beatings

The body’s placement in the projection of sound.

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Art in the Public Realm

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Abstract

Can sound penetrate beyond language? Is it a language of its own, a language without barriers or parameters and non-specific or defined by geography? Is it a language that relies purely on resonance? And what is resonance, can it be defined in a way where it does not evoke or suggest? Redefining the hierarchal structure and elitism found in words, words that can be relevant or irrelevant, one may seek to search for a meaning or let it pass undefined, perhaps let it be filled with uncertain assumption, sound on the other hand, is integral to a bodily function, its visceral reaction is penetrative beyond awareness. It is in fact anti-linguistic in its nature. However it is defined by its visceral connotations.

So what does it mean to be involuntarily exposed to sounds, music for sake of this argument, in a public space, to know that we automatically react to sound in a visceral way? What does it mean to experience this in such a way, in such a space? In such a manner? Does this henceforth involuntarily connect us, to a set locality? To each other? To we form a composition with one another in the architecture of sound? How are we composers in the spatial experience? Exploring the corporeal specifics that are unique to the sound heard, as well as the universal aspects of the sound. We almost instinctively recognize a heartbeat; we associate a rate or repetition to what we perceive to be a heartbeat. What we in fact hear is the echo that the sound makes within our ribcage, making each heartbeat not only unique in itself but also relevant to our inwardly space. What does it mean to record such an intimate sound, and play it in a public space? What does it mean to place this intimacy outside, but to also invade the personal space yet again, by playing these sounds back at a specific frequency and in such a manner where one cannot avoid feeling the sound, not just hearing it.
beatings – The body’s reaction to being projected with one’s own sound.

Fundamental Ideas, the commons of sound. Where are sounds placed and what is the body’s association to this placement?

“To hear is to be subject” – Noise/ Music – A History. Paul Hegarty, Pg 4.

“beatings” is an investigation that has stemmed from the continual disappointment at the inadequacy of language; spoken or written. The linguistic manifestations, and varying forms language takes. An investigation into the shortcomings that language seemingly prevails, however more often than not entangles even further. The words and the explanations that are lost in translation, transferred through variations of meanings, subjectivity and varying interpretations. The importance that perspective and perceptions have in forming our worlds. Words are used to label and define, box and also to set free, embellish, elaborate and to state facts. They form all sorts of reactions and are commonly overlooked, as well as pondered or followed so diligently that there is no space whatsoever to maneuver. Language is truth as well as fallacy. Through this continual conflict, that I feel I find myself in the center of with language and words. I find myself repeatedly moving towards sound. Questioning its origins, its inner workings, and its structure, its spectacular timing, focusing on its resonance. Looking at how we communicate, without “words” and rather with sounds, pitches and trying to understand and investigate, why and how we can form so much from “sounds”.

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Can sound penetrate beyond language? Is it a language of its own, a language without barriers or parameters and non-specific or defined by geography? Is it a language that relies purely on resonance? And what is resonance, can it be defined in a way where it does not evoke or suggest? Redefining the hierarchal structure and elitism found in words, words that can be relevant or irrelevant, one may seek to search for a meaning or let it pass undefined, perhaps let it be filled with uncertain assumption, sound on the other hand, is integral to a bodily function, its visceral reaction is penetrative beyond awareness. It is in fact anti-linguistic in its nature. However it is defined by its visceral connotations.

Initially I focused on music, the composition of music, the status of music and the commons that can be found in music. How music is produced and sometimes fabricated as well as the psychological aspects behind music. How does one connect to music? Why do we connect with music? How is this relative to how we connect to each other? In Greek Mythology Mnemosyne, the personification of memory, is mother to nine muses, Euterpe the muse of music, “giver of delight” there for mere mortals to forget the tribulations of day-to-day life. Why is the music of today produced in a way that replicates our bodily sounds? The thumping bass that is found in dance music is purposely created so that it replicates an abstract version of a heartbeat. Fascinatingly heart rate is regulated by the medulla oblongata. The brain responds to rhythm and when we listen to music, the brain catches the rhythm and this is why it affects heart rate; it becomes subconscious, a neurological pulse, and this affects the medulla oblongata, which controls heart rate. The heart doesn’t beat at the same tempo as the music, but it slows down or speeds up in order to become closer to it. What does this mean to how we consume music, and more importantly sound? It is
a visceral concoction that is beyond control and integral to our perceptions of the world.

“The repetition effect is a constitutive factor of our perception of the world. Our consciousness of bodily rhythms such as breathing or heartbeats makes us aware of the necessary repetition that also marks psychological time. Bodily cycles that have sound manifestations punctuate biological life by expressing its formal framework and thereby establishing a perception of reference.” Sonic Experience – A Guide to Everyday Sounds.

This foundation in music, and sounds as musical composition led me to seek how we consume music and sounds. Are the resonances relevant and irrelevant according to our moral and ethical foundations? Are there such things as universal sounds? How do we learn to recognize sounds, as signs and symbols of terror and warning? From receiving information and reacting. Do we all hear silence? In this mammoth task there are a multitude of layers, somehow all connected and all interlinked. Something however, which is foremost clear is that these intricacies are fuelled mostly by placement. Where is sound placed? How is sound placed and in order to understand this relationship between sound and placement, and ultimately also architecture, this leads to silence and placement, and silence and architecture. How much of our environments are sound related. How much of it has been changed to suit our living, as well as how is the sound commons created? What is the value of sound in our environment, and what are its political connotations?
“In another trial, heart rate was found to decrease after listening to classical and New Age music but not to change after listening to popular music (Mornhinweg 1992). The heart rate was found to increase if the music contains a fast beat (Harer 1982) or slow down if the music encourages physical and mental relaxation (Kneutgen 1970, Guzza 1989).”

The sounds that we hear have the potential to affect the rate of our heartbeat. Music in particular resonates the most truth of this. To be in a world where there is a certain amount of disconnection, where the individual opinion is so integral to our human rights. What brings us together, are mutual interest and recognition in achievements. Creating a sphere of status anxiety with, varying different ways of salvaging our points of engagement, through varying different ways to reconnected with the “self”.

“art is a sort of experimental station in which one tries out living” John Cage. What world are we living in? Some Public interventions by Alfredo Jaar. Lucy R. Clippard.

So what does it mean to be involuntarily exposed to sounds, music for sake of this argument, in a public space, to know that we automatically react to sound in a visceral way? What does it mean to experience this in such a way, in such a space? In such a manner? Does this then forth involuntarily connect us, to a set locality? To each other? To we form a composition with one another in the architecture of sound? How are we composers in the spatial experience?
“A useful model for understanding the engine behind corporeal intentionality is based on the notions of outer space and inner space. These spaces should be conceived as representational spaces of a subject’s outer and inner environments, respectively. The knowledge of the outer, environing world is determined by receptors and effectors that define what becomes a stimulus or sign for a biological organism. The inner environing world is created by the directing apparatus of the biological organism, that is, the movements and actions in the environment. Corporeal intentionality can be understood in terms if a coupling if these two.” 4.2.1. the internality engine, pg 85. Embodied music Cognition and mediation technology. Marc Leman. The MIT Press.

We live in a world where we have forgotten how indifferent we are, how connected we may all be. This investigation aims to question the purity of these particular connections. How are we affected and synced into each other, questioning the communication through sound, which not only seeks to be immersive but also questioning the intrusiveness of the sounds that we are unconsciously consuming be it that of ambient sound or those of our own bodily sounds. But much more so the perception of being able to hear oneself within a space, reminding the listener of his or her own presence in the living world, rather than the feeling of being a void, and what does this communicate, to be able to hear one self. I am currently working with sound, in an attempt to imitate the intrusiveness of the sounds that we consume but to also explore the effect that we can have one another. A mirroring of the ‘self’ whilst simultaneously exploring the metaphor of listening and that of being heard. What responsibility do we take for creating these sounds? Along with a journey into the composition of mass and void, that we create within a space with the sounds that we
make. Creating a composition of silence and sound. Seeking a way to balance these two elements.

Ultimately what I seek to find in this continual, much evolving investigation is the value of sound, within the universality of certain sounds, and the importance of placement of body in that equation which is not only about where the body is placed in order to experience sound, voluntarily or not. However it is also about the body contribution to the experience of how sound is consumed. Again this falls into the argumentation of mass and void within the composition, and the placement of the body to form mass and void within a spatial parameter.

“Rhythm may be regarded as a sequence of perceived events, each of which is specified by its position in time relative to other events and by its salience. A theory is outlined by which pulse and meter percepts in music are determined by (and therefore predictable from) configurations of an event percepts. The theory is based on the assumption by periodically repeating sounds in the human environment. The most important sounds conditioning perception of rhythm may be the sounds associated with the heartbeat and walking movements of a mother, as heard by her unborn child. Roughly equally-spaced events in music reminiscent of these sounds evoke emotional (heartbeat) and movement (motion during walking) responses” … A. Gabrielsson (Ed.), Action and Perception in Rhythm and Music. Publications issued by The Royal Swedish Academy of Music No. 55, 1987. The Perception of Pulse in Musical Rhythm, Richard Parncutt, Department of Psychology, University of new England, Armidale, NSW 2351, Australian PG 127-130
“Why do we gain sympathy from complexity in identifying with it?” – Doug Ashford.

‘What does an art institution do?’ 2011, Tensta Konsthall.

Through my exploration into sound I have found that I am more inclined to looking at fulfillment of space with sound, looking at the interaction between frequencies and space. The space within the body that creates an envelope for the sound that can be heard. This in particular has led me to question the sound of heartbeats. It seems that in trying to understand the placement of sound in a public sphere, I have compulsively ran towards investigating the private space of noise making, it is an innate and intimate recognition that envelopes the specific dimensions of exploration that I want to question within this work. Exploring the corporeal specifics that are unique to the sound heard, as well as the universal aspects of the sound. We almost instinctively recognize a heartbeat; we associate a rate or repetition to what we perceive to be a heartbeat. What we in fact hear is the echo that the sound makes within our ribcage, making each heartbeat not only unique in itself but also relevant to our inwardly space. What does it mean to record such an intimate sound, and play it in a public space? What does it mean to place this intimacy outside, but to also invade the personal space yet again, by playing these sounds back at a specific frequency and in such a manner where one cannot avoid feeling the sound, not just hearing it.

The mass and Void of Hearing oneself.

I have been taking this exploration further by actually recording heartbeats, human heartbeats. In an attempt to not just record and play back the heartbeat sound that I am recording but to also try to fill a space that embodies the sound. Attempting
to make one feel the sound, not just hear it. Whilst recording I initially tried to make the situation as organic as possible. I am all too aware that I am constantly archiving in my practice. This does of course stem naturally in my work. However I have no intention to make this project an archive. I have been trying to not “select” the people that I have been recording, but rather let things happen by chance. John Cage’s work has been particularly influential in this decision, in particular his piece “4:33”. Which I must point out has been prominently important when also trying to understand the importance, relevance and relationship between the body and sounds, the body and silence, and the relationship between sounds and silence in the mathematical exploration of compositions. The sound is relevant to the space it is being played in; it fulfills it in relation to that, and also in relation to the amount of people receiving the sound. The body always plays a part in relation to the sounds that are made, or the way that they are consumed. A forever particle in the spatial experience. There doesn’t have to be sound played in order for sound to be absorbed. Again the question of how do we all hear silence pops up again. How to compose a space where the silence is just as relevant as the composition placed. What does it mean to be silent within this space that I am creating as well to have that silence taken over.

What is noise, sound even without silence? One is the shadow of the other. What is it to understand sound, without attempting to understand silence? What are its visceral effects and how do we relate to it cognitively? What is the meaning behind silence and what is meaningful within silence? In an attempt to understand how we consume sound and in trying to articulate a language that crosses over barriers of spoken linguistics, using sound as a form of communication that is a bodily resonating experience; how is silence used as a communication form. Can communication be taken a step further and can we communicate in silence?
Paramount and in contrast to, the research that I have started into how we consume sound, and at looking into its pervasive nature. I am focusing on the consumption of silence and focusing on its connective and disconnecting contrasts. I aim to look at how and where “silence” is placed. Not just within a composition. But where we go to seek silence and solitude. Looking at why it is important to be silent. As well as seeking to relate and looking at silence as a political and artistic statement. Our environment is no longer natural. How does the consumption of this manipulated architected environment affect us? I want to further investigate the technicality behind environmental noise manipulation. Trying to understand noise abuse and its effects on the body and psyche. Silence is a human right, the right to remain silent, as a legal right is constitutional to all. So why do we not have a right to the sound that we consume involuntarily?

Communication seems to be a repeated topic in my questioning of sound and silence. What does silence communicate and how is it communicated? Where as talking is seen as a connector, to respond in silence is seen as a sign to object to a field of thought or action. So strong is the statement, and object of separation that silence and isolation is commonly used in the western justice prison system as a form of punishment, however I intend to further investigate this field later on in my essay. Susan Sontag’s essay The Aesthetics of Silence paints a romantic liberating image of the relationship and communication of the artist and silence. It references to it as a spiritual existence, almost it seems like a distant ideal of an unobtainable means, the ‘ultimate other-worldly gesture’

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Sontangs critique on the use of silence by an artist reinforces the methodologies used as well as the impact on this particular human act in relation to the artist, in this particular essay.
“Silence is the furthest extension of that reluctance to communicate, that ambivalence about making contact with the audience which is a leading motif of modern art, with its tireless commitment to the "new" and/or the "esoteric" Silence is the artist's ultimate other-worldly gesture; by silence, he frees himself from servile bondage to the world, which appears as patron, client, audience, antagonist, arbiter, and distorer of his work” Susan Sontag ²

A key point to refer back to is of course, how much does resonance depends on our own cultural and ethical background? If the sound of the heartbeat is to me so universal, used in music to stimulate and project further. Does the sound of a heartbeat have the same resonance if it is the heartbeat of a stranger, rather than when one hears one’s own heartbeat. Does this then make the sound that I am trying to communicate just as irrelevant as if it were words? These two questions push me even further to work with the resonance of “frequencies” in sound even further, the spatial experience. I want to be able to use this universally recognized sound, and push it to such an extent within a space, that there is nothing left of it but the actual components of vibrations. That the sound is so strong, and still recognizable, that it becomes something else altogether. An experience that can be felt physically, as well as

corporeally and not just orally. This then brings me back to an earlier question. Can sound penetrate beyond language?

*Sound as a weapon. A violation of space.*

Isolation in the prison system is seen as the most effective form of discipline, not just the singularity of silence but also repetitive sounds have both been used as torture in Guantanamo Bay for example. With the exposé by WikiLeaks documents came out and it has been recently revealed that the prisoners of Guantanamo Bay were repeatedly made to listen to the theme tune of *Sesame Street* as a form of torture. The repetitive noise within a confined space, resulted in a bodily resonance that is classified as torture. This was then categorized in an *Al Jazeera* documentary *Songs of War*. In a particular excerpt from the documentary, Nathalie Gosselin, Music Psychologists of Montreal University talks about musical sensory dissonance, the particular grinding effect on the outer ear, the brain automatically interprets this as something unpleasant. Gosselin goes on to explain further that these musical dissonant sounds activate certain brain regions, which are associated with the perception of negative emotions; furthermore these are perceptions, which are free of cultural differences. The fluctuations of heart rate and blood pressure results that can be seen in these studies and many more like it, show that sound is a phenomena like no other. These perceptions are integrated in the psyche. When exposed to these dissonance sounds over the duration of time and within a certain space the bodily resonance can be controlled, according to the dissonant sound one chooses.

This leads me to question the use of sound and silence as a means of punishment, why are they used as a means of punishment. Does it reflect more effectively because it has such a definite visceral effect on the body? Have the

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connotations of silence as a means to be disconnected and separated penetrated the psyche in such a way that in fact, the mind cannot quite grip the higher status reached through meditation that has been reached since centuries before? There are two prominent and relevant schools of thought when investigating the sonic abuse and looking at the contextualization and study of our soundscape. This idea of sonic abuse and silent abuse is in its infancy, yet it is by far not unseasoned or unfamiliar.

R.Murray Schaffer\(^4\) believes that there should be a cohesive sound ecology that the regulation of sound is in effect so free and seldom criticized that it has lead to a spectrum that can be abused. On the other hand Jaques Attali, in his book \textit{Noise: The Political Economy of Music}\(^5\) goes on to argue that music is so interrelated to human psychology, and music is a means to express anger and our and by generating a historical graph of how this anger is expressed musically we can then calculate and anticipate when the next surge of anger socially is to explode. It should be noted that \textit{the Minnesota University Press has published Jaques Attali’s works}, as well as that he was a civil servant and adviser to the former French president, \textit{Francois Mitterrand}. These points should be noted as a lot of my research seems to lead me to University of Minnesota, and the research that has been conducted there over the years but also the prominent figures that have stemmed from there.

Furthermore what does it mean to create a space and fully control the sonic sphere within a public space. Initially through the random recording, I chose to unify and compose the recordings and they were played within three varying audiences. A mixed audience of artists and designers and two groups purely made up of artists. What did it mean to design these sounds in the studio like this and to play them back


in the studio to an audience that is experiencing it sitting down? The situation became very ritualistic, composed and almost static and certainly expectant. Reactions were varied some unsettled, others uninterested but mostly working too hard towards the contextualization, that my main point of trying to create a space where one could feel the sound not just hear it became all too unclear and unorthodox. A point made which really struck me was the revelation that this space was like a continual reminder of death. To me this was quite the opposite of what I was trying to achieve! However it made perfect relevance. Within these two groups I also offered to record. This henceforth became and ever more ritualized and composed situation. It is also one thing to talk through the process, but to also explain the technicalities of your process also diminished its potency.
Relational branches of researching the sonic environment. How is sound placed in our environment?

As part of this continual research, I have contacted Orfield Laboratories in Minneapolis, which holds the Guinness book of records record for being the world’s quietest place. By interviewing Steven Orfield, who set up the Anechoic Chamber I aimed to further understand what sort of research is conducted in this place, as well as the physical effect that one can experience in such a location. Why and what sorts of products are sound tested. Orfield took over from what used to be a domestic appliance testing factory in 1989, and has since then been running Orfield Lab, in Minneapolis Minnesota. The space consists of three lab rooms, two reverb chambers and one anechoic chamber, this is the as quoted in the Guinness book of records the worlds quietest place. The anechoic chamber is an 8squared feet by 12 squared feet room, a chamber within a chamber, whatever sound is made it is completely absorbed, there is in effect no bounce back, and in walking into the room, one is walking on a mesh wired floor that you cannot hear, in essence you cannot hear yourself walking into the room. However all bodily sounds are heightened and they resonate far more profoundly. The human ear can hear up to .0 decibels, sound measures are -0.9 in the chamber. Orfield goes on to explain the bodily responses to the chamber, the disorientations and the variation of perception of space, or rather the lack of perception of space, this disorientation is so extreme that a chair is a permanent feature within the room.

Orfield Labs main form of identification is as a research facility, a space where appliances are still tested to calculate the bodily responses to the noise that they

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6 http://www.orfieldlabs.com 4/2/13 11:14 AM
6 Please also see transcript from Interview conducted by Myself On September 27th 2012.
7 http://www.youtube.com/watch?v=FDrXksZJef8 4/2/13 11:14 AM
make, how to make a household appliances more silent, how to make the consumer more responsive and another example is the of the work that goes on at Orfield Labs is Perceptual Market Research®️, in particular that of Harley Davidson, what noises do we associate with what the brand is trying to project, and how to manipulate the sound that the machines that they are manufacturing are making, into a more recognizable sound suitable and in sync to the brand and what it is trying to represent as a consumer product? This is of particular interest to me, the manner in which sounds are allocated to us to represent products and how this is manipulated to create a particular response, bodily or not. Further to my interview with Steven Orfield, founder and CEO of Orfield Labs, the Perceptual Market Research has also been an aid to architecture as well as founding a set standard that is recognized by the American Architecture Standards, as has been used to build old peoples homes. As well as rate and progressive aid the Toronto co-operative social housing. In essence the perceptions that we create through sounds have been used to help improve our special perceptions.
The manufacturing of a sonic identity.

Transcript of Interview with Steven Orfield of Orfield Labs. Regarding the Anechoic Chamber. Minneapolis, Minnesota.

Questions asked and answered over email.

21-sept-2012

- Why is it important to have an environment like the Anechoic Chamber?

One reason is for standardized testing. We are a U.S. NIST Accredited Lab, and so our tests must have the same results as other accredited labs here and in other countries. Quietest is not a requirement in an anechoic chamber, so most are noisier than ours. The quieter the chamber is, the quieter the products that can be tested there. Even though most of what we do is objective testing, this also provides an environment for listening and perceptual research.

- Can you explain Acoustic Holography a little more?

AH is a method of mapping out the local acoustical performance of areas and components of a product.

- You've worked together with Whirlpool to create the world's "quietest refrigerator" refrigerator. How you do measure the human response to such consumable products?

We use Perceptual Market Research, a process we developed in the 90's, which combines:

- Quantitative subjective semantic listening research
- Product measurement

All product claims are derived from the subjective semantic ranking of things like "quietness", "quality", "performance" etc.

- "Burger King Menu Board Preferences" can you explain?
This was another PMR study ranking the feelings and associations elicited by menu board design. It also included a visual navigation study of consumer performance with different board designs.

- Why is it important to test products in such an environment?

If products are quiet, in order to test them, the environment must be quieter.

- Have you tested meditation and the bodily responses to this, in the chamber?

Not formally, but I've tested my own perception of a mechanical heart valve implanted in me.

- Does the chamber make bodily sounds more prominent?

Absolutely

- Does sound deprivation make us more connected or disconnected?

Most are more disconnected and disoriented. NBC news is doing a feature on a Naval Officer who spent time in our chamber as he was quite disoriented.

- Can you go into detail about the sensory deprivation research you have done?

We don't do deprivation research; we simply evaluate deprivation experiences of many of our visitors, mostly members of the national and international press.

Conversation 28-Sept-2012

SL: Can you tell me how you came about building the anechoic chamber.

ST: Sunbeam an American small appliance manufacturer and in about 1988 or 89 they closed the research center and they were selling all of their acoustical test gear and their chamber and I bought it. There is the anechoic chamber and three reverberation chambers. The rest of the lab is a public non-profit art space, that isn’t connected to the labs at all, but that I wanted the space to be used a public gallery. I wanted the space to not be left unused.
SL: What did they use the chamber for before?

ST: They used it to test small appliances.

SL: How big is the chamber?

ST: Well the chamber has an outside dimension and inside dimension which is a called a tip to tip dimension, the tips of the wedges is 8ft by 8ft by 12ft length and width but you are walking on a wired floor, which is underneath you and all around you.

SL: The bits that I have read about the chamber talks a bit about when you are inside the chamber you have no perception of space and you get really disorientated and start hallucinating. Is that quite common?

ST: No, when you are in the chamber most of what has been written about has been with the lights turned off. We invite the national and international press to come and do what we call the “Guinness Challenge” to sit in a chair in the chamber in utter silence for 45 minutes. They sit in a chair without any noise. And that cause all kinds of disorientation. They will be to hear their bodily sounds, they might hear their heartbeat, even hear their lungs flow. We did one public radio show walking in circles in the dark. He couldn’t balance after about 6 minutes. You can actually hear that on Minnesota Public Radio. MPR.ORG.

SL: How is the chamber used more prominently?

ST: Currently it still mainly used as a research facility and through our consultants we rent out the space for $1300 a day. So we test for medical companies, we test for appliance companies, we test for any company who wants to do standardized researched, which is what the anechoic chambers are used for or for companies who want to do non standardized research. So its used on the research side of our company, we work for two markets, we work for architecture and we work for co-corporate electronic product research. The three reverberation chambers that we have next to the anechoic chamber are technical acoustical labs that are 99% reflective. This is all part of a federal accredited lab that we have built in these facilities. In each of the rooms, you can do standardized, American, European and Asian tests. And of course you can also do all sorts of non-standardized tests.

SL: What kind of product testing do you do in the reverberations?

SO: In reverb chambers you usually use pairs of two chambers, horizontally or vertically. And horizontally you test the acoustical attenuation of walls and doors and windows and other kinds of materials that are used for manufacturing. We’ve done a huge amount of research on how to make housing more private. By building better more cleverly designed walls. In the vertical pair we can test
“roads” and floor ceilings assembly we’ve done a lot of research on what allows you to do light weight construction in lousy housing.

SL: WOW. There was a recent talk on the website TED on how architecture or rather architects should be building according to their ears. How the acoustics of a classroom really effects how children learn. The box standard room isn’t necessarily the most audible format for rooms.

SO: We’ve actually set standards for classroom acoustics. For example in the city of Minneapolis, and we do a lot of work in what’s called ‘Universal Design’ which is designing through the close limited user of the space. We have just finished a seminar in the last two days, an international seminar on ‘Universal Design’ in elderly housing. And we’ve just developed the first standard in the world for designing nursing homes for ninety-year-old populations. And doing a technical definition of the day lighting, the lighting, the acoustics and the thermal comfort and the indoor air quality needed by a ninety year old user. So we are just building a nursing home in Iowa, which is the first time that anyone has ever attempted to match a space to the perception of a ninety year old.

SL: How did you work with that, did you have to test it out on a certain amount of people?

SO: Most of it was simply reviewing the medical and the psychological literature and determining which of the studies were valid and then converting that into architectural and text metrics in all of our fields. We talked to some of the best vision scientists in the world, some of the best auditory scientists in the world, and we selected a set of data that we believed to be correct. And then we converted that into architectural standards and test standards based on instrumentation that’s used in those fields. So the architects doing this project that to agree to meet all those standards.

SL: And when will this project be realized?

SO: Next year. It’s just being designed right now. We are designing 11 Million Dollars set of four nursing homes. They are called “familiar household nursing homes” about 15 people live in each one plus the cross functional staff and they live as family. And it’s are a nursing home concept where there is no schedule, you don’t have to get up and eat breakfast you can do whatever you want, if you want to cook in the kitchen you can do that, anything that you are capable of doing you can do. You can even work in the space and be part of the help. So its least degrading, it’s a small group home, where the staff and the residents are all family.

SL: From the research that I have been doing, every piece of literature seems to point to how important it is to hear, and how greatly our perception is based on hearing. How do you think our environments have influenced our way of being? By the soundscapes, how have the influenced our way of being?
SO: It’s hard to tell in any given case, there is a lot of architectural research on how perception causes people to feel we do a lot of what we call ‘perceptual market research’ where we measure, we expose people to acoustical and visual stimuli and we have them take test where they rate their feelings and association to that set of stimuli. So I don’t know if you are aware of this but if you are trying to study an individual or a group and you are trying to find out how they feel about something the one thing that you can’t ever do is ask them, because they really can’t tell you. So you have to go below their conscious state and measure their unconscious feelings and associations. And you can only do that by using methods like semantic differential word pair testing. We do an awful lot of subjective testing none of it is conversational or what is called in the United States pollicated (?). We have helped Harley Davidson when they were trying to create a new engine that would suit the European market, we helped them to define part of the sound that denoted power, which part of the sound denoted excitement, which part of the sound denoted quality. And we developed an equation based on those emotional feelings, so that they could improve their bike and make it quieter at the same time.

SL: That’s really interesting, what other companies do you work with I know that you said Samsung and Whirlpool?

SO: Whirlpool we’ve worked with tremendously. With worked with Aircraft companies. Also a huge conglomerate in the plumbing field and also in the engine field. Black and Dekker and tools most of the major US electrical appliance companies, that make consumer products, and we’ve done some kind of study for most of them.

SL: And how do you see this research developing? You’ve talked about how you work closely with Architects in Creating this project, ‘Familiar Household Nursing Homes’, but can you speak a little more about how else this research has developed and where else it is used.

SO: Well first of all for the elderly home project we set standards for perceptual comfort, which is also technically called building performance. Those are comfort in all the areas of perceptual sensation. The other side of what we are testing in the elderly home project is that they are really in the process; we are showing the elderly three-dimensional images of the spaces which are being designed with all different kinds of options for the spatial feeling of these spaces and the colours of these spaces, and the elderly are being tested to see which ones are meaningful them. So we want to on the one hand want people to be comfortable in this building and on the other hand we want people to love the building.

SL: So you can manufacture an environment, by designing it in a certain way you can, almost guide people to feel a certain way of thinking and feeling about the space.
SO: Well you are not guiding them into a way of thinking. You are measuring their unconscious metaphors so you understand the way they think. So I am not guiding them, they are guiding me.

SL: That’s really interesting.

SO: The field of user experience is a huge field in product development but in architecture there is no field of user experience and yet we’re user experience consultants in architecture. So we don’t care how the building looks. We don’t care if the building is stylish; we care that it perceptually and emotionally connects with the user.

SL: My school has a program called Experience Design, and it’s very similar to what you are talking about what they do. It’s a Master Course also, and a lot of the things that they do are about how we perceive the environment and how to make experiences or rather how you can design experiences. And a lot of the work that they do is research based. And they create experiences that create a certain kind of atmosphere then work through the participants to work out how to make that a more pleasant or effective experience. So it’s a really interesting field. So it’s amazing that you have been running Orfield Labs since 1985. It seems almost like such a young field. Rather the tip of the iceberg.

SO: Well our company started in 1971.

SL: WOW

SO: So our company is a little over 40 years old. We build our acoustic laboratory in 1995. So up until then we were doing a lot of acoustic testing but we didn’t have an internationally recognized laboratory.

SL: And can you tell me a little about what you studied.

SO: When I was in college I studied modern philosophy, and I studied psychology. So if I would have wanted to train in the fields that I am in now, there were no training, but at the time I wouldn’t have wanted to anyway. What I studied was modern philosophy, linguistics, language, meaning theory, and semantics, really a lot of British philosophy. We had the best philosophy department in the university of Minnesota, in the United States. So I trained under a few Oxford Philosophers who wanted to make me into a philosopher. And the minor that I studied in was psychology, and the university of Minnesota was and still is the best psychology school in the United States. The most of the fundamental personality tests that are used across the world were developed at the university of Minnesota.

SL: Well definitely what you are doing it does have a lot to do with Psychology. And it is to do with philosophy and you can definitely see those elements of that basic basis on the research that you are doing now. It’s so interdisciplinary.
SO: Definitely. Right the education that I got in philosophy was the principle determinable of my entire approach to my business. And what philosophy taught me was that a question imply an answer it simply implied a question, and that most questions didn’t mean anything, they were just questions. And that it was more interesting not to study systems of thought, but to observe things and figure that was going on. So it was a combination of semantics, linguistic and scientific study.

SL: I hope that you don’t mind the head of department of Experience Design at Konstfack would be super interested to hear that you guys are Orfield are doing. I would really like to introduce you; I think there would be some rather interesting discussions to be hard here. His name is Ronald Jones.

SO: That would be fine. We deal a lot with academic groups. Currently with the university of Pittsburgh, has the only PhD in building performance in the fields that we are in. And we collaborate with them on projects because we are the only laboratories that test in all the areas that they develop theory. We work in Toronto, Ontario with the University of Art and Design with help their students to develop experimental design for example we just did a perceived accessibility study, with one of the largest housing associations in North America, and the question was ‘How inclusive is Toronto Housing, multi housing seem to the people who live in public housing?’ And so we studied the physically able, the visually disabled and the physically disabled, and we found very interestingly that if you were physically or visibly disabled you became very anxious whenever you approach the transition in public housing like, the entry way to an elevator or anything else, so now we have proposed to the Toronto community housing co-operative, that they develop a second definition of inclusivity for folks with those handicaps. So that we can design in such a way to develop a parody between the physically able and the disabled.

SL: When did you do that?

SO: We finished that last year. It’s a public report if you like I can send you a copy.

SL: That would be really interesting. Thank you.

SO: OK

SL: Thank you.

SO: You’re welcome.

SL: It’s been a massive pleasure to talk to you. It’s been so interesting, and I cannot thank you so enough for your time. Thank you so much.

SO: Well I am delighted to do so.
In this following section I want to analyze how our spatial perceptions are effected by sound, how sound-spheres can affect us both cognitively and corporeally.

Moving away from the preliminary examples and from the preliminary associations with this investigation. Our spatial perceptions are not only capable of being manipulated but are designed in a way that can enhance our way of living. This is a fantastic revelation, however I fear that this also connected greatly to the value that sound-spheres have and the involuntary connection that it was with the body and the manipulation to certain cognitive aspects. For example the use of specially designed soundtracks used within the realm of shopping malls and other commercial outlets. Soundtracks designed to create a certain atmosphere but to also create a certain amount of confusion in the customer, making them more prone to shop, as well as soundtracks that suit the general aesthetic of the seasons collections, as well as suits the mood of the target market, the personification of a complete lifestyle.

This particular branch of research into the sonic experience away from an artistic perspective but rather from a scientific field of research has further led me to understand that silence and its visceral attributes have been under the microscope in a variation of forms. Vladimir Gavreau’s research into the use of infrasound, mostly in the field of war weapons of attack, his research started as early as the 1920’s but it wasn’t until the 1960’s that his works were noticed and cemented. Although his research wasn’t necessarily materialized how he envisioned it is fair to say that his research, into the bodily rejection of frequencies of a negative decibels, really explored how this particular use of sound or rather silence, could really be used to a devastating effect and without any detection. For example his works explored the use
of tubes, much like organ tubing, and the impact that this has negative decibels, this reinforces them makes them stronger. i.e stronger in silence, and stronger in force. His idea was to use negative decibels and direct this sound through a tube, aiming at a target, human, this would paralyze them, by the force that these negative decibels would have on the body, this was one of his developments. Another development that he worked with was the development of a silent police whistle, again work which stemmed from his research into infrasound, this would mean that the police whistle would be silent per se, and attack the human ear in an uncontrollable acoustical manner that would be more effective than police baton. However the uncontrollable element is exactly what shortcomings of using negative decibels in these situations, there isn’t or rather there wasn’t (I must add that there could have been a development that I too have fallen short in finding) a way to be accurate in how the negative decibels could be directed, therefore a singular target would be impossible to track.

A much more recent example of this use of sound, is the LRAD system of defense in both American and British police force, most notably in the recent riots, again Occupy Wall Street, and London Riots fall into these. The opposite methods are used, and positive decibels are projected making it uncomfortable for the listener, a jarring effect and therefore seen as a humane method of crowd control.

Creating a space for manipulation of the experience of sounds.

I aim to highlight this particular corporeal experience that we have with sound. Questioning the interaction between the body when frequency is turned up and a space is completely fulfilled with it. It is a violation of the ultimate spatial intimacy. The inward space, being that of a sound that is created by the self, being taken away
and reflected back, in a much more enveloping manner. I want to viewer or rather the participant to be left feeling violated. To have the perception of hearing their own heartbeat to leave with having their heartbeat changed, whether they feel this instantly or not is something I need to explore further.

A continual argument in this process has been the relevance and the importance of hearing your own heartbeat, and that of a loved one. How this affects the piece in a completely different way. Does it make it more interesting or perhaps even less so? Through the initial testing that I have presented, I am inclined to move further and further away from that idea. Again I do not want to create an archive. Yes, I think that to a certain extent of course it would have a much different effect to listen to ones own particular heart, as well as that of a loved one. This brings me to the most conflicting element of this project because initially I wanted to create space that would have live recordings. However in order to create the ‘ultimate’ desired effect that I want with this piece. The technicalities are yet to be ironed out completely.

Ultimately what I hope that the audience will be able to grasp with this piece is the effect that sound has on the psyche, as well as the corporal experience that can manifest through sound. It is true that in times of stress and danger, our heart beats sync to those around us. We can in fact affect the heartbeats of others with our own heartbeats. And in particular this is true of loved ones, babies and their mothers. However I want to move further than that with this piece and manifest a similar effect not just with what is true biologically, but separate that further and manifest that in a completely fabricated unnatural environment. Which is why I have been more specific about who I am recording. Currently that consists of a 14 year old boy who is autistic, a man who takes medication for ADHD, OCD, Bi-Polar and living with those diagnoses, a pregnant woman and a “yogi” meditating. What does it mean to be more
specific about who I am recording? How does this relate back to sound? Quite simply, on one level, I am exploring the sounds that we make, the enveloped, inwardly sounds that affect those around us, looking at the scientific specific reactions, the visceral reactions and the connectivity that we have with sound, that are beyond our control, and exploring what it means to play those, personal sounds back within a public space.

“Noise music in its most uncompromising form is different from other forms of resistance music’s such as punk, New Wave, hardcore, or dark metal. In these music’s, the voice, the logos as truth, has constituted the ideal point of a politicized voice by claiming to speak the truth of its audience’s situation. Noise has no such claims; it is a radical deconstruction of the status of artist, audience, and music. It is ‘the grain of the voice’, a refusal of representation, a refusal of identity. Noise, at the very least, disrupts both the performer and listener’s normal relations to the symbolic order by refusing to route musical pleasure through the symbolic order . . .” Noise and Capitalism, Pg 27-29, Publisher Gipuzkoako Foru Aldundia – Arteleku.

With this ‘noise’ I hope to move away from a ‘composition’ and still create something that has quite naturally synced into each other without much manipulation. Creating a language as thought, or rather the after thought of the consensual experience. A dialogue between the participant and the piece. The identification of the universal sound, in this case the ‘heartbeat’ its versatility and the acceptance of what that sound is. How can we surpass the notion of being observational machines, continuously consuming visually as well as orally. However the main difference is that we can choose to close our eyes, we can’t quite choose to not listen or absorb sound, sounds isn’t consumed in the quite the same way, its effect is quite involuntarily. And then move onto to be consumed and not being able to escape from it easily.
“To hear is to be subject, thought with writers such as Jaques Derrida would argue that western philosophy (‘metaphysics’) is based on a presumption that I hear myself speaking, and that is how I know I am here. But he claims, ‘here’ is always ‘there’, and there is never truly a moment where ‘I’ am simply present, all in one place, at the same time” - Noise/ Music – A History. Paul Hegarty, Pg 4.

Creating a sonic dialogue and relating to special distribution.

To conclude and in order to be more specific about the physical aspects of this project I am creating a space, a box, and an outer shell, with an inner shell. A space which is completely sound proof, in order to be able to better emphasize the silence. By creating this completely silence, the actual sounds that are made are far more magnified; this opposition not only creates space for its reflection but also for an after thought. The silence is of equal importance just as much as the looping sounds of the heartbeats, this is because, and it creates the abrupt disturbance in the continuity of the repetition of the heartbeats. It takes the self away yet again and further empathizes the concept of the intruder, and the intrusiveness of the corporal experience that has just been experienced. This particular space I visualize as a black cube, the reasoning behind the use of the colour black is purely because as I see this as an extension of a mirroring of the self, however that may be based on the perception of the self through a sound, I feel that it is of paramount importance for the space to be ambivalent, uncertain and insecure in order to indicate what we see or rather what we cannot see, as the self as a sound. I want to take full control of the participants, and to deprive them of certain senses and highlight and magnify others.

“my early works using sounds feature my own voice and experimented with glossolalia, crypti-languages, signifiers without signifieds. As well as creating a
In the above quote where Susan Hiller is talking about her ‘Witness’ piece, she quite perfectly describes the piece as “moving from a personal source to a social source, always emphasizing the physical power of sound” and this is quite clearly an element that I find of particular interest in her work with sound. Moving the personal into the open. I see myself as a violator, as continually intruding in my work. Putting myself and my ideas on display through the means of others, even when I am not doing it consciously. By inviting others to listen and to participate in order for this piece to work, I am projecting myself through them, this is further empathized by recording others heartbeats and not just using my own. I don’t see this a problem at all, rather I see this as yet another way where the autonomous is never in fact singular, that nothing is ever lacking in connection. I want the participants to feel violated and not in control of the sounds that they are creating, as well as the sounds that they are creating. I keep talking about the sounds that the participants are making however I am yet to define exactly how this will manifest in real time. I want the participant to have the perception of being able to hear their own heartbeat, but I will in fact not use their specific live recordings of their heartbeat. And although I have moved away from using each individual’s specific heartbeat because I feel that they will be better connected or at least be further inclined to be interested because they can hear their heartbeat. I still want to give the impression that they are. The specific apparatus used
is yet to be defined, but it’s most likely than not is a contraption along the lines of a non-working contact microphone. This however feels almost like a novelty, and I hope that with further tests will be defined and cemented in a far more clear way than as it currently stands. Ultimately the resonance of the sound and the common identity that the heartbeats sound has, along with the space and the vibrations that the frequencies make within that space should be what penetrate the most. However how to create this perspective and this perception of self is something that is limiting me through its technicalities. There really is no chance happening per se, but rather a very controlled environment, much like the controlled and fabricated manifestation of the sound machine, being that of the sounds that we consume voluntarily or involuntarily.

As with the work I have created, one cannot see that there is someone controlling the sound. This I feel is exactly as it should it. There shouldn’t be under any circumstances, ever the knowledge that there is someone in there controlling the sound, this is because I feel that, the research and the information would take away from the initial resonance that I aim to create with the compositions that are being played in the space. This shouldn’t be the case. The latter information is to be revealed should the participant choose to make the connection to the functionality of the space. Of where the sounds are coming from, who was recorded, why is it being played in such a way. By being specific about whom I record and through nothing but just the general synchronization of the composition, I am testing out if these
compositions do have the power to make someone feel anxious, or nervous, or joyous and happy according to which sequence the sounds are being played in, as well as there being absolutely no editing, in tempo.

This investigation does not have a conclusive definitive, end. I have chosen my recordings to be re-interpreted and manipulated into white noise, and these are to be played as part of a series of “broadcast” and events, collaboration with Radio Picnic in Berlin. This is a fundamental element to further argue, or rather question the bodies’ involvement in the placement of sound. What does it mean to play such personal sounds, which have been converted to an almost incomprehensive cloud of white noise and broadcasted on radio, to be played at simultaneously as broadcasts at Malmo Konsthall, during varying periods throughout the exhibitions duration? The third and fourth element is the continuation of where it still going to be broadcasted. The recordings will also play in the car park of Tensta Konsthall, as part of the Audible Dwelling. This is the perfect vehicle to further broadcast but to play the sounds in a public sphere. Using a learning site. Being able to broadcast and be transported easily and also be livable.

Another broadcast will also be at Norberg Festival. This however will take a different ritual. I am recording people’s heartbeats and playing it back in the main factory. Norberg is a festival for experimental music and sound art. And I have also been offered the opportunity to play the sounds back within this very special space. Norberg is set within an old metal factory. The heart of industrial Sweden, Mimerlaven which was central to the production and excavation of iron ore. After the demise of the mining industry, since the 1980’s the old factory has been used for illegal parties, and now officially host the internationally known Norberg Festival. The distribution and production of these elements is something that I consistently call
into question. To have these sounds being reinterpreted, and to be presented in a ‘musical’ context further reinforces the play between music and sound, the commons factors and elements, which are integral to both.

References And Reading List

