belief systems that previously defined the architectures of his existence, so that its relationship to the old wave structures of perception also began to break down.

In the factory, a whole new world of spatialities, temporal modalities, soundscapes and social relations is born. These were partly the result of the repetitive organization that religious systems had given to the working day. As Foucault noted, "(the) timetable is an old legacy. The monastic communities had doubtless suggested the strict model. It had spread quickly. Its three great processes - establishing scansions, constraining certain occupations, regulating repetition cycles - were found very early on in colleges, workshops, and hospitals" (1975: 151). He keeps on. "For centuries, religious orders have been masters of discipline: they were time specialists, great technicians of rhythm and regular activities" (1975:151-2). New dictator of social and working rhythms, Fordist capitalism entered into competition with religious organizations; it was who would succeed in gaining the most followers. Instead of a church and a set of beliefs for life and a factory and a job for life; instead of pious assemblies of the faithful, unions brought workers together to empower them to fight against unjust forms of oppression. The preacher was supplanted by the foreman and, more relevant to this study, the promise of the omnipresent celestial voice of God through the omnipresent music which likewise encompassed all space at all times, for it emanated from the network of factory raised wired speakers. The arrangement of the wall loudspeakers at head height thus imitates the religious longitudinal order of the waveforms in which the "voice of God" comes from "Heaven", a predetermined arrangement which finds its frequency origin in Psalm 18: 13 ("The Lord thundered in the heavens. The Most High uttered his voice").

It is no coincidence that the frequency power relations that were established between the Church and her subjects - the enormous organ pipes that make up the psychologies of respect and fear within the congregation - are found in factory. Part of the function of the architecture of the cathedral is to make the faithful adopt collective models of associated behaviors by creating in them a feeling of threat by the very size of the building in which these commands are transmitted and the same goes for factory. Foucault recognizes this in part, when he asserts that "(the) factory is explicitly akin to a convent, a fortress, a walled city" (1975: 144). What is obviously problematic in this statement, it is his blatant contempt for the divergence of the sound architectures of the two structures. The factory at that time was perhaps the noisiest environment ever created by man outside of the tumultuous cacophony of war and in no way compared to the hushed soundscape of the monastery. The cathedral was part of a sound policy radically different from that of the monastery, a dynamic which had to be relayed by the industrialists who filled the vast air spaces of the factories with amplified waves of authority. The presence of a power greater than the collectively alienated singularity of a human body was thus represented by music, which existed in the space that was previously reserved for the voice of God. The factory at that time was perhaps the noisiest environment ever created by man outside of the tumultuous cacophony of war and in no way compared to the hushed soundscape of the monastery. The cathedral was part of a sound policy radically different from that of the monastery, a dynamic which had to be relayed by the industrialists who filled the vast air spaces of the factories with amplified waves of authority. The presence of a power greater than the collectively alienated singularity of a human body was thus represented by the music, which existed in the space that was previously reserved for the voice

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The spatial sanctity of the cathedral and more particularly of the area above the height of the average man was and still is reserved for the surveillance and sonorous expression of an omnipresent intelligence. At the start of the 20th century, this dynamic unfolded strategically in the churches of capitalism - the factories. While conveying so-called psychological messages of "comfort" to workers as they toiled among machines, the networked speakers subtly reminded every employee that a power greater than them possessed the power to be. amplify their presence in every square inch of the building, from wall to wall, from ceiling to floor. In this set of architectural relationships, the presence of an invisible intelligence is announced. A ripple phenomenon that can spread to any location at any time and that can choose to provide an audible sanctuary or a sonic battlefield in its sole discretion. It is precisely this composition of a frequency presence that creates a feeling of self-monitoring in the industrial subject, because he is constantly informed that he has a passive role - that he is capable of being recorded and that his capacity to action is muffled - in the loudspeaker-fueled power relations envelope of the factory. because he is constantly informed that he has a passive role - that he is likely to be recorded and that his capacity for action is stifled - in the envelope of power relations, fed by the loudspeakers, of the 'factory. because he is constantly informed that he has a passive role - that he is likely to be recorded and that his capacity for action is stifled - in the envelope of power relations, fed by the loudspeakers, of the 'factory.

An important point to emphasize here is that the installation of networked loudspeaker systems in factories at the beginning of the 20th century made it possible to control the sound architecture of a given space and therefore allowed authorized persons to influence, to direct and manipulate the physiology and psychology of its inhabitants. Just as important as the quantitative and qualitative claims about how networked speaker systems influenced workers through their music content is the observation that this technology worked secretly. By their very nature, the hard-wired auditory arteries of the transmission network allowed authorized people to do things that were once considered supernatural, that is to say to have the faculty of hearth present in many spaces at the same time. The orchestration of this decentralized and mediatized spatiality made the architecture of the factory the dynamic theater of industrialization, in which the owner sonorously assigned several roles to the worker as an individualized and alienated actor on a crowded stage. . This worker interprets contradictory roles on an oxymoronic stage which encourages speech as a source of pleasure, but nevertheless inhibits it by stifling the silence with a camouflaged soundtrack. By extending the metaphor chronologically and

technologically, the notion of factory as a theater of industrial operations could lead inversely to the notion of factory as a silent film, in which the worker / actor, directed from above,- parts of the role that a character takes in a theatrical dialogue being replaced by parts of the assembly line - finds himself performing an atomized set of actions and activities that have no discernible meaning in the final production, in front of a (hidden) audience of consumers with whom he has no apparent relationship.

At the top of the charts - The emotional terrain of the worker

In the great production houses of industry, the shifting ground of the status of the emotional and psychological state of workers was objectified as a subject in its own right of phenomenological study. Research and testing was undertaken on cognitive dynamics, and patterns of worker behavior faced with repetitive tasks and taxonomies of interpersonal relationships were formatted to help systematize harmonious functionality. In short, the psychological landscape of the worker was identified as a natural source of energy that needed to be cataloged and understood so that factory owners could make the most of their brand new status and potential. . So,the emotional reserves of the employees came to be regarded as a somatic variety of industrial fuel which had to be extracted and redistributed according to the rhythms and the efficiency demands of the production chain and it is through the diffusion of muzak that this resource was channeled.

In the factory of the 1920s, we hear one of the first attempts to connect a mass neural productivity network to the strategies of influence of the muzak; each mind became a functional benchmark of ultimate industrial efficiency. Just as each worker is simultaneously subjected to the same sound influence for the same duration, so the soundscape acquires its status as a systematic field of relations applicable to all those that exist within it. In the acoustic laboratory of the Fordist factory, epistemological strategies of localization, recording and manipulation of a mass psychology punctuate the sound colonization of a somatic industrial rhythm. As a distributed system, the muzak was formatted to streamline activities and attendance,by capturing and influencing the mind and body of those who were forced to listen. The network system created by Squier had produced a recordable and observable soundscape in the factory, where the topography of the worker's mind was the territory under surveillance. It is thanks to this now cognoscible psychological spatiality that the sequencing of the somatic tempo could be programmed and the rate of productivity controlled.It is thanks to this now cognoscible psychological spatiality that the sequencing of the somatic tempo could be programmed and the rate of productivity controlled.It is thanks to this now cognoscible psychological spatiality that the sequencing of the somatic tempo could be programmed and the rate of productivity controlled.

As has already been said, with the advent of industrialization, the emotional and psychological behaviors of the body during times of pressure, stress and calm became objects of scientific study. A myriad of laws, theories and experiments were presented under the name of industrial psychology in order to prove that the human mind could be influenced and manipulated in the workplace and that the resulting body efficiency rates could. be "improved". The idea of using music as a stimulant in the workplace had been proposed before the development of many of these theories, and by 1915 inventor Thomas Edison had developed a number of ideas about the power of music. music on the individual as well as on the mass body.He carried out experiments to determine whether or not the use of music could reduce or suppress the specific frequency ratios of the large machines in the factory and to verify whether it positively or negatively affected the morale and motivation of the workers. Encouraged by his early discoveries, Edison recognized the ability of music to influence listener behavior and began to take a

keen interest in its ability to direct emotions and actions in the workplace. Edison recognized the ability of music to influence listener behavior and began to take a keen interest in its ability to direct emotions and actions in the workplace. Edison recognized the ability of music to influence listener behavior and began to take a keen interest in its ability to direct emotions and actions in the workplace.

Criteria for experiments undertaken by Edison as part of his research into how formatted musical programs (played by a phonograph) could be used in industrial settings included guidance on how to camouflage mechanical buzzing and hammering with sound. industrial machinery.

Tests in the factory's newly compartmentalized workspaces failed due to variations in signal strength in emerging transmission and speaker technologies. However, it is in this industrial context that we can locate the first notes and amplified compositions of the psychological manipulation of a workforce distributed via a networked system of electric speakers. Never before had it been envisioned to be able to simultaneously broadcast music in a plethora of diverse spaces. Thus, for the first time, nascent speaker technology allowed engineers to think about building soundscapes in multiple spatialities with the same or different content for orchestrated durations.

Edison's research into controlled psychological manipulation of the mass body and its repetitive routines were the first of their kind and provided the superficial "acoustic" imprints (see glossary) of the functional use of sound in industrial architecture.

Two years before George Owen Squier's speaker technology became commercially viable in 1922, Edison and his National Phonography Company had carried out extensive research on the heuristic application of music. Incidentally, Edison motivated his employees and collaborators to squeeze as many functionalities and utility applications as possible from all of his inventions. Given his desire to commercialize the multifaceted effects of music to a wide range of industrial, social and cultural groups, he employed Walter Van Dyke Bingham, assistant professor of applied psychology at the Carnegie Institute of Technology (he would become more late industrial psychologist). Regarding the rich archives of phonographic recordings of the company, the young psychologist's contract led him to study and quantify the effects of music, defined by three fundamental criteria: research on song selection, research on mood changes and research on the influence of music. music on muscle activity. Bingham's earlier psychological and philosophical research revolved around the question of why certain sound arrangements made up the melodic unit and how these melodic stimuli then influenced the motor movements of humans. This convergence of interests for the functional quality of somatic and industrial motor skills between 1910 and 1920 is not without importance for authors like Eleanor Selfridge-Field who documents the efforts to rationalize movements within the industrial workspace. . In her research, she traces how Bingham harnessed the potential of the engine and reconfigured the inconsistent areas of industry into a fluid spatiality of perpetual monophonic flow. Selfridge-Field (1997: 293) goes on to explain how these movements are analogously matched to the movements of the nervous system of the human body, when she quotes Bingham's conclusion that "the motor theory of melody allows for clearly explain the nature of the melodic 'relationship'. Two or more tones are considered to be 'related', when they trigger the same organic response (...) The origin of (...) feelings of 'relation' (can be attributed to) two main forces (...) The first of them, the phenomenon of consonance, is innate (...) But, although the basis of consonance is inherent in the structure of the nervous system and in the acoustic properties of vibrating bodies, the history of music and observation abundantly show that these same innate tendencies are subject to enormous modifications during the life.... "Although the basis of consonance is inherent in the structure of the nervous system and the acoustic properties of vibrating bodies, the history of music and observation overwhelmingly show that these same innate tendencies are subject to



enormous changes over the course of time. existence.... "Although the basis for consonance is inherent in the structure of the nervous system and the acoustic properties of vibrating bodies, the history of music and observation overwhelmingly show that these same innate tendencies are subject to enormous changes over the course of time. existence.... "

The discursive locus which is inferred from all of this is the distributed sensorium of the resonant body. The body, historically influenced by external stimuli, is placed by Bingham at the crossroads of scientific, phenomenological, musical and industrial discourse. His tests consisted of assessing how his subjects' moods changed as they listened to music shows recorded by Edison; it represented the results in the form of graphs and tables; he had accumulated a large number of them. In a follow-up report to Edison dated February 1, 1921, Bingham expressed his hope that his research would yield "new information about the power of music over the human mind" (Selfridge-Field, 1997: 297). October 13, 1920, Bingham announced that a prize would be awarded to any researcher who undertook a "meritorious" investigation on any of the following "relevant subjects":

1. Classification of musical selections according to their psychological effects.
2. Individual differences in musical sensitivity.
3. Types of listeners.
4. Validity of introspection in the study of affective responses to music.
5. Changing moods through music.
6. Effects of familiarity and repetition: durability of the emotions produced by the different types of selections.
7. Effects of different types of music on muscle activity.
8. An experimental study of music as an aid in the synchronization of routine industrial activities.

In 1921, dissatisfied with the direction Bingham's research was taking (the fact that the results of studying subject responses to tests could not directly contribute to the distribution of specific records in Edison's catalog), a vice-president of the company named William Maxwell took the initiative to create a Mood Change Board to address this apparent deficit in utilitarianism. In a one-page table, the subject is asked seven simple questions, including: "What is the most noticeable change in your mood that this test has caused in you (did you go from gravity to joy, joy to gravity, worry to recklessness, nervousness to calm? Etc.) and "please comment on the way you changed your mood" (Maxwell, 1921). Maxwell's "mood tests" were taken so seriously that they were conducted at Yale University, although the analysis of these sound surveys has been reported somewhat fancifully by the New York Sun, whose Eleanor Selfridge-Field (1997: 300) quotes the following prediction: "Music may become useful in the treatment of human illnesses (...) The day will come, predicted at Yale, when pneumonia will be treated untreated. only by the fresh air and malted milk, but by a few winged waltz records. If a man has broken his arm and is worried about it, a military march or perhaps a comic opera extract can be given to him after every meal. Another article was published on the Yale experiment in the Courier Journal of the 22nd, which developed this idea by stating that 'the tests were intended to determine what kinds of music can

be used in the treatment of neurotics' ”

By the 1920s, the desire to understand, classify and explore the psychology of the worker had become firmly anchored in socio-scientific research. The presence, movements and rhythms of the physical body were no longer the only characteristics of the worker whom the management took care to process and order. From a psychological standpoint, the directive that explained management's desire to alter a worker's mood is analogous to how a supervisor can speed up or slow down a conveyor belt or a phonograph. This desire to increase the levels of psychological influence of the company on its workforce was disguised to achieve the seemingly harmless goal of "boosting morale"; by effectively presenting phenomena such as music as collective experimental stimuli that would shape and improve a person's behavior, and by implicitly dangling an improvement in their emotional life, as if the act of listening was more beneficial to workers and businesses.

By redefining the temporality and spatiality of the factory, muzak can be perceived - through the results of Hawthorne's experiments (see glossary) and, by extension, through the 'school of human relations' (see glossary) - as the symbol of the permanent presence, in all places and at all times, of directions ("managements") and of their capacity to evaluate time as a function of sound. In this sense, the muzak becomes the inversion of Jeremy Bentham's panopticon (see glossary) (4) in industry. The networked loudspeakers are dispersed, amplifying and inhabiting all spaces. They propose a peripheral ideology in the workplace rather than the centralized organization of the penitentiary panopticon which observes the surrounding cellular spatiality. The behaviors that result from being subjected to these systems - if read in light of the findings of Hawthorne's studies - are, however, similar. What is most important here is redefining the psychological spatiality of the prison in the case of the panopticon and of the factory in the case of the muzak. In the prison, it is the panopticon which threatens to transform the vision of the voyeur into a relation with the activities of the prisoner, while, in the factory, it is the speaker system which propagates the sound of the authorized persons. in the spatiality of the workplace and in the emotional terrain of the workers' minds. it is the fact of redefining the psychological spatiality of the prison in the case of the panopticon and of the factory in the case of the muzak. In the prison, it is the panopticon which threatens to transform the vision of the voyeur into a relation with the activities of the prisoner, while, in the factory, it is the speaker system which propagates the sound of the authorized persons. in the spatiality of the workplace and in the emotional terrain of the workers' minds. it is the fact of redefining the psychological spatiality of the prison in the case of the panopticon and of the factory in the case of the muzak. In the prison, it is the panopticon which threatens to transform the vision of the voyeur into a relation with the activities of the prisoner, while, in the factory, it is the speaker system which propagates the sound of the authorized persons. in the spatiality of the workplace and in the emotional terrain of the workers' minds. it is the speaker system that propagates the sound of authorized persons into the spatiality of the workplace and into the emotional terrain of the workers' minds. it is the speaker system that propagates the sound of authorized persons into the spatiality of the workplace and into the emotional terrain of the workers' minds.

Systematic attempts to rationalize and predict the physiological and psychological mapping of the worker had been undertaken before the invention of muzak. For example, the James-Lange theory (see glossary) proposed that emotions were triggered by physiological changes manifested by experiences in the world, while Cannon-Bard's theory of emotion (see glossary) supported exactly the opposite. The aim of the multitude of theories of the late 19th and 20th centuries which attempted to understand, systematize and organize the mental behaviors, the psychological activities of humanity, was to rid men and women of their chaotic states of mind, of their capricious habits and their rebellious social behaviors

in order to regulate the movements of each of them and to lead them by a set of socio-scientific motivations. Making all minds think and moving all bodies in unison was and still is the dream of those who want to persuade, produce and distribute the mass body, which is linked to capitalist and military concerns. In 20th century factories, we can hear how the industrial elite standardized the irregular body (of each person) into a repetitive, reproducible production cell. We can listen to how they harnessed cultural production to influence economic outcomes. Orchestrated by the rhythms, the tempos and spatial timbres defined by their mechanical partners and accompanied by the muzak, the mass industrial body of work was recomposed and reinserted into the psychological roles that had just been composed within the fordist choir of the conveyor belt. The attempt at psychological conditioning of the masses by sound was not only heard in the factory or in the sky dotted with Stuka, but also in the radio propaganda that the British and German governments regularly broadcast in an attempt to deceive each other and to increase their own people's level of confidence in the state and the degree of camaraderie that they had. With regard to the capacity of frequencies to promote cooperation and facilitate the compression of multichannel frequencies into a singular rhythm, De Landa (1991: 64) argues that "(p) almost any population whose individual members oscillate or vibrate is capable of attaining a singularity and thus of beginning to oscillate in a synchronized manner. When this singularity is actualized and the rhythms of the whole population are 'catchy', the individuals who compose it acquire a natural esprit de corps. This 'team spirit' allows them to behave as if they were one organization ".the individuals who compose it acquire a natural esprit de corps. This 'team spirit' allows them to behave as if they were one organization ".the individuals who compose it acquire a natural esprit de corps. This 'team spirit' allows them to behave as if they were one organization ".

While it is clear that De Landa here analyzes the ability of military groups to move rhythmically and behave in unity, such research provides a better understanding of where and when the industrial modalities of orchestration of the esprit de corps. It is in the sound environment that we can hear these strategies and techniques bleeding loudly between military and industrial bodies of thought. In the present study, it is the transmissions of the military-industrial complex that we seek to amplify and record as they find new expression and efficiency in the organization of space, bodies and time. by military-recreational complexes.

### Section 3: Disconnecting the Global Village

Throughout this thesis, it is alleged that since 1922, frequency strategies have been used to disconnect and alienate individuals, families and groups from their belonging or relationship to their social networks, their architectural contexts and to their socio-cultural affiliations. For thousands of years, the ear frequencies of music have been understood to have the ability to bring people together to dance, sing and work. Given that we commonly see the ability of music to unite humans in a large number of cultural initiatives, it makes sense to think that such an effective and influential instrument could be used to accomplish activities of a less convivial nature. The muzak disseminated in the industrial factories of modernism could be interpreted as a source of comradeship or consolation, but this interpretation would be superficial and neglect the fundamentally (in) social elements of the muzak, which silenced the workforce, so that there was less communication between the workers. Previously, on farms, songs that spoke of suffering and emancipation through religion and death were commonplace, but, in the factory, these types of soundscapes - like any song that could possibly incite to revolt or dissension - were

frowned upon. New machines were more important to manufacturers than the well-being and health of those who operated them. Most of the time, all forms of music created by employees were seen as interfering with and distracting from the work process. In this sense, the frequencies injected into the factories could be perceived as the initial melodies of alienation. In this way, the muzak came to supplant a sound space full of stories, complaints, laughter, collective dissonances and chatter; the sound components of building relationships and social cohesion that are common among groups who undertake long repetitive tasks. In this way, the muzak came to supplant a sound space full of stories, complaints, laughter, collective dissonances and chatter; the sound components of bonding and social cohesion that are common among groups that undertake long repetitive tasks. In this way, the muzak came to supplant a sound space full of stories, complaints, laughter, collective dissonances and chatter; the sound components of bonding and social cohesion that are common among groups that undertake long repetitive tasks.

As a viral soundscape (which is composed and transmitted to complement, hide, or mutate another set of frequencies in an urban or naturalistic context), the muzak also dissociated workers from their architectural surroundings and from internal and externalized sound markers that consisted of a feeling of movement throughout the day or night. By moving employees away from all the other sound reference points they encountered on a daily basis, the muzak helped to compose a set of disconnected and autonomous working conditions, the success of which rested only on the committed relationship between the worker and the machines that were associated with it. As employees could no longer directly relate to the sounds emitted by the equipment in their workplace, by the people coming and going on the stairs and the workspaces, nor by the sounds outside the factory, they were, each individually, brooded by the muzak, which tried to remove all the factors which could help the worker to mentally adapt to industrial space and time. Lanza acknowledges this attempt to alienate the worker from anything unrelated to his workplace in his daily life, when he writes: "If Taylorism could assess the time lag between when the clerks took their pencils and the one they used to produce their paperwork, the sound engineers could also fabricate their version of the optimal working range" (2004: 27). Each individually, brooded by the muzak, which attempted to remove all the factors that could help the worker to mentally adapt to industrial space and time. Lanza acknowledges this attempt to alienate the worker from anything unrelated to his workplace in his daily life, when he writes: "If Taylorism could assess the time lag between when the clerks took their pencils and the one they used to produce their paperwork, the sound engineers could also fabricate their version of the optimal working range" (2004: 27). Each individually, brooded by the muzak, which attempted to remove all the factors that could help the worker to mentally adapt to industrial space and time. Lanza acknowledges this attempt to alienate the worker from anything unrelated to his workplace in his daily life, when he writes: "If Taylorism could assess the time lag between when the clerks took their pencils and the one they used to produce their paperwork, the sound engineers could also fabricate their version of the optimal working range" (2004: 27). Lanza acknowledges this attempt to alienate the worker from anything unrelated to his workplace in his daily life, when he writes: "If Taylorism could assess the time lag between when the clerks took their pencils and the one they used to produce their paperwork, the sound engineers could also fabricate their version of the optimal working range" (2004: 27).

Once the external or internal sound markers of temporality had vanished, a new dependence on the

owners of the factory came to orchestrate the conditions that signaled the time of the break, the time of lunch and the time of rest. departure. This new wave dependence on management resulted in a further loss of independence for the employee. Without a clear conception of his relationship to the spatiality and temporality with which he is engaged, it is more difficult for man to have the feeling of being able to act on the world and on others, especially if this feeling is based on resistance to or questioning of those who build and apply the rules of said work environment. As the movement of the machines reaffirmed the employee's sense of disorientation by forcing him to move in an automated fashion, the worker was forced to live to the rhythm of their blind synchronicity. The ability of the machine not only to work but also to train the somatic workforce made the mechanical robot to become the fantasy of the production line of the industrial factory. As for the muzak, it became the sonic fantasy by which robots danced with capital, although at the time they were still chaperoned by workers; fifth wheels of the coach who did not wish to participate, but had no choice, because their hands were tied by the choreography of progress. the worker was forced to live to the rhythm of their blind synchronicity. The ability of the machine not only to work but also to train the somatic workforce made the mechanical robot to become the fantasy of the production line of the industrial factory. As for the muzak, it became the sonic fantasy by which robots danced with capital, although at the time they were still chaperoned by workers; fifth wheels of the coach who did not wish to participate, but had no choice, because their hands were tied by the choreography of progress. the worker was forced to live to the rhythm of their blind synchronicity. The ability of the machine not only to work but also to train the somatic workforce made the mechanical robot to become the fantasy of the production line of the industrial factory. As for the muzak, it became the sonic fantasy by which robots danced with capital, although at the time they were still chaperoned by workers; fifth wheels of the coach who did not wish to participate, but had no choice, because their hands were tied by the choreography of progress. As for the muzak, it became the sonic fantasy by which robots danced with capital, although at the time they were still chaperoned by workers; fifth wheels of the coach who did not wish to participate, but had no choice, because their hands were tied by the choreography of progress. As for the muzak, it became the sonic fantasy by which robots danced with capital, although at the time they were still chaperoned by workers; fifth wheels of the coach who did not wish to participate, but had no choice, because their hands were tied by the choreography of progress. As for the muzak, it became the sonic fantasy by which robots danced with capital, although at the time they were still chaperoned by workers; fifth wheels of the coach who did not wish to participate, but had no choice, because their hands were tied by the choreography of progress.

As the newly mechanized factories buzzed with manufacturing satisfaction, muzak technology that would help spark the collective notion of a global village was actively used to alienate employees from their colleagues and, more importantly for our purposes, from their architectural sense of space and place. The muzak, with its duality of capabilities and purposes, is the first example of an electrically generated soundscape that has been generated to play both on the desire for mass communication and on the uneasiness of alienation. . As stated in the introduction, music had always had this double potential in the past, but it had never had such potential for contagion. Indeed, it now aimed to simultaneously affect massive groups of people in divergent geographical areas. The fact that these new broadcast musical soundscapes were unknown to workers was also an important factor, as the initial reactions they elicited must have been nestled in waves of disorientation and surprise. When such technology is implemented, there is always an initial period of adaptation and learning for those who come into contact with it, and in the case of the inexperienced wave bodies that sprang up in factories, there was a time of cultural and somatic metamorphosis. for the first reactions they aroused must have been nestled in waves of disorientation and surprise. When such technology is implemented, there is always an initial period of adaptation and learning for those who come into contact with it, and in the case of the inexperienced wave bodies that sprang up in factories, there was a time of cultural and somatic metamorphosis. for the first reactions they aroused must have been nestled in waves of

disorientation and surprise. When such technology is implemented, there is always an initial period of adaptation and learning for those who come into contact with it, and in the case of the inexperienced wave bodies that sprang up in factories, there was a time of cultural and somatic metamorphosis.

Emily Thompson (2004: 2) comments on this intrinsic modulating and transitional characteristic of the industrial soundscape as follows: "A soundscape, like a landscape, ultimately has more to do with civilization than with nature and, therefore, it is constantly under construction and constantly evolving. The American soundscape underwent a particularly dramatic transformation in the early years of the 20th century. In 1933, the nature of sound and the culture of listening were both different from anything that came before. "

The introduction of muzak into the citadel of repetitive spatially controlled work processes - the factory - was approved and ratified at a time in history when the sound territory of the workplace was relatively unexplored, poorly mapped and politically pristine. In 1922, there were few guidelines, regulations, or laws relating to the soundscape and what to exist within it psychologically, physiologically, politically, or legally, for the body.

In Squier's "taylor-esque" strategy to connect through the omnipresence of musical cycles each worker in the soundscape remained a meta-objective, which was to compose, within the factory, global schemas of repetitive actions, productions and payments which would subsequently expand into a global context as repetitive ideology informed the modalities of distribution and marketing. Such viral coordination and classification of time and space, from the factory to the global networks of expanding industrial capitalism, is the embodiment of Foucault's idea that the micropolitics of the local is transplanted and etched onto the logic map. of global capitalism.

Dependent in part on the sonico-political virginity of the workforce, the first Muzak networks were not interested in the exchanges of micropolitics; what interested them was to define the mass subject and to manipulate it as a single body. The headquarters of the muzak - from which the networks originated and escaped - were hidden from the workers and out of their reach. Exposed to the music played over the loudspeakers, the workers could neither modify its sound, nor slow it down, nor manipulate it, nor destroy it, because they did not even know where it was transmitted. Just as the machines in the factory alienated workers from their work, thus networked music similarly separated the body from its architectural environment by moving workers away from the hidden and inaccessible "transmission center" of control (see glossary). Within these dystopian patterns, the muzakal bunkers of avarice spawned transmission networks that directed information and influenced behavior - cementing the perception of geographic and psychological control that amplified the ideological dominance of the factory owner. . It was precisely detachment - being aware that it existed on the other side of the network interface - that made the worker a passive subject and put the "mass industrial body" (see glossary) at a disadvantage. have no power in the composition, distribution or destruction of (waveform) information.

The carnal cadence of the antenna body

To paraphrase Schafer (1970), the universal symphony that is the soundscape is an endless wave spectacle that simultaneously makes us an audience, a performer and a composer. In the newly

composed soundscapes of industrialization, it is useful for us to situate the emergence of the body-antenna in an industrial context. Energized by electricity, the antenna corps alternated between the promise of future systems of information exchange and the usefulness of the strategies then in force in persuading workers to surrender to the machine. Factory workers were able to become the first bodies to generate these antithetical and divergent wave ontologies, because they have both been the subject of a program that would install silence between them while simultaneously transmitting a premonitory signal of technological prowess capable of shattering space and time through the envelope of human relations. The first effects of the public wired sound system - its development, in resonance with the body-antenna, into a carnal industrial operator who depended as much on sound as on visual - had far-reaching repercussions. The electrical amplification of sound in private, public and interstitial spaces has had important resonance effects over the 20th century. Ultimately, as we will see in the course of this study, ideological routes, technological and psychological speaker systems will take us a detour through a wave network that includes Waco, Guantanamo Bay and the ultrasonic spatiality of the HSS. By connecting these points of reference across the soundscape, we will come to learn how body-antenna capacities provide alternative readings of world events and predict future patterns of social organization.

In the factory, the antenna body finds itself in a socio-political interstice between the promise of technological emancipation from the borders of geography and temporality and the reality of being linked to a rhythmic attrition of industrialized production targets. Spatially shifted and mechanically repositioned in categorized 15-minute muzak segments, this body is disciplined through and by electrically propagated waveforms for the first time. It is observed, documented and analyzed in a new factory, which, scientifically designed, joins the laboratory as a modern place to study the physiological and psychological activities of the body. While learning a spatialized sonic discourse that is organized through the vocabulary of timbre, rhythm and instrumentation, the body-antenna is invited to perceive its new role as that of an element as replaceable as it is subordinate. Foucault (1975: 147) describes the oscillating position of workers in the factory, when he speaks of the composition of the unit in conjunction with the organizing principles of the discipline: "In the discipline, the elements are interchangeable since each is defined, by the place it occupies in a series, and by the distance that separates it from the others. The unit is therefore neither the territory (unit of domination) nor the place (unit of residence), but the rank: the place that one occupies in a classification, the point where a row and a column intersect, the interval in a series of intervals that we can go through one after the other ... The discipline individualizes the bodies by a location which does not implant them, but distributes them and circulates them in a network of relationships. "

The denial of the static location locks the body into a nebulous relationship with its newly mechanized environment. Connected to everyone and everywhere via the conveyor belt, the worker becomes a replaceable singularity in this industrial composition of space, redefined as it is by the new sound discipline orchestrated by the muzak.

Occupying the areas between silence and a mechanically produced sound, the muzak functioned by synthesizing the loss of verbal language and the creation of a definitive wave map and, in doing so, provided another reading of sound spatiality; an unconscious topography of frequencies that can be defined as a "third sound".

The muzak allows us to perceive a soundscape designed to amplify and exist between the undulating spatialities of noise and non-sound. At first, the industrialized workplace inspired fear, because the absence of noise meant stasis, an unwanted interlude in the industrial symphony of constant mechanized movements.

Silence meant an interruption in the production line and therefore a production halt. The offspring of the military and entertainment industries, muzak came into being by embracing the rhythmic nature of the needs of production chains. It has developed by channeling the eschatological desires of workers and buyers and has led us to equate silence with death. Lanza recalls this industrial fear of no sound when he remarks that, "as the industrial revolution introduced the roar of the internal combustion engine and the hum of generators, ventilation systems, riveters and low-powered electric lighting. frequency, silence, where it existed, has become an unwanted anomaly "(2004: 11). Muzak gave rise to dualistic hypotheses about industrial sound and silence by offering new ways of thinking about how spatialities, psychologies, and workplace presences might be orchestrated by waveforms. Just as silence gives meaning to sound, the muzak gave impetus to the notion of the third sound and in doing so it asked us to renegotiate our cognitive relationship with each other. she asked us to renegotiate our cognitive relationship with each other. she asked us to renegotiate our cognitive relationship with each other.

A cognitive mapping of the "audio architecture"

The prophetic hymns to future cultural survival that were the work songs were followed by symphonies of preparation for the industrial environment. This spatial reorganization in the soundscape tells us about the transition from the field and agrarian civilization to industrial civilization and factory and informs us that we need to find new ways to map the psychology and physiology of the workplace and think about our relationship with waveforms. So how to explore, to map and analyze the third sound? How to design a frequency mapping which expresses the movement and mobilization of waveforms at the time when an essentially agrarian society becomes industrial (it has today become a leisure society)? Turning to the website of the Muzak company is instructive here, because, to market their product, "Audio Architecture" (see glossary), it expresses the mapping of space through constructed material metaphors and speculative sound psychologies. (see glossary).

The Muzak Company clearly announces its intentions to functionally use music in contemporary society, and the composition of their audio architectures leaves little to the imagination. She talks about bypassing the conscious and targeting lesser-known areas of the subconscious and emotions. The sound mapping system it implemented in factories has now moved beyond the workplace and extended its acoustic roots into recreation areas, shopping malls and hospitals. For this study, the most relevant intention of the Muzak company in its early days was its attempt to map the soundscape in order to make it knowable and manageable within a predefined field of recording and observation. We thought that when these criteria were met - when sound could be streamlined - the visual and material areas within the factory would more easily accept the logic of the flow of the production line. This form of reasoning, which first concerned the workplace, then applied to other places.

As the first electrically powered waveform mapping system, muzak pioneered new ways of thinking about space, time, function and presence in relation to the wave body. She has developed topographical strategies aimed at tracing and orienting the subject rather than exploring or liberating it, as proposed by the third sound.

To enrich a mapping system capable of exploring the abstract territory of the third sound, it is necessary to be attentive to other theoretical orientation systems. Amplified to confer a certain freedom of action



on the subject, Fredric Jameson's notion of cognitive mapping encourages the wave body to redefine its presence in a network of global relations and thus to escape the subordinate role that the muzak had assigned to it there. almost a century. Colin MacCabe describes the concept of cognitive mapping in the preface to Fredric Jameson's book *The Geopolitical Aesthetic. Cinema and Space in the World System*, as being "the missing psychology of the political unconscious, the political limit of the historical analysis of post-modernism [...] The term is taken from *The Image of the City* by geographer Kevin Lynch (MIT Press, 1960). He uses it to describe the phenomenon by which people make sense of their urban environment. Indeed, it is an intersection of the personal and the social, which enables people to act in the urban spaces through which they move. For Jameson, cognitive mapping is a way of understanding how the individual's representation of their social world can escape traditional critique of representation because mapping is intimately linked to practice - to the capacity of the individual. to succeed in negotiating with the urban space. Cognitive mapping in this sense is the metaphor for the processes of the political unconscious. But it's also the model of how we might start to define the local and the global. It connects the most intimately local - our particular path through the world - and the most global - the crucial characteristics of our political planet (Jameson, 1995: xiv) ”.

Cognitive mapping goes further in terms of the reification of vibrational politics, by transforming our wave body into a socially and politically conscious subjectivity endowed with an implicit perception of space and time and the pressures that are exerted on it. him by those who wish to blunt these tools for understanding the urban. It is in the breaks in this process of transformation, which goes from subjugation to frequencies to understanding our position in the mixture of social partition, that our undulatory subjectivity becomes coherent.

By being plugged into the independently connected domain of the active speaker instead of waiting to be connected - as its passive, submissive twin wants it - the body-antenna signals its willingness to communicate and broadcast, to transmit as well as to receive.

If the idea of employing cognitive mapping to distinguish the third sound seems at first glance to be linked to a sensitivity too visual to discern the echoes of an abstract wave theory, to protect us from this interpretation, it is towards the Wegner's (2006: 267) analysis of Jameson's ideas that we must turn to: "Jameson himself warns against this idea that 'since everyone knows what a map is, we should have added that cognitive mapping cannot (at least in our time) involve anything as simple as a map; indeed, once you know what a cognitive map is for, you need to push all the representations of maps and cartography that are yours out of your mind and try to imagine something else. Slip into the language of the map, it is then, argues Jameson, to give way to the hegemony of the image and the visual (also marked by a resurgence of traditional aesthetics and ethics), which is a central dimension of postmodern ideology.

This reference to over-reliance on primarily visual tropes warns us of the danger of making the same mistake about the notion of cognitive mapping and is why this notion lends itself to soundscape theorizing and exploration. more precise practical parameters of the third sound. The third sound requires us to understand, negotiate, and listen to the historical, present and future soundscape in an entirely new way. As Wegner (2006: xiv - xv) usefully explains, "it is a question of ensuring that the information (, which will always be limited,) is nevertheless sufficient to produce a map which will overlap at certain points. crucial to other interpretation grids and will create the conditions for a political analysis

and more economical. Theoretically, cognitive mapping requires more than just development - it's

basically a metaphor that needs to be decompressed into a series of concepts that would link the psychic and the social. For a comprehensive understanding of the third sound to be possible, the 'other interpretive grids' would surely have to include sexual, aesthetic, somatic, historiographical, emotional and spatial discourse networks. It is only when we interpret from such a multidimensional web of perceptions (the range of means of interpretation that we use every day to understand the visible and material world) that we can 1) understand the historical significance of muzak and its role in the formation of sound mapping parameters; 2) renegotiating the intimate affiliations we have with the soundscape in which we exist every day; and 3) anticipate how our involvement in the third sound can be mobilized to resist those who establish this undulatory spatiality in order to control the absences and presences within it.

Toby Heys, *SONIC, INFRASONIC, AND ULTRASONIC FREQUENCIES: The Utilization of Waveforms as Weapons, Apparatus for Psychological Manipulation, and as Instruments of Physiological Influence by Industrial, Entertainment, and Military Organizations*, translated from English by BK (\*).

(\*) Heys published in 2018 a recast, revised, shortened and slightly popularized version of his thesis under the title *Sound Pressure: How Speaker Systems Influence, Manipulate and Torture Output Type* (Rowman and Littlefield International Limited, London).

(a) See *The Dead Record Office, Art in General*, New York, USA. 2014.

(b) Commissioned in 2008 in the border area between France and Switzerland, the Large Hadron Collider is the largest and most powerful particle accelerator in the world.

(c) "Bank of Hell" is the English term for mock banknotes burned during funerals in many Asian countries to symbolically provide the deceased with money and goods in the afterlife; invented in China at an unknown time, this "currency of the dead" is at the origin of the "currency of the living", issued for the first time on earth at the beginning of the Northern Song dynasty (960-1127) ( see Marc Montoussé, *Monetary and Financial Economics*, Éditions Bréal, 2006)

(d) Dead Record is the name of AUDINT's record company (See <https://c-cyte.blogspot.com/2011/06/audint-dead-record-office-at-art-in.html> ).

(e) "Phantom Hailer" is the name that AUDINT gives to the third phase of the "global militarization of vibrations", in other words of the process of deploying "strategies, technologies and frequency programs developed by military organizations to orchestrate phenomena of tactical haunting in conflict zones" (Steve Goodman, Toby Heys and Eleni Ikoniadou [eds.], *AUDINT— Unsound: Undead , Urbanomic Media LTD*, 2019, p. xi). AUDINT calls the study of this process " martial hauntology" ". "Hauntology" (science of haunting) is a neologism coined by Jacques Derrida in the essay *Specters by Marx* (1993). As a philosophical concept, it refers to elements of the past, which, because they subsist or return in the present, can be compared to ghosts.

The first phase, called "Ghost Army" after the name of the unit of the US army which, in 1944, was,

according to AUDINT (\*), the first armed corps to use special effects and sound decoys in a military theater, lasted until 1965; the second, initiated during the Vietnam War by the psychological warfare operation called "Wandering Soul" ("Wandering Soul"), during which, exploiting the Vietnamese belief that the soul of one who is not buried in his native land will wander forever, the US army broadcast through loudspeakers channels that imitated those of fallen Vietcongs (see <https://vinageoblog.wordpress.com/2019/09/15/raffinement-macabre> -vii-operation-wandering-soul-the-Americans-make-Vietnamese-beliefs-a-psychological-weapon /), ended in 1991, when, thanks to the "War on Terror" led by Washington, the United States Army was the first in modern times (\*\*) to experiment with sound torture techniques , both through loudspeakers to combatants held captive in offshore military complexes and through high-powered directional audio systems such as sound cannons to crowds. This third phase, AUDINT calls it "Phantom Hailer" ("Phantom Megaphone").

The fourth, according to AUDINT, will run until 2056. AUDINT calls it "Ghostcode" ("Ghostcode"), the title of a cartoon transposed by AUDINT from a novel by RM Gonzales entitled *Holo.wars : the Black Cats*(2014) and whose action takes place precisely in 2056: "... societies and nation-states have merged into a single economic and political entity. Human flesh has been removed from the messy equations of political turmoil, resulting in conflict being unleashed by holographic and holosonic forces. The film follows the exploits of Irex2, an outlaw artificial intelligence who tries to escape its undead creators to create by artificial intelligence, before a Colombian Black Hat named Sureshot does. , holographic fighters named AIHolos. Fueled by the sound of human pain, the AIHolo's weapons require massive injections of recorded suffering. As the torment becomes an economy in its own right,Pain © Amps is built to generate a source of sound energy. By amplifying the logic of the 20th century music industry's most successful recipe - recording and selling the sound from poverty-stricken urban areas (from certain urban areas: as far as we know, songs of coal miners don't have never interested record companies, unlike by virtue of the alliance between the scum above and the scum below in rap - the functionality of suffering has been pushed to its maximum. The needle is in the red, but it is the pain that is sought, not the blood... "(By amplifying the logic of the 20th century music industry's most successful recipe - recording and selling the sound from poverty-stricken urban areas (from certain urban areas: as far as we know, songs of coal miners don't have never interested record companies, unlike by virtue of the alliance between the scum above and the scum below in rap - the functionality of suffering has been pushed to its maximum. The needle is in the red, but it is the pain that is sought, not the blood... "(By amplifying the logic of the 20th century music industry's most successful recipe - recording and selling the sound from poverty-stricken urban areas (from certain urban areas: as far as we know, songs of coal miners don't have never interested record companies, unlike by virtue of the alliance between the scum above and the scum below in rap - the functionality of suffering has been pushed to its maximum. The needle is in the red, but it is the pain that is sought, not the blood... ") - the functionality of suffering has been pushed to its maximum. The needle is in the red, but it is the pain that is sought, not the blood... ") - the functionality of suffering has been pushed to its maximum. The needle is in the red, but it is the pain that is sought, not the blood... "(<http://www.audint.net/www/ghostcode/> ; see also Steve Goodman, Toby Heys and Eleni Ikoniadou [eds.], op. cit. )

(\*) In fact, the Russian army had already started to deploy sound weapons during the siege of Stalingrad. To destabilize the German soldiers, a special unit was tasked with broadcasting particularly dismal tango pieces over loudspeakers as well as the throbbing ticking of a clock, interspersed, every seven seconds, with the following message: "Every seven seconds, a German soldier dies in Russia. Stalingrad est un charnier "(see Antony Beevor, *Stalingrad: The Fateful Siege: 1942-43* , Penguin Books, 1998; John Naughton," War mentality: How a man boosted the morale in Stalingrad ", February 28,

2013, [https://www.rbth.com/arts/2013/02/28/the\\_stalingrad\\_battle\\_how\\_snipers\\_boosted\\_soldiers\\_moral\\_23337.html#:~:text=The%20ferocious%20Battle%20of%20Stalingrad,a%20savage%20war%20of%20Torture%20the%20background%20sound%20of,Stalingrad%20is%20a%20mass%20grave.%E2%80%9D](https://www.rbth.com/arts/2013/02/28/the_stalingrad_battle_how_snipers_boosted_soldiers_moral_23337.html#:~:text=The%20ferocious%20Battle%20of%20Stalingrad,a%20savage%20war%20of%20Torture%20the%20background%20sound%20of,Stalingrad%20is%20a%20mass%20grave.%E2%80%9D) )

(\*\*) The idea of producing sound waves, shock waves or other sounds to cause damage is nothing new. In addition to the famous Jericho trumpets, we can point out the kites that the ancient Chinese, from the Han dynasty (200 BC - 200 AD), used to fly above their enemies and whose bamboo pipes which fixed there, when the wind blew through them, made noises so frightening that they panicked and put them to flight (Richard C. Levy and Ronald O. Weingartner, *From Workshop to Toy Store: A Fascinating Inside Look at how Toy Inventors Develop, Sell, and Cash in on Their Ideas*, Simon & Schuster, 1992, p. 46; Sally Wilkins, *Sports and Games of Medieval Cultures*, Greenwood Press, Westport, CT and London, 2002, p. 91; among the various military applications that the ancient Chinese found for this object they had created, we can also cite the "fire raven", a kite carrying incendiary powder and provided with a stick of burning incense attached to it. a wick (Fan Zhilong, "A Short History of Kites", in *China Reconstructs*, vol. 33, China Welfare Institute, 1984, p. 43).

(f) See above.

(g) <https://www.art.mmu.ac.uk/profile/theys/projectdetails/591> .

(h) Ibid.

(i) In addition to AUDINT-Unsound: Undead and Dead Record Office (see supra note a), Heys participated in the writing of the collective work *Infrasense / Viritorium: Viral Projects* (ThirdsoundPress, 2010), of which we do not know absolutely nothing, except that it is accompanied by a DVD; from the collection of essays *Futures and Fictions: Essays and Conversations that Explore Alternative Narratives and Image Worlds that Might Be Pitched Against the Impasses of our Neo-Liberal Present* (Repeater, 2017.) edited by Simon O'Sullivan, Henriette Gunkell and Ayesha Hameed and where he offers "a brief historical overview of the spectral archives of AUDINT, spanning 1922 to 2064, a period (which he calls) 'a century of his zombie'".

(j) The only two to our knowledge are Juliette Volcler, *The sound as a weapon. Police and military uses of sound*, Paris, La Découverte, 2011; id., *Control. How the art of sound manipulation was invented*, Paris, La Découverte, 2017).

(1) Embodied cognition is the theory that many characteristics of cognition, whether human or otherwise, are shaped by all aspects of the organism. Characteristics of cognition include mental constructs (such as concepts and categories) and performance in various cognitive tasks (such as reasoning or judgment). Bodily aspects include the motor system, the perceptual system, the body's interactions with the environment (situation) and the assumptions about the world that are built into the structure of the body (see also <https://www.universalis.en/encyclopedia/incarnate-cognition/>)  
NDT

(2) KT Theus, "Subliminal advertising and the psychology of processing unconscious stimuli: a review of research". In *Psychology & Marketing*, vol. 11, n° 3, 1994 [p. 271-90]; TE Moore, TE, "Subliminal self-help auditory tapes: an empirical test of perceptual consequences". In *Canadian Journal of Behavioral*

Science , vol. 27, n ° 1, 1995 [p. 9-20]; id., "Scientific consensus & expert testimony: lessons from the Judas Priest trial". In American, Psychology Law Society News, vol. 17, n ° 1, 1997 [p. 3-14] both arrive at opposite conclusions, NDT

(3) The allusion is to *The Call of the Wild* ( *The call of the wild* ) by the American writer Jack London, NDT

(4) The panopticon is an architectural form designed by the utilitarian philosopher Jeremy Bentham at the end of the 18th century (\*). He set out the principles in *Panopticon: or, the inspection-house Containing the idea of a new principle of construction applicable to any sort of establishment, in which persons of any description are to be kept under inspection; and in particular to penitentiary houses, Prisons, Houses Of Industry, Work-Houses, Poor Houses, Manufactories, Mad-Houses, Lazarettos, Hospitals, And Schools*(1791). Before reviewing them, it is advisable to outline the philosophy on which they are based: "... man is guided by the search for his personal satisfaction and wants to maximize it always and everywhere. It is a calculator which seeks the maximum of pleasure and the minimum of pain, a small economic machine which wants to increase its profits and reduce its costs. On this basis, it is all of society, all institutions, all laws and standards that must adapt to this data: the goal of all the institutional apparatus and the main objective of the government is to produce the most great happiness for the greatest number by regulating and orienting behavior so that the satisfactions of individual interests lead to the greatest possible amount of happiness for the community. In other words, if we are all "economic men" governed by our interests, the government of society should take them into account. The new system of laws, the scale of rewards and sanctions, the institutional functioning must be designed in such a way that everyone calculates their own interests well, pursues their private ends while taking into account the interests of all. This means that individuals must be both very free in their decisions and in their choices, but that they must be the most strongly dissuaded from acting in a direction contrary to the interests of the community and the most strongly encouraged to make the choices. the best for all. This is the paradox: the supposedly free choices of selfish calculators are constrained from within by hopes of rewards and punishments linked to the normative system instituted and maintained by the government. Everyone calculates and decides for themselves, but the parameters of individual choice are largely determined by the normative framework that has been set by political power. We can see a paradox here. It is explained as follows: if each individual pursues his personal interest, he cannot be trusted since he will spontaneously defend his only selfish interest. It is therefore always necessary that it is under surveillance, and that the government intervenes indirectly in its choices, so that by pursuing its selfish interest, it also contributes to the greater collective good (...) It is therefore for the utilitarian philosopher to build a system of power which leaves individuals free to make choices according to their own maximization calculations, and this in accordance with the principles of economic liberalism of the time, while orienting behavior towards the general interest, which means constantly keeping an eye on "potential delinquents". Freedom and security are therefore two sides of the same political practice. Social space is now fluid, but each agent who can circulate there freely, establish the relationships he wishes, develop his 'business' as he pleases, must have internalized in his calculation of pleasures and pains the relative weight of punishments. and the likely rewards as a result of these acts."(Christian Laval, " Monitor and prevent. The new panoptic society ". In MAUSS 2012/2 review, n ° 40 [p. 47-72]

Let us add that the Benthamite dogma of "the greatest happiness for the greatest number" thanks to the mathematical and now algorithmic quantification of pleasures and pains is based on the "liberal" obsession with the maximization of efficiency and minimization of costs.

Thus begins the preface to the *Panopticon*: "If we found a way to take control of everything that can

happen to a certain number of people, to arrange everything that surrounds them in such a way as to operate on them the impression that we want to produce, to be sure of their actions, of their connections, of all the circumstances of their life, so that nothing could escape or thwart the desired effect, one cannot doubt that a means of this kind was an instrument very energetic and very useful that governments could apply to various objects of the greatest importance" ( Works of Jérémie Bentham, flight. 1, Brussels, 1840, p. 225). The example he chooses to illustrate his point is not taken at random, it is undoubtedly the best: "Education, for example, is only the result of all the circumstances to which a child is exposed. To watch over a man's education is to watch over all his actions; it is to place it in a position where one can influence it as one wishes, by the choice of the objects with which one surrounds it and the ideas that give birth to it. But how can a single man be enough to watch perfectly over a large number of individuals? How could even a large number of individuals perfectly watch over one? If we admit, as we must, a succession of people who take turns, there is no longer unity in their instructions, nor in their methods. It will therefore be readily agreed that an idea as useful as it is new would be one which would give a single man a power of surveillance which, until now, has surpassed the combined forces of many." (Ibid.) A principle can " (put) men in the dependence of one, by giving this one man a kind of universal presence within the confines of his domain" (ibid., P. 226): inspection, in its etymological sense of looking, examining and controlling. The style of construction which allows the inspection to "extend to every individual among the prisoners, at every moment of his life and consequently to every part of the space which contains him" (ibid., P. 229) is the following: two buildings nested one inside the other. The apartments and the prisoners would form the building of the circumference on a height of six floors: one can imagine them like cells open on the interior side, because a not very massive iron mesh exposes them entirely to the sight. A gallery on each floor establishes communication; each cell has a door which opens onto this gallery. A tower occupies the center: it is the home of the inspectors; but the tower is only divided into three storeys, because they are so arranged that each one dominates in full two storeys of cells. The inspection tower is also surrounded by a gallery covered with a transparent louver, which allows the inspector's gaze to dive into the cells, and which prevents him from being seen; so that at a glance he sees a third of his prisoners, and that by moving in a small space, he can see them all in a minute" (ibid., p. 226). This also applies to the guards: "the sub-inspectors, subalterns of all kinds (are placed) under the same inspection as the prisoners: nothing can happen between them that is not seen by the chief inspector. In ordinary prisons, a prisoner annoyed by his guards has no way of appealing to the humanity of his superiors; if he is neglected or oppressed, he must suffer; but, in the panopticon, the master's eye is everywhere; there can be no subordinate tyranny, no secret vexations." (Ibid.) That guards are put on the same footing as inmates is explained by Bentham's belief that " (w) e are all potential delinquents" (cited in Christian Laval, he can see them all in a minute" (ibid., p. 226). This also applies to the guards: "the sub-inspectors, subalterns of all kinds (are placed) under the same inspection as the prisoners: nothing can happen between them that is not seen by the chief inspector. In ordinary prisons, a prisoner annoyed by his guards has no way of appealing to the humanity of his superiors; if he is neglected or oppressed, he must suffer; but, in the panopticon, the master's eye is everywhere; there can be no subordinate tyranny, no secret vexations." (Ibid.) That guards are put on the same footing as inmates is explained by Bentham's belief that " (w) e are all potential delinquents" (cited in Christian Laval, he can see them all in a minute" (ibid., p. 226). This also applies to the guards: "the sub-inspectors, subalterns of all kinds (are placed) under the same inspection as the prisoners: nothing can happen between them that is not seen by the chief inspector. In ordinary prisons, a prisoner annoyed by his guards has no way of appealing to the humanity of his superiors; if he is neglected or oppressed, he must suffer; but, in the panopticon, the master's eye is everywhere; there can be no subordinate tyranny, no secret vexations." (Ibid.) That

guards are put on the same footing as inmates is explained by Bentham's belief that " (w) e are all potential delinquents "(cited in Christian Laval,"The sub-inspectors, the subalterns of all kinds (are put) under the same inspection as the prisoners: nothing can happen between them which is not seen by the chief inspector. In ordinary prisons, a prisoner annoyed by his guards has no way of appealing to the humanity of his superiors; if he is neglected or oppressed, he must suffer; but, in the panopticon, the master's eye is everywhere; there can be no subordinate tyranny, no secret vexations. "(Ibid.) That guards are put on the same footing as inmates is explained by Bentham's belief that" (w) e are all potential delinquents "(cited in Christian Laval,"The sub-inspectors, the subalterns of all kinds (are put) under the same inspection as the prisoners: nothing can happen between them which is not seen by the chief inspector. In ordinary prisons, a prisoner annoyed by his guards has no way of appealing to the humanity of his superiors; if he is neglected or oppressed, he must suffer; but, in the panopticon, the master's eye is everywhere; there can be no subordinate tyranny, no secret vexations. "(Ibid.) That guards are put on the same footing as inmates is explained by Bentham's belief that" (w) e are all potential delinquents "(cited in Christian Laval,nothing can happen between them that is not seen by the Chief Inspector. In ordinary prisons, a prisoner annoyed by his guards has no way of appealing to the humanity of his superiors; if he is neglected or oppressed, he must suffer; but, in the panopticon, the master's eye is everywhere; there can be no subordinate tyranny, no secret vexations. "(Ibid.) That guards are put on the same footing as inmates is explained by Bentham's belief that" (w) e are all potential delinquents "(cited in Christian Laval,nothing can happen between them that is not seen by the Chief Inspector. In ordinary prisons, a prisoner annoyed by his guards has no way of appealing to the humanity of his superiors; if he is neglected or oppressed, he must suffer; but, in the panopticon, the master's eye is everywhere; there can be no subordinate tyranny, no secret vexations. "(Ibid.) That guards are put on the same footing as inmates is explained by Bentham's belief that" (w) e are all potential delinquents "(cited in Christian Laval,there can be no subordinate tyranny, no secret vexations. "(Ibid.) That guards are put on the same footing as inmates is explained by Bentham's belief that" (w) e are all potential delinquents "(cited in Christian Laval,there can be no subordinate tyranny, no secret vexations. "(Ibid.) That guards are put on the same footing as inmates is explained by Bentham's belief that" (w) e are all potential delinquents "(cited in Christian Laval,op. cit.). "The inspector, himself invisible, reigns like a spirit; but this spirit can, if necessary, immediately give the proof of a real presence "(Works of Jeremiah Bentham, p. 226); "... even if he is absent, the opinion of his presence is as effective as his very presence" (ibid.), Because the fact that inmates and guards cannot know when they are being watched prompts them to behave as if they were being watched. 'they were constantly watched, especially since "this spirit can immediately give proof of a real presence, if necessary" (ibid.). To be, or, in any case, to believe oneself constantly under the eyes of an inspector ", this is undoubtedly not, contrary to what Bentham asserts," to lose (...) the power to do evil, and almost the thought of wanting it "(ibid.), but it is certainly adopting a behavior likely to make it believe.This has two consequences for the guard as well as for the inmate: they internalize this relationship to surveillance and develop the habit, not only of watching themselves, but of watching others. Vertical surveillance is thus coupled with horizontal surveillance, which works all the better as it gives the impression to each of those who exercise it that he is the depositary of power, all the more massively little corporal slumbers in almost all the individuals who live in a democracy ("the tyrant tyrannizes thanks to a cascade of tyrannies, tyrannized no doubt, but tyrannizing in their turn", Marcel Conche, quoted in Bernadette Gadomski,not only to watch over themselves, but to watch over others. Vertical surveillance is thus coupled with horizontal surveillance, which works all the better as it gives the impression to each of those who exercise it that he is the depositary of power, all the more massively little corporal slumbers in almost all the individuals who live in a democracy ("the tyrant tyrannizes thanks to a cascade of tyrannies,

tyrannized no doubt, but tyrannizing in their turn", Marcel Conche, quoted in Bernadette Gadomski, not only to watch over themselves, but to watch over others. Vertical surveillance is thus coupled with horizontal surveillance, which works all the better as it gives the impression to each of those who exercise it that he is the depositary of power, all the more massively little corporal slumbers in almost all the individuals who live in a democracy ("the tyrant tyrannizes thanks to a cascade of tyrannies, tyrannized no doubt, but tyrannizing in their turn", Marcel Conche, quoted in Bernadette Gadomski, all the more massively since a small corporal slumbers in almost all the individuals who live in a democracy ("the tyrant tyrannizes thanks to a cascade of tyrannies, tyrannized no doubt, but tyrannizing in their turn", Marcel Conche, cited in Bernadette Gadomski, all the more massively since a small corporal slumbers in almost all the individuals who live in a democracy ("the tyrant tyrannizes thanks to a cascade of tyrannies, tyrannized no doubt, but tyrannizing in their turn", Marcel Conche, cited in Bernadette Gadomski, La Boétie, thinker masked, Paris, L'Harmattan, 2007) and all the more easily as the panopticon "automates and deindividualizes power. This has its principle less in a person than in a certain concerted distribution of bodies, surfaces, lights, looks; in an apparatus whose internal mechanisms produce the relationship in which individuals are caught. The ceremonies, the rituals, the marks by which the more-of-power is manifested in the sovereign are useless. There is a machinery which ensures the asymmetry, the imbalance, the difference. It does not matter, therefore, who exercises the power. » (Michel Foucault, *Monitor and punish. Birth of the prison*. Gallimard, 1975, p. 203, it is us that we underline)

Bentham (himself) expended without counting to develop the project of the panopticon - which had been inspired, by his own admission, by the plans of workshops of shipbuilding which, then in the service of Catherine from Russia, his brother Samuel who, a Freemason, had an eye for everything, had drawn; see Philip Steadman, "Samuel Bentham's Panopticon," <https://discovery.ucl.ac.uk/id/eprint/1353164/2/014%20Steadman%202012.pdf>; Christian Welzbacher, *The Radical Fool of Capitalism: On Jeremy Bentham, the Panopticon, and the auto-icon*, The MIT Press, 2018, p. 17; Matthew S. Anderson, "Samuel Bentham in Russia, 1779-179". In *The American Slavic and East European Review*, flight. 15, n° 2, April 1956 [p. 157-172]). In March 1792 he was finally able to present it to the British government, and in 1794 parliament passed a law authorizing the construction of a panopticon prison (Janet Semple, *Bentham's Prison: A Study of the Panopticon Penitentiary*, Clarendon Press, Oxford, 1993; Leslie Stephen, *The English Utilitarians*, vol. 1, Continuum, London, 2005; Thomas Mackay, *A History of the English Poor Law*, vol. 3, PS King and Son, London, 1899). Ten years later, nothing had been done yet. George III, offended by some of Bentham's writings, scuttled the project for good, by vetoing it. However, as early as 1791, Bentham had sent, in the form of a memoir composed by the Geneva publicist Étienne Dumont, the Panopticon to Garran de Coulon (In the letter attached to the memoir, Bentham wrote: "Let me build a prison on this model, and I make myself a jailer: you will see, in the Memoir itself, that this jailer does not want to salary, and it will cost the nation nothing", *Works of Jeremiah Bentham*, t. 1, Bruxelles, Hauman et Cie, 1840, p. 223), member of the legislative assembly and of a committee for the reform of criminal laws and "the directory of the department of Paris [...] soon distinguished this project among the crowd of those offered to it for the reform of prisons and hospitals. It seemed to go beyond those who had so far obtained the most approvals, either in terms of economy or of public safety: it offered a whole new guarantee for the guard and the keeping of prisoners and for the effectiveness of the means of reform. So its adoption was unanimous, and measures were taken to put it into effect..." (ibid., p. 223), when France declared war on Austria... the project was engulfed in the revolutionary whirlwind. In the first decades of the 19th century, several prisons were built more or less on the model of the Panopticon, but none was identical. Ironically, therefore, the Panopticon saw the light of day, not as an architectural design, prison or otherwise, but, as we have shown above, as a system of social organization, a system whose



effectiveness has been shown. to perfection by new technologies, with this nuance: "Power in networks is not an omniscient fixed point that monitors and punishes as in the panoptic prison of Bentham. It is made up of myriads of mirrors which reflect the image and identity of each accessible to all in a logic of individualistic individuation to which the current neoliberal and 'parcellarist' logic contributes. In other words, we are witnessing the advent of a horizontal panopticism where everyone is watching, controlling, judging and gauging themselves without a general supervisor. Some speak of 'participatory panopticism' or 'omnioptic', others of 'canoptic' (Ganascia, 2009) to designate this model of 'sousveillance' (Mann, Nolan and Wellman, 2003) in which the greatest number observe and sees the greatest number without any central authority "(Simon Borel, "Le panoptisme horizontal ou le panoptique inversé", *tic & société* [Online], vol. 10, N° 1, 1st semester 2016, accessed July 4, 2020. URL :Nolan and Wellman, 2003) in which the greatest number observes and sees the greatest number without any central authority "(Simon Borel, "Le panoptisme horizontal ou le panoptique inversé", *tic & société* [En Ligne], vol. 10, N° 1, 1st semester 2016, accessed July 4, 2020. URL:Nolan and Wellman, 2003) in which the greatest number observes and sees the greatest number without any central authority "(Simon Borel, "Le panoptisme horizontal ou le panoptique inversé", *tic & société* [En Ligne], vol. 10, N° 1, 1st semester 2016, accessed July 4, 2020. URL:<http://journals.openedition.org/ticetsociete/2029> ; DOI: <https://doi.org/10.4000/ticetsociete.2029> ).

Basically, the panopticon is nothing other than the most perfect application of the (Judeo) Christian notion, then taken up by Freemasonry, of "the all-seeing eye" (see <https://elementsdeducationraciale.wordpress.com/2017/07/04/isis-3/>, A. Attempt to determine the channels of transmission of the symbol of the eye that sees to Freemasonry) and this is also the very meaning of the neologism forged by Bentham (pan = all + opticon = eye). Bentham's panoptic penitentiary project may have failed, but the goal is no less to transpose it from the world of prisons to society (see Guillaume Tusseau, "Sur le panoptisme de Jeremy Bentham". In *Revue Française d'Histoire des Idées Politiques*, 2004/1, n° 19 [p. 3-38], particularly "From prison panoptism to political panopticism: the association of projects", <https://www.cairn.info/revue-francaise-d-histoire-policy-ideas1-2004-1-page-3.html#pa8>). However, everything suggests that, to imagine the panoptic architectural device, he drew as much from (Judeo) Christian thought as from Freemasonry imagery. Indeed, Bentham put Psalm 139 ("You know when I sit down and when I stand up, You see my mind from afar; You know when I walk and when I lie down, And you see all my ways, say the verses 2 and 3) highlighting the sketches of the panopticon that he sent to various governments (Jacques-Alain Miller, "La machine panoptique de Jeremy Bentham, Ornica", n° 3, May 1975, p. 3-36; see also Gertrude Himmelfarb, "The Haunted House of Jeremy Bentham", in Richard Herr and Harold T. Parker [ed.], *Ideas in History*, Duke University Press, Durham, NC, 1965, which indicates that, "comparing the table (attributed to) Bosch ( The Seven Deadly Sins and the Last Four Human Stages ) and the drawings of Bentham, one is struck by their almost identical composition: replace the tables of sins by cells and iris by the observation tower and you have the plan of the panopticon ". Bentham could not have been unaware of this scene, if not by Bosch's painting, at least by the similar representations which decorated the English churches of the time (Stewart R Clegg and Cary L Cooper [eds.], *The SAGE Handbook of Organizational Behavior*, vol. 2, Sage Publications, Los Angeles, CA, 2009, p. 272, p. 283, note 2 and fig. 16.1 and fig. 16.2).

(\*) "Jack-of-all-trades" and of a sickly inventiveness, Bentham conceived a multitude of other projects, several of which, like that of the panopticon, were taken up and completed, either in full or in part, in a modified form, after his death, whether or not his successors recognized their debt to him; this is how

his project for the conservation of all animal and plant species (Pierre Amédée Pichot (ed.), Jérémie Bentham, his memoirs and his system , In *British Revue*, 5th series, t. 13, 1843, p. 40, note 1) was partially produced by the designers of the Svalbard Global Seed Vault (2008), nicknamed 'Noah's Ark Plant' and co-funded by the Norwegian government, the Gates Foundation, the seed industry , genetics, the UN and the World Bank. The goal is the monopoly of seeds as a food and commercial weapon (see Thierry Brugvin, *The illegal power of the elites: Essais - documents* , Max Milo Éditions, Paris, 2014). It should be noted in passing that Bentham began his literary career by writing two texts "On Torture" (see WL and PE Twining, "Bentham on Torture". In *Northern Ireland Legal Quarterly*, 24, 1973 (pp. 305–56 (reprint in Bikhu Parekh [ed.], *Jeremy Bentham: Critical Assessments*, vol. 2, Routledge, London, 1993, pp. 512–65): unfinished. Not torture.

(5) The other two sub-parts of section 3 will be published later after the first. They are respectively entitled "The carnal cadence of the body-transmitter" and "A cognitive mapping of the sound architecture".