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*Michel Chion is an audiovisual theorist and created what's called the Three Modes of Listening, Causal, Semantic and Reduced.* (1) (p.1 Chion, M. 1994) *This text will use one of the three, Semantic Listening, as an underlying theoretical cornerstone to the ideas that follow. As embodying semiotics, Chion describes this as being the deciphering of signs and signals through specific listening. An example would be in conversation, from one initial sentence we can immediately learn many things about another person through the sound of their voice, such as age, gender, nationality and mood. It is important here to understand Semantic Listening, as it will be referred herein as the basis of my analysis.*



3



We live in an experience economy, a Pleasure Dome hedonia. (2)

(Fisher, M. 2014)

This project will look at the ways in which we consume sound. It will do so with the overriding aim being to understand the future of my practice as a sound designer in relation to big changes with the way we interact, and value our environments. Sound design in the context of this research is inclusive of all sounds put out into this world through design. This project will focus on sound and its reductions, its ethereality amplified to the point of noise and painted with the colours of importance it fails to achieve in a world hypnotized by music and ignorant of sound. The ideas, experiences and references in this text will argue that in ignoring sound, we are ignoring a fundamental sense that defines our consciousness, and in doing so we leave it open to become occupied by fictions (3) (Bergson, H. 1910) of order, space and time. I grew fascinated by

sound through music and was exposed to it from very early in my life having been taken to nightclubs and music venues. Although this may not attribute fully to my choice of research, I can see that perhaps having been introduced to the hedonistic side of sound at a young age has made me see it in a different way overall. In London you are bombarded by sounds, low hums and drones, the serious low frequency of aeroplane routes juxtapose the high pitched squeaks of buses, police sirens and train lines. I love it as a medium because it is emotive, both able to perturb and appease. Sound can be powerful but at the same time ethereal, and it is through this that it becomes an ever-fascinating material — affecting the mind without our being aware. This project is dedicated to the exploration of sound and how, as a society, we experience our lives and ourselves through it.

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I start in the first section by introducing a personal experience and a contemporary piece of sound design. Born out of this experience is a question regarding sound and its interplay with consciousness — what semiotic, semantic **4** Chion, M. 1994 listening takes place from day-to-day, and a question of what sound design adds to this. The first section will explore these ideas through the notion of semantic listening, go on to look at the different spaces in which we experience sound, then introduce a significant theorist regarding this area, before discussing ways in which sound can be used as a type of "psycho-surgery". A key analogy of the first section will relate the consumption of sound to being one and similar to the consumption of technology.

In the second section I will start by describing a personal experience in an anechoic chamber and relate it to theory on **▶ immediate data of consciousness** the It will then look at two different types of space **5** Bergson, H.1910 where we consume sound and then look at an influential theorist in this area. The section will then go on to look at attitudes towards the use of sound as a tool for psychological transcendence before looking at how this exists in current society and the ways in which it is used as a material to perturb, appease and subvert.

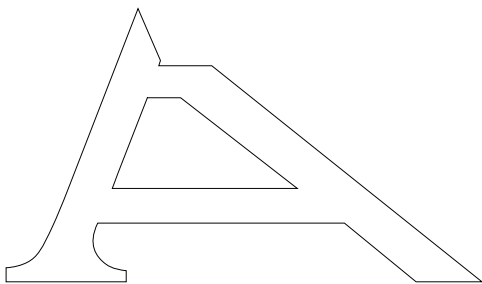


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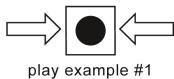
The final section will look at the Phillips pavilion by Le Corbusier and its involvement as a precursor to the potential realization of a systems architecture incorporating hardware and software for the control of "holistically choreographed" **6** p.189 Klingmann, A. 2007 environments. It will go on to look at the cultural emergence of the idea of hard/soft spaces before looking at the significance of this in relation to current architectural trends before re-examining it in relation to our example in section one of the auditory icon. Le Corbusier's inclusion of Iannis Xenakis and Edgar Varsese in the Phillips project could be related to the future emergence of stochastic environments. It will explore the idea of a Stochastic environments by looking at what this would mean on an ethical scale through

Murray, Baudrillard and Debord. With this in mind, the new "holistically choreographed" **7** Klingmann, A. 2007 architecture will be compared to our first example and put in relation to that prophesied it at the World Expo '58. By linking the two the text will hope to conclude and introduce Rainforest 3000

**8** David Tudor's Rainforest x Sun-Ra's Disco 3000., the idea that sound art and semantic listening can be used as a model for a future of experience architecture.



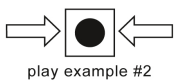
Overall this project was inspired by a change in the auditory environment. This was brought about by the latest (2013) development in the user experience of the Apple iPhone, a software iteration (an upgrade) made by Apple between their iOS-6



play example #1

and preceding iOS-7 operating systems. 9

Phone Operating System version 6 and 7



play example #2

The significance of this iteration and its relevance to the dissertation lies in the change in characteristics to one of the most noticeable sounds on the device, an auditory icon. 10 p.1 Gaver, B. 1989 Bill Gaver invented the term auditory icon while he was a researcher

at Apple. He describes them as being, "the everyday sounds meant to convey information about computer events by analogy with everyday events." 11 p.1 Gaver, B. 1989

The auditory icon we are focusing on here ceremoniously informs us of when we have finished a moment with the device, a metaphorical full stop to each interaction and a crescendo to another experience within it. It therefore becomes a very important sound for the user-experience of the object. What has happened to the sound between the two versions is the addition of a type of sound processing more commonly found in music. This processing is the effect of digital reverberation. Digital reverberation is a tool used in sound engineering to provide spatial temporal qualities to an audio recording in postproduction. With this effect you are able to place a sound into any acoustic space, real or imaginary.





The effect is used indiscriminately in contemporary music to add depth to a mix and spatialize **13** [see glossary for Spatialize](#) the listener in association with the instrumentation.

This perhaps insignificant change is of interest to me because of the way it made me feel when I first experienced it. What I ultimately realised was that it was an affective piece of sound designed to move the mind. As a sound artist and musician I know the reverb effect well and I also know its history. **14**

The uses of reverb as an effect in music have a long history in religious experience. Church acoustics were designed to transcend the listeners on to a spiritual mindset and the same is true in Dub Reggae, the Rastafarian music, where the use of spring reverb and tape delay shattered time and space, and gave the listeners a spiritual experience. (Jones, D.R. 2011).

Given my parameters at the time, **15**

...the darkness of a bedroom, physical immersion in my bed sheets and about to go to sleep having just set an alarm.

this set up an experience that was deeply affecting. Listening to this auditory icon semantically, the sound signified clarity, assurance and comfort, the knowledge of spacious surroundings and a clutter-free zone. Reading deeper into my experience, what was inherent was a general sense of importance and weight that had been enabled through this effect. I was moved by the event, and this started to make me think about what it means to own the Apple I-Phone. I realize that I am of a privileged demographic in owning the device, and in doing so I become a meta-

phorical ambassador for the brand. It is produced and marketed with the intent of being a desirable, expensive object, and it is this fact that has me infatuated

with the sound it now produces. When you look at Apple in the cold light of business reports **16**

Gee, S. (2014) Mintel-Telecommunications; Mobile Phones Report: Feb(2014). Mintel International.

you see that, compared with other manufacturers, they are the only company managing to maintain a sizable market share through premium handsets alone. You also see that their brand loyalty is unequalled with, "some eight in ten previous Apple phone owners" going on to purchase another. **17** [Gee, S. 2014](#) The Apple business model is based on building desire, leveraging the aspiration aspect of their products to, "provide value through the satisfaction the consumer acquires when they buy into the brand's image." **18** [Gee, S. 2014](#) This can be seen in the light of the example as happening not only through their products as physical objects, but through the transformation the consumer experiences on a psycho level. Auditory icons like our example, therefore, become semiotic actors in the sub-conscious transmission of the brand's ideology. It is the semantic listening that takes place on this level and its inherent design based on musical concepts that have inspired the research and ideas that follow.

6  
AUDITORY

AUDIT



During my first year at RCA I worked on a project

that led me to seek out and experience an anechoic chamber, a scientific room designed to be acoustically silent and have the lowest ambient noise possible. (19)

The chamber I visited was the first anechoic chamber to be built outside of the USA

Within the acoustic range: infrasound, the frequencies below our hearing threshold and out of acoustic range are impossible to proof.

and is located at University College London. The room is currently used for the study of phonetics and is one of the quietest places in the U.K. (20)

What I experienced during 15 minutes in the chamber is almost indescribable: as our ears are continually receiving audio, the

All others being Anechoic chambers too.

sensation of zero vibration is aggressive and physical-ly discomfoting.

Moreover, after two minutes or so in the chamber I began to hear what was an immediately recognisable loud ringing in my left ear. This sound I soon realized was my work from the morning of that day, a synthetic bell texture I had made using FM synthesis.

Innovative American composer John Cage (1955) had an epiphany in an anechoic chamber, that silence does not exist. He realized that we always hear two sounds: the sound of our blood flow and the sound of our nervous system. Cage, J. (1963) Silence: Lectures and Writings. Wesleyan University Press.

French writer and philosopher Henri Bergson, considered intuition and immedi-



play example #3

FM synthesis stands for frequency modulation synthesis. A form of sound production that can emulate real instruments

(21) The chamber technician, Stephen Nervard, confirmed that this was a hallucination made up by my brain

and was a product of a trauma to my auditory cortex. He explained that this trauma came about because of my brain having nothing to process, and as a result had reverted its output to what it had been processing for most of that day. (22) Further

to this, on leaving the chamber I had lost all perception of time, according to the technician this is common for people experiencing auditory sense deprivation. (Nervard, S.P. 2013)

Our sense of time passing, I found out, is highly dependent on having something to measure it by. What I learnt overall from my experience in the chamber (beyond Cage's silence) (23) is that we measure our time through sound and its durations.

ate experience as more important than abstract rationalism and science in the understanding of reality.

(24) (Bergson, H. 1910) What excites me about Bergson's theory is that, as a sound artist, I



see duration as the parameter I am always playing with. It is a fundamental variable in the crafting and production of sounds. This is because time-based programming of sounds uses "envelopes", and a method called ADSR (Attack, Decay, Sustain, Release). The envelope is like a ramp. Attack is the up slope, decay is the flat bit, release is the down slope, and sustain is the height of the ramp. Through seeing the senses arriving in envelopes of duration we can understand further why Bergson has used it in his study. (25) (Bergson, H. 1910)

Time and Free Will (1910) is a reductive essay that seeks to better understand causality through focusing on the immediate data of consciousness. Bergson approaches his subject through thinking about duration. He claims,

"It is no less obvious that our belief in the necessary determination of phenomena by one another becomes stronger in proportion as we are more inclined to regard duration as a subjective form of our conscious-

ness". (26)

p. 210 Bergson, H. 1910



He suggests that when duration is regarded as a vital factor for understanding causality, albeit subjective, sound can be seen as the empirical material that governs consciousness. It does so, Bergson says, by subconsciously transmitting perceived sound events to memory, and in doing so building an overall perception of time within it. The following quote illustrates Bergson's realization that sound events dictate his perception of time:



"While I am writing these lines, the hour strikes on a neighbouring clock, but my inattentive ear does not perceive it until several strokes have made themselves heard. Hence I have not counted them; and yet I only have to turn my attention backwards to count up the four strokes which have already sounded and add them to those which I hear. If, then, I question myself carefully on what has just taken place, I perceive that the first four sounds had struck my ear and even affected my consciousness, but that the sensations produced by each one of them, instead of being set side by side, had melted into one another in such a way as to give the whole a peculiar quality. (27)

p. 127 Bergson, H. 1910

Bergson's writing from personal experience in Time and Free Will adds a dimensionality to my own experiences in the chamber. I realise that how I perceive time cannot be removed from how I perceive sound, moreover, how I consume sound cannot be removed from my consciousness. The question of sound consumption, it seems, can only exist where a sound is manufactured as part of a commoditized assembly. This type of sound, absent of sacrifice, solely exists in relation to objects as it

becomes part of the mechanized experience. This distinction leads me to believe that the consumption of sound overall is not divorced from the consumption of music. Therefore, the sounds I perceive day-to-day make up my overall emotional environment. They do this through their inherent designed semiotics, informing me of order (harmony), space (acoustics) and time (duration). Furthermore I realize that when sound is displayed to me in the form of music, the science of organized sound, (28) Solkema, S. V. 1979 it becomes a pure extension of my consciousness. (29)

p. 23 McLuhan, M. 2001

The creation of two terms can make the distinction between two types of space where sound is experienced: these are personal space and acoustic space. The distinction between these two spaces in the context of listening is important because in analogy they can become seen as collective consciousness and insular consciousness. Personal space accounts for enclosed listening, that is, where sounds are being listened to via personal transmitter, headphones, telephone, headset and so on. The main classification for personal listening is that it is private and insular. Acoustic space on the other hand accounts for the polar opposite, which is the shared, communal, social space where sounds happen in acoustic unison. The idea of acoustic space being collective consciousness is what becomes important in studying sound design. An important figure in sound theory that helps develop this topic is Canadian sound artist and activist Raymond Murray Schafer (1977).

Schafer dedicated his working life to the study of sound and the everyday environment, calling it "The Soundscape". This is the word he used to describe the sounds all around him.

The Soundscape (1977) and its introduction of key terminology, will be used here the basis from which all further ideas will relate. Schafer's work in the field of sound has ultimately been to document and critique the Soundscape in the same way a biologist would document the unknown ecologies of a rainforest.



He did this by starting what is called Acoustic Ecology. <sup>30</sup>

<sup>p.3. Schafer, R. M. 1977</sup> Schafer's goal in pursuing the project was to make everyone listen and care about the sounds in his or her habitat. The World Soundscape Project (WSP) <sup>31</sup> was an initiative started by Schafer that helped define Acoustic Ecology. The World Soundscape Project's goal was to document differences in the Soundscape between countries and habitats, subsequently providing awareness and protection through the recordings in its archive. <sup>32</sup>

Simon Fraser University. 2014. The World Soundscape Project. [online]. [Accessed 12th June 2014]. Available from: <http://www.sfu.ca/~truax/wsp.html>

9

One of Schafer's most important ideas in the book was schizophonia. This was a term coined by Schafer to describe an emergent new phenomena of the 20th century <sup>33</sup> <sup>p.90. Schafer, R. M. 1977</sup>, and refers to the event where mechanically reproduced sounds become detached from their original source. It is in this state of detachment, Schafer said, that sounds become like an illness, and serve to induce what he saw as an altered state of semi consciousness through their artificiality. <sup>34</sup>

<sup>p.90. Schafer, R. M. 1977</sup> He states, "I coined the term schizophonia [...] intending it to be a nervous word. Related to schizophrenia I wanted it to convey the same sense of aberration and drama". <sup>35</sup>

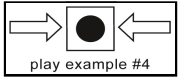
<sup>p.91. Schafer, R. M. 1977</sup> Schafer was perhaps concerned with a direction he saw the world going in technologically and his efforts in the World Soundscape Project overall could be seen as an indirect form of political activism. His ideas and phrases in *The Soundscape*(1977) echo this and are designed to provoke. It could be argued that what Schafer was concerned with was the dictation of a collective consciousness through newly emerging technology.

Schafer's seminal book, *The Soundscape: Our Sonic Environment and the Tuning of the World* (1977), was a collection of ideas related to the Soundscape making up the totality of his research in the area. His main purpose for writing this text was to anthologise all his ideas into one place as a reference tool for future researchers in the field.

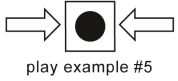
Schafer proves this to be a key part of his practice when he describes the frequency of alternating current in cities to be the tonal centre to civilization, a collective sub-consciousness that we all experience and share on a physical level. What Schafer discovered, was that since the 'electronic revolution' <sup>36</sup> <sup>p.88. Schafer, R. M. 1977</sup> and AC electricity, civilization has become harmonized



on two basic tones: that of 60 cycles [see example 4]



in the US, and 50 cycles in Europe (G# and B-natural).



This idea is what Schafer calls the Tonic of prime unity, and is born out of musical theory prevalent and essential in Indian anahata music, and Western music of the spheres. [37](#) [p.99. Schafer, R. M. 1977](#) What these two musical theories rely on is a fundamental base frequency that acts as an anchor to all other frequencies introduced into the composition. Schafer noticed this phenomena through his own qualitative research and introduces them in stating:

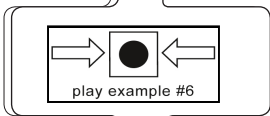
"In ear training exercises I have discovered that students find B natural (60hz) much the easiest pitch to retain — when students are asked to sing the tone of prime unity, the tone that seems to arise naturally from being is B natural — in Europe where the resonant frequency of 50hz is G sharp — a group of students hum the tone of G sharp" [38](#) [p.99. Schafer, R. M. 1977](#),

Another key part of Schafer's research is on the rhythms and tempos that are present in the everyday Soundscape. He writes that tempo and tempi when manufactured, relate directly to circadian rhythms and cycles in the body. [39](#) [p.97. Schafer, R. M. 1977](#) Schafer gives an example of how the temporality of waves and its relation to the human respiratory system is the reason why the sound has an effect of relaxation. He also notes an important study on aboriginal drumming by Catherine Ellis for making the distinction between the base tempo of a performance to that of the human heart rate, 80 beats per minute. [40](#) [p.156 Schafer, R. M. 1977](#) He sees that where tempo is introduced into our Soundscape it becomes an artificial pacemaker to society, and in doing so is inherently manipulative. One of the ways in which Schafer uncovers this happening is by focusing on Muzak Holdings. [41](#) [p.97. Schafer, R. M. 1977](#) This is a company that makes their profit through creating bespoke music for public spaces. Muzak is mostly used in consumer retail but also common in offices, and is involved in the use of sound and music to have a particular psychological affect on the listener. The ideas of base frequency and base tempo signify for Schafer the belief that sound has a deep physical and psychological relationship with society and collective consciousness. By understanding this it can be said that in ignoring sound you are open to become narcotized by it. [42](#) [p.45 McLuhan, M. 2001](#)

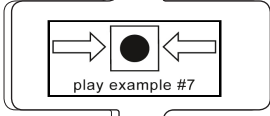




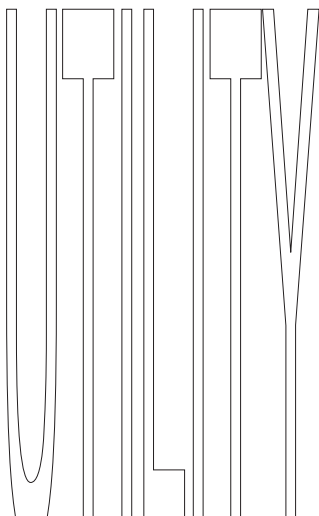
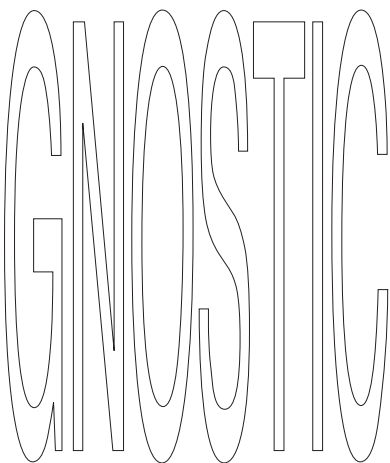
When I was in Tokyo, I experienced first hand what Schafer was referring to. I made a number of bpm measurements from Muzak, arcade machines, jingles and general music in public. What I found was a recurring tempo of 160bpm,



twice the 80bpm that Schafer related to the human heart. 43 (p.156 Schafer, R. M. 1977) 160bpm is the same tempo of jungle drum and bass and footwork, music styles specifically designed and performed to make you exert tremendous energy.



It is interesting that a city with the energy of Tokyo could be seen as subconsciously thriving off this base tempo. One way to avoid this tempo having affect would be





THR

ough the use of headphones and self-transmission. Schafer sees the use of headphones for travelling through social environments as being a form of augmented reality. As he states, "When sound is conducted directly through the skull of the headphone listener, he is no longer regarding events on the acoustical horizon, no longer surrounded by a sphere of moving elements, he is the sphere, he is the universe." [44](#) [p.119 Schafer, R. M. 1977](#)

In the adoption of the personal psycho-space you become shielded from acoustic events and their inherent affects, but as a model this becomes dangerous to society and sociability. Schafer continues, "Today sound walls exist to isolate... in the same way intense amplification of popular music does not stimulate sociability so much as it expresses the desire to experience individuation-aloneness-disengagement." [45](#) [p.88 Schafer, R. M. 1977](#)

The danger here is that in masking sounds we are also shielding ourselves from each other and becoming actors in what Herbert Marcuse(1964) saw as a Great Refusal. [46](#) [p. 55. Marcuse, H. 1964](#) Marcuse was a influential philosopher whose text *One Dimensional Man*(1964) introduced this idea. In the text he states, "it is the Great Refusal — the protest against that which is. The modes in which man and things are made to appear, to sing and sound and speak, are modes of refuting, breaking, and recreating their factual existence." [47](#)

[p. 51. Marcuse, H. 1964](#) What Marcuse was concerned about within *One Dimensional Man* was the adoption of technology in advanced industrial society that could lead to an impotent catatonia amongst its inhabitants. [48](#) [Marcuse, H. 1964](#) What we have ultimately seen through Schafer's introduction of audioanglesia and schitzophonia is that there is an analogy to be made between our consumption of sound and our consumption of technology.

Artist and musician Jeff Mills is somebody who see's the act of escaping reality as being a positive thing for society. Famous for being a worldwide DJ and pioneering a hardcore version of Detroit Techno, Mills believes that we should harness technology in this way as a tool. Describing inactivity on the dance floor at his gigs, Mills observes that this might come down to a change in our basic tools for sociability: [49](#) [p.1 Martin, L. 2014](#)

"We're showing signs that we don't like the life we are living, and would prefer to be someone else. It's like when you see a very rich person, who has more money than they could ever spend: the first thing they do is isolate themselves. They move away to islands, into and onto themselves. This person is imagining what a rich, privileged, fully autonomous human should be; using your resources to move away from the rest of the population. If we're given something in technology, we're using it more and more to do just that [...] Music exists to put your mind in an enlightened place, and there's many ways to do that." [50](#) [p.1 Martin, L. 2014](#)



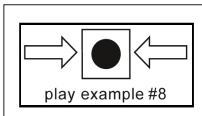


Mills here is specifically speaking about music as a technology. His/Detroit Mills's musical genre was affiliated with this deterministic attitude. Originally named High-Tech Soul, the style focused on the creation and use of the music to transcend the harsh realities of the postindustrial environment. (51) p. 381 Prendegast, M. 2000

What is championed through the music is an ideology that was born out of Afrofuturism. This was a movement that has been extremely influential in popular culture since its birth in the 70's and was pioneered by artist and musician Sonny Blount, also known as Sun-Ra. (52) (Zwed, J. F. 1998) Blount used fictions of his existence and space travel as an analogy for his music, to become an alternative for religion within a turbulent black American diaspora. (53) (Zwed, J. F. 1998) Blount and Mills share the same attitude, that the use of technology, in this instance music/sound design, should be used as spiritual, metaphysical betterment towards well-being.

The analogy made by Blount between outer space and religion is prevalent in today's society. Where Marcuse would say that, "metaphysical, spiritual and bohemian occupations" (54) (Marcuse, H. 1964) only help to control a mass of society, Blount would perhaps argue that the happiness and well-being of a society is of greater importance toward a true sense of democracy. (55) (Zwed, J. F. 1998) What this synthesis tells us is that the use of technology for mediated escapism, although an act of negation in Marcuse's terms, (56) (p. 15 Marcuse, H. 1964) is a pathway to the increased quality of psycho-spiritual life and a Gnostic utility.

13





What is inherent in Detroit techno can be adapted to technology as a whole. Present in both instances is the Dionysian mindset **57** (p.5. Schafer, R. M. 1977), the perpetual bringing in of the harvest. Mark Fisher, author of *Capitalist Realism* (2009) and *Ghost of my Life* (2014), calls this the 21st century Pleasure Dome. **58** Fisher is a cultural theorist and musicologist who describes this condition as being a, "depression-hedonia" **59** [...] ed, not by an inability to get pleasure so much as an inability to do anything else except pursue pleasure." **60**

Fisher, M. (2014). *Another Grey World: The Secret Sadness of the 21st Century*. 27th September. Arnolfini Bristol.

p.1 Mark Fisher. 2014. *K-Punk: Abstract Dynamics* [online] Accessed: 15th July 2014. Available from: <http://k-punk.abstractdynamics.org/archives/007656.html>

p.1 Mark Fisher. 2014. *K-Punk: Abstract Dynamics* [online] Accessed: 15th July 2014. Available from: <http://k-punk.abstractdynamics.org/archives/007656.html>

What Fisher puts this down to is, "there is a sense that something is missing - but no appreciation that this mysterious, missing enjoyment can be accessed beyond **61**

p.1 Mark Fisher. 2014. *K-Punk: Abstract Dynamics* [online] Accessed: 15th July 2014. Available from: <http://k-punk.abstractdynamics.org/archives/007656.html>

the pleasure principle." Fisher believes that our current consumption of technology we have become desensitized, **62** leading to seeking out and experiencing greater sensory immersion in media. He calls this the secret sadness of the 21st century **63**

Fisher, M. (2014). *Another Grey World: The Secret Sadness of the 21st Century*. 27th September. Arnolfini Bristol.

(Fisher, M. 2014) noticing that we are in a current epoch of cultural stasis. **64**

He recognizes this through the reading of popular music through semantic listening, and sees that we are constantly looking back and assimilating the past as a musical therapy to alleviate the present. **64**

Fisher, M. (2014). *Another Grey World: The Secret Sadness of the 21st Century*. 27th September. Arnolfini Bristol.

William. S Burroughs is an American poet and author of *The Electronic Revolution* (1970). In his book Burroughs describes the potential of hacking the newly available technology of portable magnetic audio tape, "TO SPREAD RUMOURS...TO DISCREDIT OPPONENTS... AS A FRONT LINE WEAPON TO PRODUCE AND ESCALATE RIOTS... cut/up video tapes. Cut/up techniques could swamp the mass media with total illusion." (65) (p.13 Burroughs, W. S. 1970) 'Cut Up Techniques' (66) (p.14 Burroughs, W. S. 1970) was a method of activism where Burroughs would record political speeches and re-edit them to subvert the status quo in society. Burroughs's ideas were eventually made into a film called *Decoder* (1984). In the film a team of revolutionaries in West Germany cause mass riots by hacking and manipulating Muzak systems in fast food restaurants and other public spaces. The film depicts a society in which there is mass uncertainty through the threat of nuclear war. This uncertainty eventually leads to a disenfranchised youth that exploits a subliminal form of control that has maintained order in society — Muzak. The film's hero, FM, creates a form of counter Muzak through the adoption of Burroughs's 'Cut Up Techniques'. In turn FM reintroduces this counter-Muzak into society with the effect of causing mass riots. (67) (p.142 Goodman.S. 2010)

Although fictional, the story in *Decoder* relates to a real life example of political activism in the Philippines. Observed by Sumanth Gopinath and her book, *The Ringtone Dialect* (2013), she reveals how the ringtone has the potential to work as a political weapon. In the following quote she describes this taking place:



(68)

(p.152 Gonipath, S. 2010)

"The story begins on 6 June with the release of tape recordings of President Gloria Macapagal-Arroyo speaking to Virigilio Garcilano, an elections commission official with close ties to the president. The press secretary, Ignacio Bunye, played a series of wire tapped recordings in a press conference, some segments of which were soon spliced and used in anonymously composed ringtones. [...] The ringtones became immensely popular in the Philippines, apparently being downloaded more than a million times. These ringtones were, in fact, inseparable to the subsequent groundswell of protest that nearly brought down the political administration of the country" (69)

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(p.152 Gonipath, S. 2013)



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What is remarkable about Gonipath's research is that it

Please read carefully!

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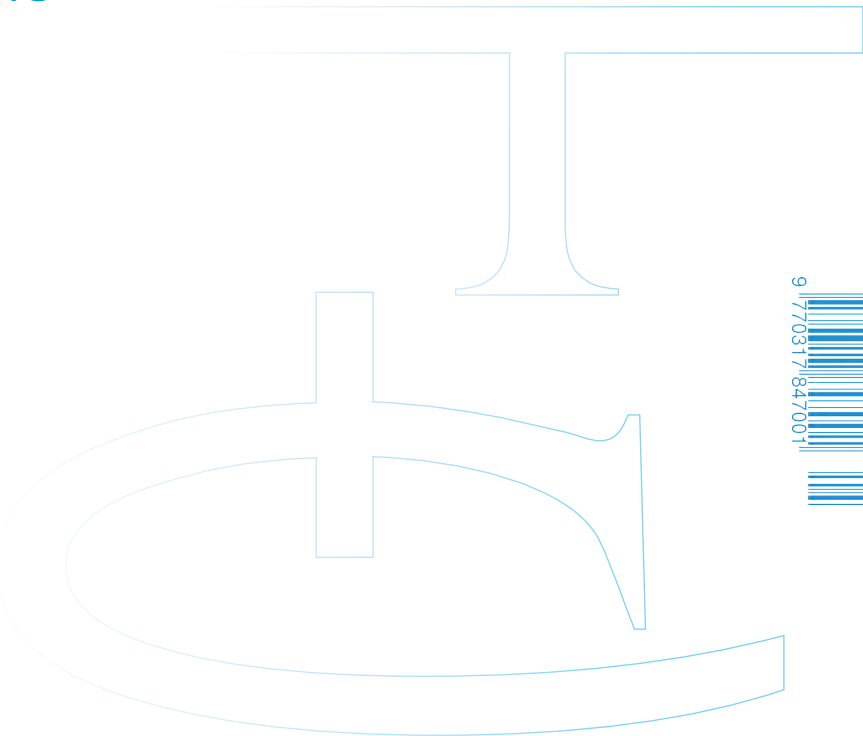
is a real life manifestation of the model introduced by Burroughs, and in turn Decoder. It is also inherently present in all the texts introduced so far. What it shows is that through the occupation of the ethereal sense of sound and the exploitation of its newly available technologies, there can become a state change in the collective consciousness of a society. Moreover, it can be recognized that the distribution of sound in Gonipath's report, was in essence the distribution of popular narratives and fictions that had a major effect on the collective consciousness of the masses. The evidence here shows the potential of sound as an acousmatic **70** media.

Acousmatic refers to the act of faceless sound. The famous example is the wizard in the Wizard of Oz but the word originates from Pythagoras who used to lecture his students from behind a curtain in order for them to concentrate better.



It backs up theory introduced here earlier and leads to further questions as to the semantics of designed sounds and the narratives they carry. If not as powerful as a political outrage, the proof that sound can have a collective affect on a people, leads to the just reasoning for all designed sounds to have proper theory and criticism in their own right. Sound it could be said, as a sense we have learnt to ignore, has become the sense most occupied by dream, and it is in theorizing these dreams that we can learn the most about our society. **71** (Atali, J. 1978)

In this section we have looked at The immediate data of consciousness, through Bergson and his theories of duration. We have seen through Schafer's terminology that there is an analogy to be made between consumption of sound and consumption of technology. We then moved on to look at two attitudes towards escapism in Marcuse and Detroit techno before looking at the Pleasure Dome principle through Fisher and sounds potential use in the subverting of power and status quo in society. Overall this chapter has been a thought experiment, it has looked at its topics in a seriousness that belies their actual importance with the amplification of signal comes the inherent noise. The next section seeks to use examples and current trends that could enforce the ideas introduced in this first part/section.



72 What happens when you mix David Tudor's Rainforest and Sun-Ra's Disco 3000

The Phillips Pavilion was to be the major model of the future put forward by the Phillips electronics company and put on display at the 1958 World Expo in Brussels. It was to convey the, "spectacular demonstration of a synthesis of light, music, space and colour, all of this using the most advanced technical means." 73 (p.3 Treib, M.1996) To design the pavilion, Phillips approached a man who was famous for his forward thinking approach to architecture, Le Corbusier. When they did, in the winter of 1956, Le Corbusier was nearing 70, with a long and illustrious career of designing, "houses, housing, churches and had even conceived plans for parts of cities and cities in their entirety." 74 (p.4 Treib, M.1996) Le Corbusier took on the project as it offered him an opportunity to work with the most advanced technology of the time in designing the world's first electronic poem, "a collage liturgy for twentieth century human kind, dependent on electricity instead of daylight and on virtual perspectives instead of terrestrial views." 75

(p.3 Treib, M.1996)

Le Corbusier's role in the project was more that of producer than of actual project architect. 76 (Treib, M.1996) To lead the project he hired two prodigies of avant garde musical thinking: Iannis Xenakis(1992) and Edgar Varese(1979). Xenakis was a Greek mathematician and engineer who is perhaps best known for his contribution to musical

thinking around the mid 20th century. 77 (Xenakis. I 1992) He had become involved in the design and planning of the Phillips Pavilion through working in Le Corbusier studio in Paris from 1951. He caught the attention of Le Corbusier by displaying great intelligence and skill during his time there. Corbusier described Xenakis as, "three favourable vocations [engineer, composer, architect] united in one man". 78 (Treib, M.1996) Le Corbusier assigned Xenakis to spearhead the project and was credited as the co-author of the building's architecture. Throughout the project he developed the formal ideas for the pavilion and determined its geometries. One of the main contributions from Xenakis was his Stochastic music 79 (Xenakis. I 1992). This was a form of music developed by Xenakis that borrowed heavily from mathematical theories such as game theory, Boolean algebra, and group theory, and became a major attraction to Le Corbusier and a defining feature of his work in the project.

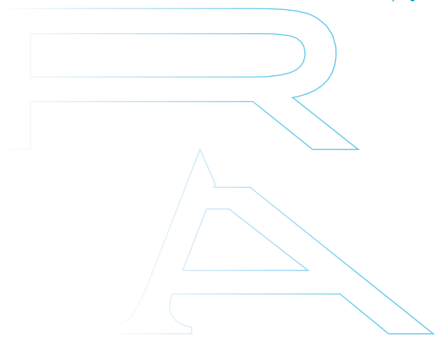
Edgar Varese was a pioneering composer who spent most of his working life trying to imagine new forms of music beyond the technological means of the time. Varese was obsessed with organized sound and spatialization but was always too ahead of his time to fully realise his ideas technologically. The Phillips collaboration presented him with the perfect opportunity to do so. Like Xenakis, Varese was incessant that music was inseparable from mathematics. Moreover, Varese believed that

the arts were inseparable from the sciences and made his position clear when stating that, "music has its place in the company of Mathematics, geometry, and astronomy [in being the] corporea-

lization of the intelligence that is in sounds." 80 (p.175 Treib, M.1996) Varese was involved in the project as head composer, and Le Corbusier had approached him on more than two







asions prior for proposed collaborations.

Further to this he had included an ultimatum in the contract with Phillips that stated he would only take part in the project if Varese were involved. This can be seen in the following, as taken from a personal log of Le Corbusier, where he reveals his initial thoughts on the project, "Sounds, noises, unlimited power... A new creation opening all before it... Immediately I thought of Varese, with whom I had no dealing with for nearly 25 years. My feeling about this was so strong that I was forced to say I would not undertake this task except on the condition that Varese should create the music [...] And moreover, I also make it a condition that Varese shall be

accorded a remuneration worthy of him" <sup>81</sup> (p.1 Treib, M.1996).

Marc Treib in his research on the Phillips Pavilion suggests that the inherent beliefs of practice common in Varese and Xenakis is what tie the two so closely to Le Corbusier in this instance, and why the collaboration was thinking that sought to shed light on the future relationship between these new emerging technologies and cultures.

Anna Klingmann in her book Brandsapes (2007) introduces experience architecture <sup>82</sup> (Klingmann, A. 2007) as being a new branch of architecture, said to have arisen through the realisation that there has been a, "Fundamental shift from a rational to an emotional system of values" <sup>83</sup> (Klingmann, A. 2007) in society.

The practice is focused on eliciting transformations through narrative semiotics and describes this further by stating, "As we are living more and more in an intangible economy, in which the greatest sources of wealth are no longer physical but perceptual, intellectual and emotional, the value of architecture is no longer appraised merely as a formal object but by its ability to elicit relevant transformations in people

and places." She continues, "The paradigm of need has been surpassed by the paradigm of desire, as the acquisition of basic goods has been replaced by a search of emotional satisfaction [...] a quest for identity" <sup>84</sup> (pp.312-318 Klingmann, A. 2007)

. Through Stochastic <sup>85</sup> (Xenakis. I 1992) programming of space – architecture could be seen to be moving closer to the manipulation we have already seen with Muzak in the previous chapter. Furthermore, this could be seen as prophetic to the emergence of an architecture arising



that plays on the identity of the user, in the same way a music collection has turned into an algorithmic dictation. **86** Last FM The way we experience space could become reliant on similar feedback systems.

The exploiting of hardware and software to increase a space's emotional functionality and control over its visitors, is something that has been theorized through its involvement in popular science fiction.



Writer Janet. H. Murray speaks from the experience of somebody that has spent twenty-five years at Massachusetts Institute of Technology and her perspective on the topic can be seen as being founded in practice and participation. She looks at the television series Star Trek and its introduction of the Holodeck as the cultural emergence of the concept of a 'holistically choreographed' space. In her book titled Hamlet on the Holodeck (1997) she relates the holosuite, a room that is programmed through fantasy and desire **87** Murray, H. 1997, to its cultural predecessor: the literary novel. Stating, "All the representational arts can be considered dangerously delusional, and the more entrancing they are, the more disturbing. The powerful new story telling technologies of the 21st century has brought on an intensification of these fears." **88** Murray, H. 1997 She concludes in stating that, "If digital art reaches the same level of expressiveness as these older media, we will no longer concern ourselves with how we are receiving the information, we will only think about what truth it has told us about our lives." **89** Murray, H. 1997

This brings me back to a notion that was present in Detroit techno, the Dreamscape. More and more it can be suggested we will be experiencing similar events such as with the I-Phone. Events where through design our emotions will be played on by the adoption and exploitation of already present semiotics present in music. Although this could be seen as a fear of the media, it is important nonetheless to unpack this as an emerging trend and one that has a considerable affect on the experience of life through the consumption of sound. The Dreamscape was a term that was introduced by J.G. Ballard in his novel Vermillion Sands (1971), the following quote shows its context, "the expression on her face, whose porcelain plane reflected the turquoise light of her eyes, was one of almost terrifying calm, as if she were moving through some inner dreamscape of the psyche with the confidence of a sleepwalker." **90** p.67 Ballard, J. G. 1973

What the dreamscape stood for in Detroit techno was the creation of an art form that would transcend reality, providing temporary escape for its creators. **91**

Sun-Ra — the analogy of space and religion.

The dreamscape in this sense is being adapted and changed from a controlled output and consumption based on choice to a dictated ecology of dreams in the everyday environment. Xenakis's stochastic music when applied to hard/soft environments becomes a model for an enforced psychic surgery **92** Keenan, D. 2014 where the dreamscape becomes adopted, used and exploited outside of a musical context. A lack of consciousness is perhaps something we will begin to desire in a world where space is at a premium, but I cant help but attribute this to being a step further down the path of Fisher's, "depressive hedonia" and the double dose of Prozac society takes once immunity kicks in. **93**

Fisher, M. 2009 Surely a concrete approach to the difficulties facing society is a more sensible approach than the doping and stimulation of a system that threatens to consume all.

The man who best sums up this feeling is critical theorist Guy Debord



in his text, 'Society of the Spectacle' (1968). "Where the real world is transformed into mere images, mere images become real beings-dynamic figments that provide the direct motivations for a hypnotic behaviour." <sup>94</sup> (p.125 Debord, G. 1969) What he alludes to here is a fear of a catatonic state society will reach through its immersion of the consciousness into high potency media. Media theorist Marshal McLuhan describes this as the Narcissus effect <sup>95</sup> (p. 45 McLuhan, M. 2001) But Jean Baudrillard describes it best in his text Simulations (1983), for the purposes of this paper. The following quote has been chosen here as it describes specifically the stochastic processing that would constitute an enforced dreamscape: "Digital space [...] the police-space [...] space of reactionary conditioning that took its inspiration from the total Pavlovian disposition of programmed, repetitive aggressions [...] from the required passivity [...] to models constructed all at once on the basis the active response of the subject, on its ludic participation [...] towards a total environmental model made out of incessant spontaneous responses of joyous feedback and irradiating contact. This is the concretisation of the general atmosphere [...] the great festival of participation [...] under the sign of the techno-luminous cinematic space of totals spatio-dynamic theatre." <sup>96</sup> (pp.138-139 Baudrillard, J. 1983) The texts of Debord and Baudrillard can be said to lay precedent to the notion of experience architecture. The descriptions assume there is no longer a distinction to be made between real and fictional. <sup>97</sup> (Baudrillard, J. 1983) In Simulations(1983) Baudrillard describes this as being hypereality, <sup>98</sup>

Umberto Eco's book, Travels in Hypereality(1986) is a study on semiotics and America's obsession with non-reality and its consumption.

a situation where reality is merely operational and everything becomes prescribed as placebo. <sup>99</sup> (Baudrillard, J. 1983) Debord and Baudrillard's work was ultimately to locate and untangle the complex web of semiotics that governs our experience of everyday society. This semiotic liturgy it now seems is becoming used in the domain of architecture where experience architecture can be seen as a direct juxtaposition of the practice by adopting purposefully, "literal and popular imagery", <sup>100</sup> (Klingmann, A. 2007) where the former is to locate and illuminate, and the latter is to apply and conceal. What is important for me about the introduction of the Phillips pavilion, and why it is worthy of study here, is that it resembles a prophetic model for the notion of experience architecture. Moreover, in Le Corbusier's inclusion of two of the main contributors to sound art in its development, it could be suggested holds a secondary precedent towards the inclusion of sound art as a practice within it. Where sound art would be useful for architecture is in its ability to exploit the emotions by musical means.



Through what I have learned — In the case of the i-Phone effect — the use of the reverb can be understood through the reading of Klingsman (2007) and Baudrillard (1983) as an exploitation of signs by a designer employed to add a new dimensionality to an otherwise dead media. This type of design resembles a reverse iconoclasm **101**

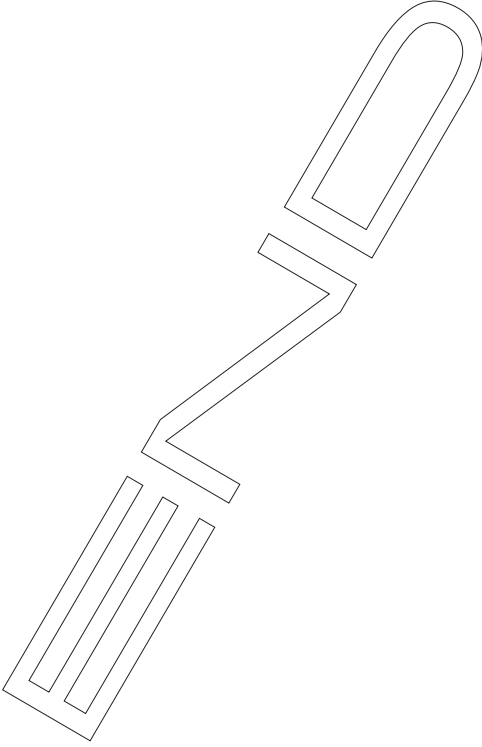
(Baudrillard, J. 1983), a migration of symbols **102**

(D'Alviella, E. G. 1891), and a recursive one that includes already present narratives to increase emotional feedback.

The hard/soft object and its audio animism, makes it exist as an, "Omni-potent simulacra" **103** (p.171 Baudrillard.J 1983) and an example of the, "baroque that hides the grey eminence of politics". **104** (p.173 Baudrillard.J 1983) Moreover, through the reading of Bergson (1963) and Jeff Mills (2014) I can see that the use of the reverb as a tool toward an environmental transcendence is an object itself that shatters space and time **105** (p.103 Heidegger, M. 1953) — one that echoes the brand ideology in communicating to the consumers (my) underlying desire for head space in a cluttered existence (my cluttered existence). Experience architecture could be seen as the next logical step in the continuation of consumer capitalism, "The fantasy acquired authenticity [...] an architecture of the spectacle." **106** (Klingmann, A. 2007) In the words of Umberto Eco the new designed sounds could be seen to, "become so many notes in an anthem to progress, a hymn to the abundance and happiness of consumption and production." **107** (Eco, U. 1986) A progression it seems can only stop with a major embrace of noise.

Rainforest 3000 stands for the cross synthesis of systems architecture and the dreamscape — it is a schizophrenic model for a practice where stochastic feedback systems will only apply thicker potions of dream. In amplifying and criticizing what I do and its importance I believe I have learnt much about my practice and what it is to become. Its method should be to probe and provoke, to accelerate and provoke. In practicality what interests me most about the things I have found, is that through the introduction of Experience Architecture **108** (Klingmann, A. 2007) I can see a model where sound art and semantic listening can be applied to evoke emotional environments. As symbolism and identity have become paramount in the experience economy perhaps there will be more budget for conceptual artists, sound artists and musicians to take their practice into the public environment and create a sound systems architecture.







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