Are You Ready for a Wet Live-In?

Explorations into Listening

Holmstedt, Janna

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JANNA HOLMSTEDT
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a)

HARDCOPY

WHERE DEC USERS TURN FOR RESOURCES

ER 1984 VOL 13, NO. 11

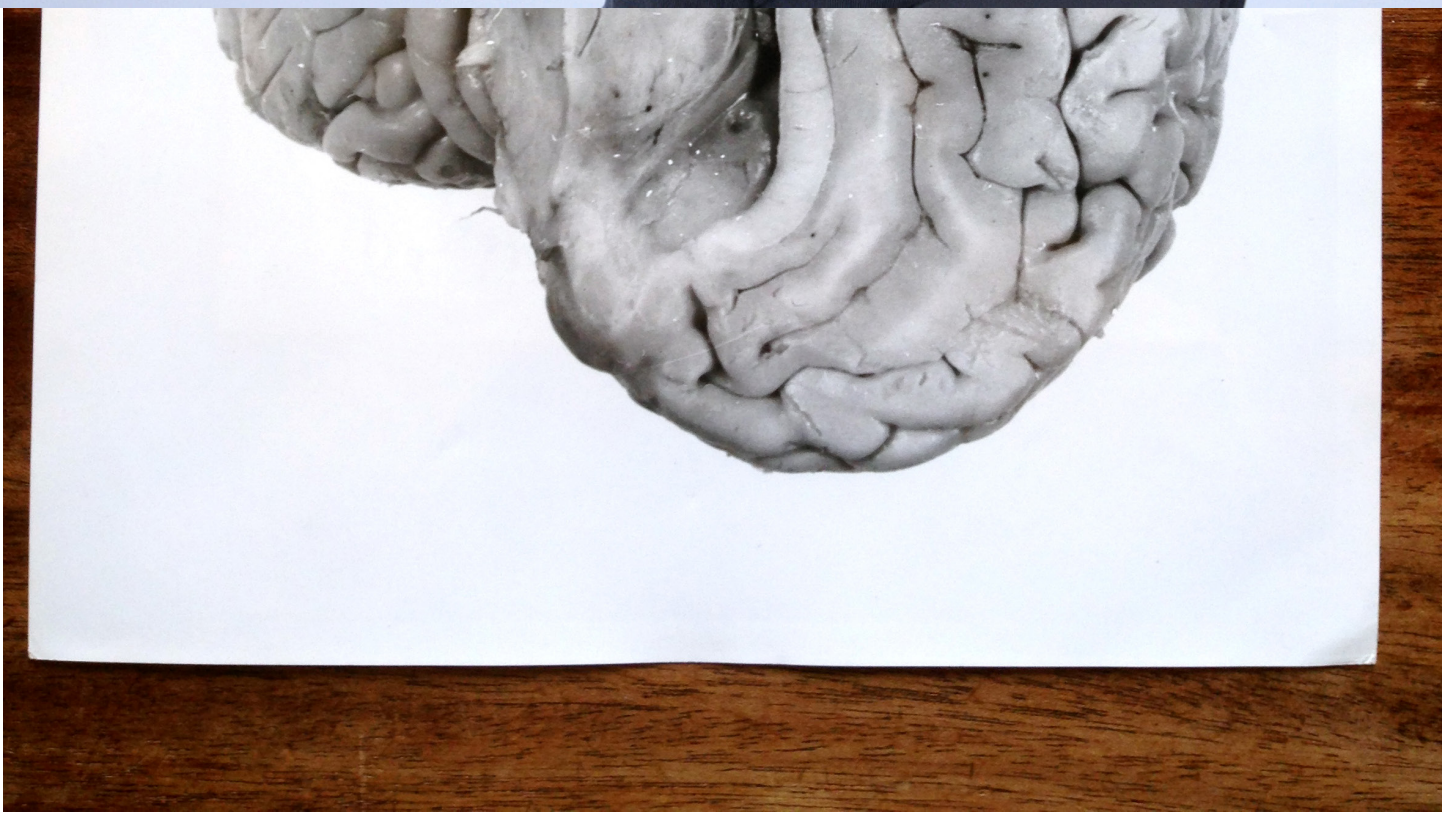
"SPEAKING" WITH DOLPHINS: DEC Deciphers The Dialogue

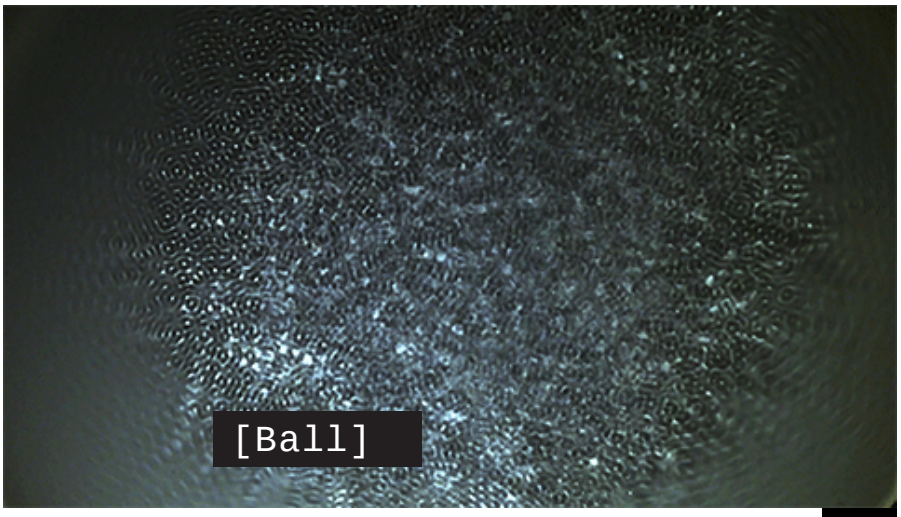
The Power And The Glory Of DEC's Pro 380

SPECIAL DEXPO West Preview

b)

c)





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ARE YOU READY FOR A WET LIVE-IN? EXPLORATIONS INTO LISTENING

JANNA HOLMSTEDT

A DOCTORAL THESIS CONSISTING OF SIX WORKS OF ART AND AN ESSAY

This dissertation has been carried out and supervised within the graduate program in Fine Arts at Umeå Academy of Fine Arts, Umeå University. The dissertation is presented at Lund University in the framework of the cooperation agreement between the Malmö Faculty of Fine and Performing Arts, Lund University, and Umeå Academy of Fine Arts regarding doctoral education in the subject Fine Arts in the context of Konstnärliga forskarskolan.

Figures

a) Cover of *Hardcopy* vol. 13, no. 11 (November 1984). Lilly Papers, box 45, folder 8. Courtesy of the Department of Special Collections and University Archives, Stanford University Libraries

b) Brain of a bottlenose dolphin (*Tursiops truncatus*), Communication Research Institute (CRI), Coconut Grove, Florida. Lilly Papers, box 36, folder 16. Courtesy of the John C. Lilly Estate and the Department of Special Collections and University Archives, Stanford University Libraries

c) *Fluorescent You*, sound and light installation, part of the solo exhibition *In the Greenery* at Inter Arts Center, Malmö, 2016. Photo: Mikael Lindahl

d) Film still, *Articulations from the Orifice (The Dry and the Wet)*, 2016

e) *Limit-Cruisers (#1 Sphere)*, performance at Weld, Stockholm, 2014. Photo: Fredrik Wåhlstedt

f) Unknown dolphin, Communication Research Institute (CRI), Coconut Grove, Florida. Lilly Papers, box 39, folder 7. Courtesy of the John C. Lilly Estate and the Department of Special Collections and University Archives, Stanford University Libraries

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Abstract

Listen. If I ask you to listen, what is it that I ask of you – that you will understand, or perhaps obey? Or is it some sort of readiness that is requested? What occurs with a body in the act of listening? How do sound and voice structure audio-visual-spatial relations in concrete situations?

This doctoral thesis in fine arts consists of six artworks and an essay that documents the research process, or rather, acts as a travelogue as it stages and narrates a series of journeys into a predominantly sonic ecology. One entry into this field is offered by the animal "voice" and attempts to teach animals to speak human language. The first journey concerns a specific case where humanoid sounds were found to emanate from an unlikely source – the blowhole of a dolphin. Another point of entry is offered by the acousmatic voice, a voice split from its body, and more specifically, my encounter with the disembodied voice of Steve Buscemi in a prison in Philadelphia. This listening experience triggered a fascination with, and an inquiry into, the voices that exist alongside us, the parasitic relation that audio technology makes possible, and the way an accompanying voice changes one's perceptions and even one's behavior. In the case of both the animal and the acousmatic, the seemingly trivial act of attending to a voice quickly opens up a complex space of embodied entanglements with the potential to challenge much of what we take for granted. At the heart of my inquiry is a series of artworks made between 2012 and 2016, which constitute a third journey: the performance *Limit-Cruisers (#1 Sphere)*, the praxis session *Limit-Cruisers (#2 Crowd)*, the installations *Therapy in Junkspace*, *Fluorescent You*, and *'Then, ere the bark above their shoulders grew,'* and the lecture performance *Articulations from the Orifice (The Dry and the Wet)*.

The relationship between what is seen and heard is being explored and renegotiated in the arts and beyond. We are increasingly addressed by prerecorded and synthetic voices in both public and private spaces. Simultaneously, our notions of human communication are challenged and complicated by recent research in animal communication. My work attempts to address the shifts and complexities embodied in these developments. The three journeys are deeply entwined with theoretical inquiries into human-animal relationships, technology, and the philosophy of sound. In the essay, I consider as well how other artistic practices are exploring this same complex space. What I put forward is a materialist and concrete approach to listening understood as a situated practice. Listening is both a form of co-habitation and an ecology. In and through listening, I claim, one could be said to perform in concert with the things heard while at the same time being changed by them.

Keywords: artistic research, listening, situated practices, sound in art, expanded art, expanded scenography, media ecology, acousmatic orality, a/orality, storytelling, interspecies communication, more-than-human relations, co-habitation, sensorial estrangement, posthumanism, parasites, play, technology, dolphins, sonic sensibility, transliteracy, voice, performativity, new materialism, Michel Serres, Karen Barad, John C. Lilly, oceans, wet live-in.

For Hugo and Max

PRELUDE

17

Articulations from the Orifice

Dr. L. started his scientific career by killing the object of his study in search for intelligent life. When he saw the brain of his object, he said: “Oh boy! This is *it*.” The first five objects were given numbers.

1,
2,
3,
4,
5,

They quickly died because of fundamental technical mistakes, before the team even got to work on them.

6,

On number six they located the reward system in the brain with the help of needles, hammers, and electrodes. It took an entire day. Number six died of an epileptic fit.

7,

Number seven was a whiny kid. The first scientific results consisted of recorded distress calls: stereotypical, monotonous, and sometimes jarring. Accordingly, they managed to locate the punishment system in the brain.

8,

Number eight clearly seemed to imitate the researchers and emit humanoid sounds. They felt the uncanny presence of *Someone*, who was on the other side of a transparent barrier, which up to that point they hadn’t even seen. *Someone* was disabled after several days of experimentation.

9,
10,

Number 9 and 10 were the first ones to receive names: Lizzie and Baby. Lizzie died because they dropped her on the floor. Her last words were: “This is a trick,” or it might have been: “It’s six o’clock.” Baby died after a few weeks of self-starvation. They got five new research objects.

11,
12,
13,
14,
15,

They needed to be domesticated first, a procedure that, according to Dr. L., resulted in quick learning, akin to teaching, psychotherapy, or brainwashing.

The team discovered natural ways to make the research objects speak; electric stimulation of the brain was not necessary. The best way to proceed was instead through playfulness and different kinds of rewards, such as food, tactile contact, and acoustic rewards. Dr. L. made a note that this was something that trainers had told them for many years. With the establishment of the Communication Research Institute (CRI), an institute for interspecies communication, Dr. L’s research entered a new phase. In order to prevent the researchers from over-interpreting the articulations made by the research objects, Dr. L. set up a strict system for language training that consisted of nonsense syllables:

oyn oat lye chew kih chee ine key oil tih

The experiment begins when the human operator walks into the room, sets up the microphone, turns on the light above the Plexiglas tank and calls out: “Alright – let’s go. Hello.” Randomly aggregated series of consonant-vowel

combinations of various length are then presented at a rate of one syllable every 0.8 seconds. The average length of each sounding element is about 0.4 seconds, the silence between each element lasts for about 0.4 seconds. When the last syllable is uttered the vocal pitch is changed slightly (a small raise in pitch accompanied by a glance sideways at the test subject) as when a question is asked:

roy kah ovv kehh oyv noy rye nigh otch?

Elvar, number eleven, is very impatient with their slow and laborious methods to communicate with him. Dr. L. notes, "We are dealing with a species that is primarily acoustically oriented. We are primarily visually oriented." Dr. L. realizes that in order to move forward in his research he needs an ideal "mother" who can give "tender loving care." He engages Margaret Howe to work at the newly built laboratory on the U.S. Virgin Islands, and her mission is to practice a "human mother-child teaching-learning model," a pleasure-contact method of learning and interaction. The research objects quickly improve their ability to learn humanoid sounds.

16,

Number 16, Pam, is outstanding. But the research methods are far from satisfactory. Margaret Howe thus develops a completely new experiment. During a period of 2.5 months Margaret Howe will live together with number 17, Peter Dolphin.

17,

Howe has tried to find the most equal solution for co-existence between the human being and the dolphin being: a flooded house with plenty of fish. The communication study can begin. Every aspect of their life together is documented. After a while a crucial question emerges: who is teaching whom?

Meanwhile, Dr. L. seeks to prepare the human operator for the task of communicating with other intelligent beings. He wants to radically isolate the scientific observer. By using himself as research object, Dr. L. attempts to rid himself of prejudice and pre-programmed belief systems, which tend to contaminate the research results, with the help of sensory deprivation in a floatation tank of his own design. With sensory input brought down to a minimum (auditory, visual, olfactory, tactile), with his body suspended and relaxed in lukewarm water, the boundaries of the body seemed to dissolve and the mind expand. Dr. L. sees this as an opportunity to study the brain and the mind from within, in its unspoiled state. He also nurtures the idea that floating in solitude in the tank somehow simulates how the dolphins experience the world, as a pure mind in the waters.

A few months after the completion of Howe's experiment, the funding is cut. The laboratory on the U.S. Virgin Islands is eventually forced to close and the dolphins are moved to a facility in Miami, located in a former bank in Coconut Grove. Five dolphins pass away, Peter amongst them. Suicide, according to Dr. L. Others call it mistreatment. The former veterinarian of the lab describes Peter's death as a voluntary act. One day he chooses not to breathe anymore after having been forced to separate from Margaret with whom he was deeply in love. Three dolphins remained; they were released into the open sea.[1]

18,

19,

20 .....

You Tape God (Touching the Matter of Language)

I sit in a quiet, cool room at the Special Collections and University Archives at Stanford University Libraries and sort through box after box of Doctor John Cunningham Lilly's research materials. I am hoping to find the recordings that Margaret Howe made between June 15 and August 18, 1965 when she lived with Peter, the dolphin, in the water-filled home. I want to hear the woman and the voices as they were shaped by the speech training during the wet live-in (the articulations from the orifices). The first thing I come across is a lantern slide of a cross section of a dolphin head, the eyes are still there and look at me, between them expands a painterly

landscape – divided into gray, white, and red fields of flesh. In a folder, I find endless lists with groups of similar sounding words and phrases:

agitate
annotate
candidate
can't you take
cogitate
concentrate
confiscate
commentate
computate
crowd your tape
garbage day
got to take
grab the tape
guard your state
gravitate
heart attack
hesitate
imitate
orchestrate
progitate
vegetate

The list ends with:

you tape god[2]

The phrase perhaps captures the mixed feelings of discomfort and wonder that the scientists experienced when in the research objects, these biological machines, they met a voice that was frighteningly similar to their own. There was no tongue, no tonsils, no palate, no vocal cords, no mouth to form the words, but still the object imitated them – the dolphin had uttered English words through its blowhole.

"One time he mimicked my speaking so well that my wife laughed out loud and he copied her laughter," Lilly writes.* Shortly thereafter the dolphin dies of an epileptic fit caused by the electrode placed in its brain. This is 1957 and the researchers believe they have succeeded in finding the reward system in dolphin number six. But, even though Lilly has recorded the dolphin's imitations of human voices on tape he cannot prove that what they heard has actually taken place. Lilly notes, "My demonstrations of direct tape recordings of the phenomenon have been unconvincing to many types of persons and scientists."[3]

Since large parts of the sound emissions made by the dolphins are extremely rapid and not within the human hearing range, Lilly and his team start to experiment with the tapes, slowing them down and altering the pitch to make the humanoid sounds more audible. Sound recordings are converted into sonograms and fed into computers that search for patterns. Can the inaudible be extracted and made visible? They make mimicry studies with the dolphins using simple words and phrases. When human and dolphin take turns at vocalizing, the mass of impressions are reduced to one sound object at a time. A sense of conversation emerges; the dolphin seems to listen and respond. Eventually Lilly begins to pull the speech apart into sound elements as if he has been inspired by Elvar, dolphin number eleven. In a report from 1962 Lilly describes how Elvar dissects words; how he tries out and plays with pronunciation, speed, and frequency. It seems as though the dolphins are testing what the researchers are capable of hearing and adjust the frequency range of their sound emissions accordingly. The same phrase, "more Elvar," is repeated and varied by the dolphin in several different ways – from high-pitched, fast dolphin-range down to the slower lower-pitch of human speech. "He does not reproduce a word in a 'tape-recorder' fashion or in the fashion of a talking bird. In one's presence he literally analyzes the acoustic components of our words and reproduces various aspects in sequence and separately."[4] To make this process audible, the researchers must significantly slow down the recordings of the dolphin sounds:

> Further studies of the tapes slowed down to half speed and to one-quarter speed revealed an additional unexpected factor. Apparently these animals are quite capable of taking a vocalization by a human and compressing it with respect to time. We found that most of the vocalizations made far more sense and their inherent complexity showed up more easily when we extended their duration and lowered their pitch by slowing down the tape.[5]

* In the documentary film by Christopher Riley, *The Girl Who Talked to Dolphins*, Mary Lilly recalls: "I came in at the top of the operating theatre and heard John talking and the dolphin would go: 'Wuh… wuh… wuh' like John, and then Alice, his assistant, would reply in a high tone of voice and the dolphin would imitate her voice. I went down to where they were operating and told them that this was going on and they were quite startled." Lilly's version quoted above is taken from John C. Lilly, "Some Considerations Regarding Basic Mechanisms of Positive and Negative Types of Motivations," *American Journal of Psychiatry* 115 (1958): 498–504. Lilly Papers, box 43, folder 9.

Were they onto something, or was it merely illusion?

Lilly begins to experiment with recordings of the human voice as well and is fascinated by the effect a steady repetition of the same word has on the listener. In one experiment the word "cogitate" was recorded and repeated to a listener for a period of fifteen minutes up to one hour. "One at first hears the word cogitate from the signals received. As one continues to listen, one begins to hear other words. … With three hundred expert observers, we found that there were 2,730 alternates, 350 of which were in a large dictionary; the rest are words that we do not use."[6]

micro-tit *oliver pitt* *oppenquick*

"Every act of perception is to some degree an act of creation," notes biologist Gerald M. Edelman, "and every act of memory is to some degree an act of imagination."[7] I myself try listening to a loop that I found on Lilly's website and during a period of five minutes I hear: *cogitate, how to take, kartotek, cut the tape, crowd your tape, gravitate, architect, got to take, grab the tape, glad you take, proud to take, cut dictate, edit cut*.[8] After approximately 2.5 minutes, a rhythmic pattern occurs where the two last phrases, *edit cut* and *cut dictate* alternate and create a clear stereo effect. After that, a short, ringing tone punctuates and adds to the composition. By this point I have stopped listening for words and have begun to notice the rhythmic, evolving patterns. I perceive new sound patterns as the listening proceeds, as if a sonic residue interferes with the signals received, and thus new words and impressions are formed. Or is it a so-called otoacoustic emission in my ear that causes the effect, i.e. a sound given off by the inner ear when stimulated by a sound?

Composer Michel Chion writes that hearing does not occur in continuity, but in brief "slices." What the ear, or rather the ear-brain system "perceives and remembers *already* consists in short syntheses of two or three seconds of the sound as it evolves."[9] And he continues, "This results in a paradox: we don't hear sounds, in the sense of recognizing them, until shortly after we have perceived them." In other words, we don't hear words as separate entities though we might *recognize* them as words, we hear sections (slices) of sounds. There simply are no solid, sonic facts that can be sifted out and isolated, but Lilly tries. At the same time, he states that the human research subject can be "programmed" to recognize certain words and not others with the help of barely discernable peripheral visual stimuli. Different levels of noise are also introduced into the sound recordings, to reduce the clarity of the "acoustic image," as Lilly calls it and he finds that this increases the number of alternates that can be heard, as does the use of a vocoder. Lilly formulates the hypothesis: "High fidelity speech contains two major components not yet clearly separated: (1) embedded patterns of parameters (not yet specified) which are necessary and sufficient to carry meaning, (2) added 'noises' which allow the alternate to develop." Lilly wishes to separate the signal from the noise, believing that if he would succeed in doing so the acoustic image (in this case "cogitate") would not be distorted into alternate words and phrases. But, he also states that the speech resulting from such a procedure "will probably sound quite strange and non-individual as to talker identity."

It was not only the word "cogitate" that was used, other words and phrases were played as loops for research subjects in different environments and Lilly appeared to devote many months to these listening exercises and sound experiments. Sometimes the research subject sits at a table and writes down the words he or she thinks she hears; sometimes the listener lies on a couch in a soundproof room with low lighting and the impressions are reported verbally in a microphone so that visual stimuli can be reduced as much as possible; sometimes the research subject floats in water in total darkness. I suspect that in many cases the research subject is Lilly himself who exposes his own ears to word loops or combinations of words from various directions – right, left, stereo, right, left, stereo – through headphones or speakers, sometimes for up to six hours at a time. He asks, "Are there a limited number of words which can be evoked, or if one listens long enough, does the list expand ad infinitum?" Lilly even plays sound loops for educational purposes in some of his lectures and notes that they cause around ten percent of the audience to trip out.[10]

I continue to sort through diagrams and lists of linguistic experiments reminiscent of William S. Burroughs poems, various forms of concrete poetry, or Dada. What strikes me in Lilly's careful accounts of his efforts to find a way

to document the imitative ability of dolphins without being lured by one's own perceptions is that he discovers that words are *sound*. But the words-as-sounds don't behave like words on paper, clearly defined and demarcated. It is as though the dolphin's voice itself and its playfulness get in the way of the meaning of the words. At the same time, this is precisely what signals that *Someone* is there and that it is not a repetitive machine or mere parroting. The voice, eerily human-like, seems to overflow with meaning beyond what is purely signified.

Encountering what he refers to as the dolphins' Donald Duck-like voices, Lilly is forced to treat language as an acoustic phenomenon, a series of sounds, which, moreover seem to play tricks on him. "The voice is something which points towards meaning, it is as if there is an arrow in it which raises the expectation of meaning," writes philosopher and cultural theorist Mladen Dolar. And he formulates a question that captures an important aspect of that which seems to elude Lilly: "The word as a signifier, the word as a sound object: *how do we think them together*?"[11] Seemingly Lilly neither read nor listened to poetry. That, which for every poet is an essential insight – the difference and interplay between the visual, signifying, and auditory aspect of words, becomes a scientific problem for Lilly. What's more, the sound recordings do not capture the fullness of the reality that the researchers experienced with the dolphin in the room. Neither technology nor perception can be relied on. Even the role of language in the act of communication becomes increasingly elusive.

cut the tape *cut dictate* *edit cut*

"When sound ceases to follow sense, when, that is, it *makes* sense of sound, then we touch on the matter of language."*

can't you see *counter tape* *count to ten*
can't you stay *consultate*

Lilly had, through intensive listening, touched on the matter of language. But, not only that, when he closed the eye for the benefit of the ear, established boundaries began to be redrawn.

conscious state *found a fish* *microtape*
copper plate *hibernate* *Margaret faith*
counter face *levitate*

How did he end up here?

* Charles Bernstein quotes Giorgio Agamben and adds, "This is the burden of poetry; this is why poetry matters." Charles Bernstein, ed., Introduction to *Close Listening. Poetry and the Performed Word* (New York: Oxford University Press, 1998), 21.

INTRODUCTION

Notes on the Text and This Doctoral Work

This artistic research project investigates listening as a form of co-habitation through practices that are situated in the borderlands between human and non-human, listening and seeing, language and voice, contemporary art and performing arts. On the meandering journey that follows you will find me in the company of sea mammals, poets, composers, philosophers, and media historians, among others. The cross-reading of art, film, theater, neurology, cetology, philosophy, and poetry, offers contextualizations and shows how similar issues have been explored and understood in different fields at different times and places. Drifting in and out of focus is the sonorous body, a sonic sensibility, and what it might mean to exist according to listening.

My doctoral work consists of six works of art and an essay. Despite its length, I choose to call this text an essay, partly because the text is written in an essayistic spirit,* and partly to point out that the text alone does not constitute the thesis (or dissertation, depending on country and academic tradition). The artworks and the text form a dialogical whole, where the essay documents the research process through presenting a collection of stories and situations, or cases. Rather than evidence, a travelogue is offered, as listening has consequences for what can be shown (demonstrated, pointed out, proven).**

At the heart of the inquiry is a series of artworks, or set-ups, that make use of voices, bodies, sound, narrative material, and constructed environments. Between 2012–2017 the artworks have been presented at different venues and in a variety of contexts, either as installations, performances, praxis sessions, or lecture performances. How each set-up is finally aesthetically articulated is a direct consequence of the chosen themes in each work; the themes are played out and activated in space, so to speak. Photographs, sketches, and texts from these works are presented in chapters 3 and 5.

Since the doctoral work is presented as an e-book (available as both an ePub and an interactive PDF) it is possible to listen to sound and see films while reading. A printer friendly PDF is also available, which is a reduced version where parts of the composition are omitted. Furthermore, the electronic publication is accompanied by a website, which serves as an open and living archive. The website is accessible at http://www.explorationsintolistening.se/

In the essay, two sets of notes are used to better facilitate reading: endnotes and footnotes. Substantive notes are located on the page in question as footnotes and are indicated by asterisks; citation related notes are numbered and can be found in the endnotes.

The main part of the essay is structured as three journeys that are thematically rather than chronologically ordered. These journeys are referred to as acts of "going visiting," a term borrowed from Hannah Arendt, and include chapters 2, 3 and 4. To go visiting is an attempt to keep several perspectives open at the same time rather than to search for universal overviews.

Before embarking on these journeys though, some central concepts are presented in chapter 1, "Listening as Mode and Practice." In this opening chapter, the topic of listening is introduced, and I present the research questions that have spurred my inquiry. The chapter could be seen as a navigational tool as it maps out certain relations and points to further discussions in specific chapters.

I approach the listening body in the company of Michel Serres as a "mingled" body, i.e. a body that is not separated from the environment, and where the five senses are not treated as independent modalities. I also make use of Serres' figure of the "parasite" – or more precisely, the condition of existing alongside expressed by the prefix *para-*, which throughout this essay helps me inquire into the relations between human and non-human, listening and seeing, language and voice. Two other central concepts introduced in the opening chapter – and used to explore these same relations – are "acousmatic," which in my use does not denote the split between a sound and its visible source, but rather the very relation of the heard and the seen, and "a/orality," a term appropriated from Charles Bernstein, which I use to refer to the invocation of a listening that is additive rather than reductive. Furthermore,

* The essayistic form allows for a sense of conversation, as well as diversions and shifts in style. Following Michel de Montaigne the essay forms itself as an attempt, as a sort of *trying things out*, as a simultaneous navigation and exploration of a landscape. It offers a way to dwell and meditate on a subject, where the writer does not attempt to hide behind the pretense of objectivity.

** The word "document" has its origin in the Latin word *documentum* ("example, proof, lesson") and *docere* ("to show, teach"). "Documentation" often refers to the practice of creating a record and/or a description of a situation or an object, which can serve as evidence.

sound art and the use of sound in art are discussed, and the notion of "apparatuses" is introduced in relation to cybernetics and system aesthetics, which eventually leads me into the field of media ecology. In this study listening has been approached as an embodied interaction with matter, and thus Karen Barad and Donna Haraway become two other important travel companions.

Chapter 2, "Going Visiting: Are You Ready for a Wet Live-In? Or, the How of Ms. Howe," continues where the "Prelude" left off. It follows John Lilly's trail and the resulting journey involves a hunt for the tape recordings that document the dolphin experiments conducted in the 1960s, especially the "Wet Live-In," when Howe lived with the dolphin Peter in an attempt at equal human-dolphin co-habitation. Here, all the main concerns of this artistic research project float to the surface. Visiting Lilly's laboratories helps me produce insights not only about his work and what it meant in the 1960s, but offers relevance today as it opens up new ways of understanding interspecies communication, language and intelligence, apparatuses, performativity, the sonorous and mingled body, and situated listening as a form of co-habitation – all of which I explore in my artistic research.

In this chapter I also attend to some historical aspects of the 20th century as the century of the "extended ear," as well as the hitherto unheard, in which humans started to probe and map the deep blue sea with hydrophones (underwater microphones) and sonar, as well as listen for signals from outer space. It is as if the world suddenly exploded with sound and through the use of new technology we encounter the problems of listening anew.

In chapter 3, "Going Visiting: Traces from an Artistic Practice," I present the performance *Limit-Cruisers (#1 Sphere)*; the praxis session *Limit-Cruisers (#2 Crowd)*; and the solo exhibition *In the Greenery*, which consisted of three sound installations: *Therapy in Junkspace*, *Fluorescent You*, and *'Then, ere the bark above their shoulders grew.'* I refer to these artworks as both "parasites" and "set-ups" and through them I seek to explore how acousmatic sounds and voices structure audio-visual-spatial relations in concrete material situations.

The artworks could be said to process and reroute both the issues and questions that Lilly's work raises, as well as the aesthetics of the 1960s, including influences from science fiction, psychedelia, new age, and multi-media events. My artworks do not answer my research questions. Rather, they offer ways to inhabit the problem of an embodied and situated listening and make it felt. Here, a/orality and the acousmatic are used as compositional techniques.

In my presentation of the artworks, I do not seek to document "everything," or offer a clearly defined overview since these temporal, spatial, and physical works do not exist as autonomous artworks separate from their listeners, or even as a coherent subjective experience that can be completely retold or accounted for. Hence, only traces – photos, texts, sound, and other fragments from the installations and performances – are left.

Chapter 4, "Going Visiting: Acousmatic Orality and Para-*Sites*," offers a contextualization of the artistic field(s) my practice can be associated with, as it attempts to read across various so-called expanded practices in art, theater, and cinema. While focusing on embodied and situated listening practices, and the use of sound and voice, I take a closer look at the acousmatic voice and a special kind of acousmatic being that Michel Chion has called acousmêtre, which is simultaneously familiar and uncanny.* In other words, I explore listening in relation to sounds and voices that have been recorded or otherwise technologically mediated. There is something significant in the *alongsideness* one experiences while listening to a voice through (for example) headphones, and the way this sort of accompanying voice changes one's perceptions and even one's behavior. These bodily and experiential aspects that arise in relation to an accompanying voice can be expressed through the prefix *para-* mentioned previously, i.e. the condition of being beside, or side by side. Listening turns into an experience of being-more-than-one, and as inhabiting-more-than-one-place at once.

Chapters 2, 3 and 4 could be said to work in parallel since this condition of existing alongside (as in *para-* and as parasites) and listening as co-habitation are examined first in the context of Lilly's work, secondly in the context of my own artistic set-ups, and thirdly in

* The *acousmêtre* is an invisible character present as voice only, a split being. Because of this condition and through the cinematic imaginary the *acousmêtre* has, according to Chion, become bestowed with "the powers of ubiquity (being everywhere), panopticism (seeing all), omniscience (knowing all), and omnipotence (being all-powerful)." See Michel Chion, "Glossary: 100 Concepts to Think and Describe Sound Cinema," trans. Claudia Gorbman, PDF available on Michel Chion's website, accessed June 16, 2014, http://michelchion.com/texts

the context of expanded practices that explore what I have come to call an acousmatic orality. The parallelism I propose could be considered a form of conceptual mapping across domains, where insights and problems from one field can be mapped onto another, thus they can be read with and through one another, the aim being to produce new patterns of thinking-being and a kind of "transliteracy," a notion I will return to in the "Outroduction."

The "Outroduction," is divided in two parts: one performed and one written. Here the plurality of directions and contradictory paths have transmuted into another artistic format (in this specific case a lecture performance) presented in part one, and a new set of concepts presented in part two.

In the second (written) part, the artistic choice of working with listening as a situated and embodied practice is discussed in relation to larger cultural shifts and (in)visible apparatuses at work in an experience and knowledge economy where optimal performance has become a demand. I ask: is it possible to unlearn habitual and dominant modes of thinking-doing by turning to an auditory domain? This section both recapitulates and further elaborates on the topic of listening, while considering Bernard Stiegler's organologies,* Karen Barad's new materialist take on performativity, Anne Carson's reflection on the Greek word *morphē*, and Pauline Olivieros' notion of deep listening.

The first part of the "Outroduction," *Articulations from the Orifice (The Dry and the Wet)*, which was presented as a lecture performance in 2016, is the final artwork included in the dissertation. The traces of the lecture performance presented here include excerpts from the score/transcript as well as photographs and sketches. The score, when read as text, displays a frustrating lack of information. That is why it is there, to point to the missing presence of the actual spatial compositions – the performed parts of this thesis.

As you will see, the three journeys, represented by chapters 2, 3, and 4, have been made simultaneously and operate on different levels, but they constantly feed into and contaminate one another. There is no before and after, cause and effect. There are a multitude of perspectives that I try to inhabit and keep open at the same time. This is how I work and the structure of the essay therefore seeks to mimic the structure of the practice, not discipline it.

The essay ends with a "Coda," a final lingering chord, which for me also represents the beginning of something new, a prelude to other journeys.

* Stiegler could be said to offer an organology in place of the cybernetic understanding of complex systems. He combines three organological levels: the human body, what he calls "technics," and the social. The human body cannot be separated from the organologies of which it is part.

27

you

yes, you

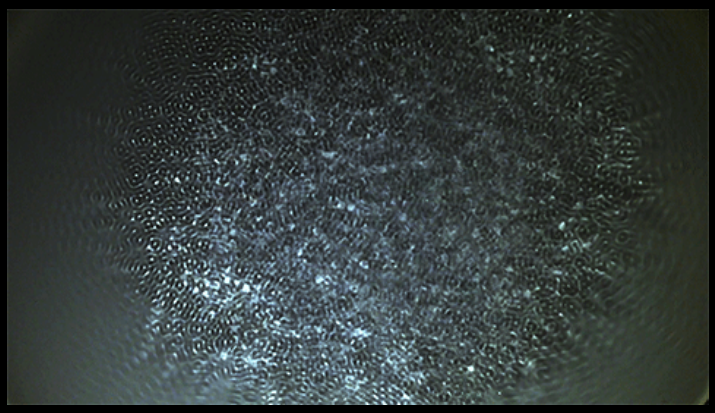
this is not for you to see

this is for you to bear

and to hold

CHAPTER

1. LISTENING AS MODE AND PRACTICE



The Dry and the Wet

Listen.

If I ask you to listen, what is it that I ask of you – that you will understand, or perhaps obey? Or is it some sort of readiness that is required, an openness, or should we call it a displacement? What does listening open? What occurs with a body in and through the act of listening in relation to material objects?

When I say "I understand" there is a risk that I have already stopped listening; my effort to further comprehend has ceased; I remain where I am. An interpretation has been extracted, a meaning fixed. (Understanding as substitute, a stand-in.) I tend to cling to this interpretation, as if it holds me afloat. When we don't understand, we must listen, writes philosopher Jean-Luc Nancy, but at the same time he wonders if the Western philosophical tradition has lost the ability to listen, or rather, if it has exchanged it for the ability to understand.* Nancy asks us to consider: "What does it mean to exist according to listening, for it and through it, what part of experience and truth is put into play?"[1] And, I might add, what kind of violations are made possible?

Margaret Howe lived with a dolphin for 75 days in a flooded house. This scientific experiment in interspecies communication, referred to as the "Wet Live-In," was conceived as a preliminary experiment in the co-habitation of humans and dolphins. What does this have to do with listening? As it turns out, quite a lot. The phrase "Wet Live-In" used in the title of this dissertation refers as well to another watery experiment that Lilly conducted upon himself, in which he – like an embryo – was isolated from the outer world, floating in body-temperature water. For Lilly, the purpose of the experiment was to undergo a sort of mental training as well as to be freed from preconceptions about dolphin consciousness and limiting ideas about the nature of human consciousness. (How could we possibly understand and communicate with another intelligent being if we do not comprehend the nature of our own consciousness?) Lilly attempted to approach dolphinness by surrounding himself with water. In this way, he somewhat unexpectedly began his journey as a psychonaut, which would come to influence his scientific research considerably. Or, as he himself put it: "Research at the frontiers of science is not a clean-cut, dry, planned affair."[2]

As late as 1999, two years before his death, Lilly presented an idea for a Future Communications Laboratory where dolphins, instead of being held captive, could voluntarily visit the lab in a variety of areas, ranging from deep sea (most compatible for the dolphins) to dry house (most compatible for the humans).** Human-dolphin communication would be facilitated in different ways along this continuum from dry to wet.

Through my encounter with Lilly, a journey recounted in chapter 2, I have come to consider listening in and of itself as a kind of wet live-in, and thus a form of co-habitation. If I close my eyes in order to concentrate more fully on listening, I'm not turning my attention inwards, rather I perceive myself as acutely connected to an "outside," even if the only thing I hear is silence. Regardless of personal experiences, I dare say that in turning our attention to the sonic and the auditory, the world emerges in a different way. Our field of view spreads out before us. In contrast, sound envelops us; we swim, even drown in sound.

Are you ready for a wet live-in?

Mingled Bodies and the Five Senses

Sound has the power to penetrate through, even dissolve, what we usually conceive of as the borders of the physical body. Sound, and voice, can be soothing or torturous, annoying or subliminal. The verb *to hear* also carries echoes of *to obey, be in bondage, to belong.****
Listening to someone speaking thus implies, besides

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* "Is listening something of which philosophy is capable? Or … hasn't philosophy superimposed upon listening, beforehand and of necessity, or else substituted for listening, something else that might more be on the order of *understanding*?" Jean-Luc Nancy, *Listening*, trans. Charlotte Mandell (New York: Fordham University Press, 2007), 1.

** The idea for this lab was presented 1999 as a series of 3D renderings on Lilly's website, "The Future Communications Lab," where a pixelated Lilly at the close of the 20th Century described the concept of the future facility. Accessed April 4, 2004, http://www.johnclilly.com/futureComm20.html. On August 4, 2016, a film appeared on YouTube, "John C. Lilly: Interview at Future Communications Lab," posted by "bigtwinNYC," August 4, 2016, showing Lilly on a virtual set depicting the laboratory, designed by Bigtwin (a.k.a. James Suhre). Lilly was filmed and interviewed for this video in October 1998 in SMA Studios in New York City. Accessed April 17, 2017, https://www.youtube.com/watch?v=s-knqVbghIA

*** In German *hören* ("listen") carries echoes of *gehorchen* ("to obey"), hörich ("be in bondage"), *gehören* ("to belong"). The Latin *obaudire* stands as a root source for *obey* and means listening "from below." See, for example, Don Ihde, *Listening and Voice: Phenomenologies of Sound*, 2nd ed. (Albany: State University of New York Press, 2007), 81.

merely paying attention, a relationship of power and the voice is often used as a metaphor for power, agency, and authority.* Can I trust this situation? Who is in control? Should I raise my voice, or exit silently?

The simple act of being spoken to immediately activates a multitude of different relations, positions, and becomings. The nature of the address has the power to simultaneously conceal and expose intentions, as well as shape expectations and behaviors in any given situation. Even when split from its physical body, a voice is never alone, freely floating in space. Even an acousmatic voice immediately invokes complex relations. For example, the tone of the voice (educational, authoritarian, caring, and so forth) suggests a particular mode of interaction, and indicates the level of trust demanded – is the situation to be understood as informative, therapeutic, participatory, democratic or authoritative? But, tones can easily shift: a voice of guidance can slide into a voice of command. To lend one's ear to someone is hence not a trivial thing: it engages the whole body (hypnosis and relaxation exercises could be used to prove the point). Opening to the intimacy and vulnerability that listening implies might therefore also evoke a fear of being exploited and manipulated. I will give examples of this in chapter 4, where the acousmatic voice is a main figure.

In and through listening, I propose, we become acutely aware of borders and their dissolution. Forces of desire and protection are put into play, which challenge our ability to adequately respond and be responsive, at the same time as we are held responsible. That which can be gleaned from listening, it turns out, not only concerns the ear, but the entire body.

When it comes to our sensory perceptions, sound travels faster than light. Neuroscientist Seth Horowitz says, "You hear anywhere from 20 to 100 times faster than you see, so that everything that you perceive with your ears is coloring every other perception you have, and every conscious thought you have."[3] Thus, sight is not as independent a guide as we might like to believe.** In scientific research on human perception the senses have long been studied separately and viewed as working independently, where vision traditionally has been regarded the dominant modality. Rather than being divided into five senses though, it has been suggested that sensory perception is better understood in terms of "multisensory integration."[4]

In my practice as an artist, I explore listening in relation to cross-modal interactions, and thus here the listening body will be treated as a "mingled body," a body that is not separated from the environment and in which the senses are knotted together, not separated into discrete channels.[5] I borrow the term "mingled" from philosopher Michel Serres, who in *The Five Senses: A Philosophy of Mingled Bodies* writes about the senses as fundamentally interconnected, and as multisensory emanations. I will return to Serres and his mingled bodies in chapter 2, especially in the section "Language and its Consequences." Serres writes in opposition to the downgrading of the senses that has dominated Western philosophy, and the systems of knowledge that have replaced the perceptual world with a language robbed of bodily experience. Therefore, the questions that I investigate here could be reformulated as: What might it mean for a mingled body to be acoustically oriented? How does a sonically augmented body relate to space? I do not wish to position the visual and the auditory as opposites, but I find it helpful to twist the hierarchies around in an attempt to re-think the questions that emerge in these borderlands without reproducing a reductive visualist approach.

With "visualist" I mean the habit, tradition, and cultural inclination towards visuality, which can be understood as a reduction *to* the visual as well as a reduction *of* the visual. I find this point made by philosopher Don Ihde helpful. He argues that the visualist tradition stems from the classic period of Greek philosophical thought and arises with a gradual distinguishing of the senses that elevates sight and links vision with thought. This reduction *to* vision is, according to Idhe, "complicated within the history of thought by a second reduction, a reduction *of* vision" that separates experience from the real, or sense from reason in modern metaphysics.[6] For the sake of clarity, I wish to stress that vision is of course not in and of itself reductive.

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* Different concepts of the voice, as discussed by John Durham Peters – in relation to Michel Chion's writing on the voice in cinema, as well as Louis Althusser's concept of interpellation – will be presented in chapter 4.

** What I see thus appears to be determined by what I hear. But, the opposite can also be true, as the so-called McGurk Effect illustrates, where the brain is tricked into hearing the wrong sound due to a mismatch between an auditory speech sound and the movements of a person's lips. This multisensory illusion was first described in an experiment conducted in 1976 by psychologists Harry McGurk and John MacDonald. See, for example, Cari Nierenberg, "The Strange 'McGurk' Effect: How Your Eyes Can Affect What You Hear," *Live Science*, February 28, 2017, accessed April 17, 2017, http://www.livescience.com/58047-mcgurk-effect-weird-way-eyes-trick-brain.html Professional musicians though are not subject to this illusion. See Alice M. Proverbio, Gemma Massetti, Ezia Rizzi, and Alberto Zani, "Skilled Musicians Are Not Subject to the McGurk Effect," *Scientific Reports* 6 (July 26, 2016), doi:10.1038/srep30423

We should be aware of what media and technology historian Jonathan Sterne has called the "audiovisual litany" that tends to "elevate a set of cultural prejudices about seeing and hearing to the level of theory," when attributing to them specific (and often opposing) qualities, e.g. that "hearing is concerned with interiors, vision is concerned with surfaces … hearing is about affect, vision is about intellect."[7] But I think Sterne's "litany" does have some bearing on how audiovisual *media* are commonly used for the purpose of bringing forth certain effects. Thus, this opposition tends to be reproduced.

Rather than turning away from the visual, I seek to inquire into the relations between listening and seeing. In my view, the things heard are engaged in processes of meaning-making and mattering, involving physical bodies in particular situations, which are socially and culturally determined. In this study, I have sought to contextualize and gain a deeper and more diverse understanding of these entangled issues. I wish to linger in and around the blurry borderlands briefly sketched up above. The body, both a vessel and a conductor, an environment even, exists in this space between, at these knots and junctions. It is neither strictly inside nor outside, one's own nor other. In this context, listening implies steering away from ocularcentrism, i.e. the privileging of vision over the other senses, as well as an ideology of separation that disregards mingled bodies. "A turn to the *auditory dimension* is thus potentially more than a change of variables," writes Ihde, the aim is not to replace vision with listening. "It begins as a deliberate decentering of a dominant tradition in order to discover what might be missing as a result of the traditional double reduction of vision as the main variable and metaphor."[8]

While touching on matters such as hearing, communication, and meaning, I have approached listening primarily as an embodied interaction with matter – which might sound abstract, but it is actually quite concrete. As indicated previously, I do not consider listening to be an exclusively auditory affair, but a mode of bodily interaction and engagement, or rather *intra-action* to speak with theoretical physicist and feminist theorist Karen Barad.* Intra-action does not presume the prior existence of independent entities with inherent characteristics that precede the intra-action. Or as Donna Haraway writes, "Beings do not preexist their relating."[9] Though many interesting aspects of listening have been dealt with in the field of phenomenology, it is the phenomenon in Barad's new materialist (and ethico-onto-epistemological) sense that I prefer to refer to, where she draws on insights from quantum physics. She says:

> Knowing is a direct material engagement, a cutting together-apart, where cuts do violence but also open up and rework the agential conditions of possibility. There is not this knowing from a distance. … Objectivity, instead of being about offering an undistorted mirror image of the world, is about accountability to marks on bodies, and responsibility to the entanglements of which we are a part.[10]

Listening turns out to be a messy business. It has ethical implications, and should not be idealized in opposition to the gaze. Rather, listening can be seen as a generative process where the observer/listener becomes part of a dynamic production, which is guided by doubt rather than a desire for certainty.**

The Animal Voice and the Acousmatic Voice

One entry into this complex field of dynamic production is offered by the animal "voice," and attempts to teach animals to speak human language, as will be discussed in more detail in chapter 2. Not only parrots but also many other species have proved to be vocal learners (e.g. elephants, bats, seals, and orangutans). When speech has failed, sign language or gestures have also been used, and the 1960s and 1970s saw an upsurge in ape language-learning.[11] But, to what extent do the animals understand what they are saying? The story

* With "intra-action" Barad proposes a new way of thinking about causality. She writes, "The notion of intra-actions reformulates the traditional notion of causality and opens up a space, indeed a relatively large space, for material-discursive forms of agency." Karen Barad, "Posthumanist Performativity: Toward an Understanding of How Matter Comes to Matter," *Signs: Journal of Women in Culture and Society* 28, no. 3 (2003): 826.

** The act of listening (like the act of speaking) can be seen as being shaped by constant negotiation. In her dissertation, *Tvivel/Replikernas poetik*, playwright and director Christina Ouzunidis explores a specific kind of relational doubt by focusing on a particular sort of conflict inherent in the theatrical line. Her work offers a fascinating journey through the bodily nature of language and speaking, which indirectly provides an important commentary on listening as a co-creative act. See Christina Ouzunidis, *Tvivel/Replikernas poetik* (Göteborg: Glänta produktion, 2016).

A human voice, film excerpt, 10 sec.
Please click on the images to start the films
Articulations from the Orifice (The Dry and the Wet), 2016

A dolphin voice, film excerpt, 10 sec.
Please click on the images to start the films
Articulations from the Orifice (The Dry and the Wet), 2016

about John Lilly, Margaret Howe, and the dolphins offers a specific case that I will return to throughout this essay. This human-dolphin encounter would come to stir up doubt in profound ways.

Another point of entry is offered by the *acousmatic* voice, i.e. a voice that appears to us decoupled from its physical body, as well as a particular version of this, a special kind of invisible character that composer and film theorist Michel Chion calls *acousmêtre*.[12] If today acousmatic voices are mostly considered trivial and banal phenomena, in earlier times, and for a period after the advent of the telephone, gramophone, and other sound-based media, they were regarded as supernatural, divine, or as emanating from the dead. The word acousmatic has been derived from Greek *akousma*, "the things heard," and acousmatic sound has generally been described as sound one hears without seeing its originating cause. The sound source is invisible, and acousmatic listening has often been thought of as nonvisual and fully focused on the auditory. Now, both prerecorded and synthetic voices are increasingly being used in public, semi-public, as well as private contexts. Strikingly often the many acousmatic and synthetic voices we encounter – who kindly accompany, inform or guide us – are female. We meet them in aircrafts, shopping malls, and private homes, through websites, smartphones, and consumer electronics. The acousmatic voices have thus escaped their usual frames (such as the cinema, radio, television, computer game, and audio book) and entered everyday life, as a form of inverted Voice Command Devices. A so-called VCD is a device controlled by means of the human voice and is used to operate appliances without the use of buttons. But, here, it seems to be the device that commands the human body to execute certain functions by means of a synthetic or prerecorded voice. Due to this leakage and porosity, new audiovisual and spatial relations are formed. Acousmatic then, rather than being understood as a split between the heard and the seen, concerns the very relationship of seeing and listening.

I will return to this issue of the acousmatic in both chapter 2 and 4, with a specific focus on the *acousmêtre* and the question about what constitutes a voice in the latter chapter. Before we move forward though, I would like to point out that in both cases, that of the acousmatic and the animal voice, the seemingly trivial act of attending to a voice quickly opens a complex space of embodied entanglements with the potential to challenge much of what we take for granted.

Listening in Art and as Situated Practice

It seems as though many artists concerned with sound art have worked to challenge the assumption that vision is primarily spatial and hearing primarily temporal, or that sound is intangible. Composer Alan Licht identifies the historical and aesthetic roots of sound art in the above mentioned disjunction (split) of sound and image that came with the advent of new media and early recording technologies. In addition, since the 1950s many visual art practices have moved away from the concept of the art object into the realm of the temporal and relational – offering events, experiences, and situations as the artwork itself. With this shift the body came into focus in a new way and various participatory, performative, contextual, process-based, and site-specific practices emerged, forming new rela-

tionships with the audience, as well as with the surrounding environment. In this context, it is interesting to note the influences that experimental music had on avant-garde art and performance in the United States in the 1950 and 1960s. At this time, composer John Cage brought notions such as experimental composition, duration, and process, as well as complex chance operations inspired by Buddhist practices from music into art. This also meant that artworks came be to situated in and between the audience members as opposed to in front of an audience. Teaching at Black Mountain College in North Carolina, where he staged a mixed media event in 1952 (later entitled *Theater Piece No. 1*), and giving courses at the New School for Social Research in New York City in experimental composition (held between 1956–59), Cage gathered and influenced artists from many different fields, e.g. visual artists, composers, and poets associated with the loosely organized network and community known as Fluxus. But if Cage created space for purposeless play as an affirmation of life and "a way of waking up to the very life we're living,"[13] performance artists such as Marina Abramović would situate the mingled bodies of audience and performer in terms of a power relationship, where the "waking up to the very life we're living" involves awakening to violence, and trauma.

In this field of expanded art, which will be further elaborated on in chapter 4, practices that are generally referred to as "sound art" straddle the borders between genres such as installation art, performance art, music, architecture, media art, soundscape works, radio, sound/text art, *Hörspiel*, and spoken word. The term gained influence and spread during the 1990s and 2000s, as a multitude of sound art exhibitions proliferated.* Depending on the background of the artists making what could be considered sound art, their works might be assigned different labels, such as experimental music, sound sculpture, soundscape composition, sound installation, experimental radio, soundwalk, audio walk, and so forth. There is no coherent sound art movement as such, and the term is sometimes applied in such a way as it becomes all-inclusive. The journal *Organised Sound* released an issue dedicated entirely to sound art, edited by Jøran Rudi (April 2009). Here a variety of interesting perspectives are presented.[14] In her contribution, performer Lílian Campesato locates sound art somewhere between music and visual arts, and as characterized by, among other things, the absence of a narrative discourse.[15] This ruling out of narrative and temporal aspects is a common trait in several accounts, as it serves as a distinction from other fields such as music, sound design, or theater.** Licht writes, for example, with reference to Barry Truax, that soundscape compositions tend to simulate a journey through a landscape, and Licht remarks that Hildegard Westerkamp's soundwalks often include narration. This leads him to state that "the sense of a timeline in soundscape compositions ultimately marks them, to my mind, as music rather than sound art."[16] Many of the early works from the 1950s and 60s that Licht refers to as aesthetic precursors to sound art, focused on sound as an "entity" in itself – as in, for example, electronic music pioneer Pierre Schaeffer's *musique concrète* and other uses of documentary sounds in montage composition. Or, on spatialized compositions such as Edgard Varèse's *Poème électronique* in the Philips Pavilion at the 1958 World's Fair, and the sound environments of La Monte Young.

In *Noise Water Meat. A History of Sound in the Arts*, Douglas Kahn, a historian and theorist of the arts, media, and technoscience, uses another point of departure, and as the title of his book suggests, focuses on sound in the arts rather than sound art. What unfolds is a somewhat deeper and more diverse history that starts at the beginning of the 20th century, rather than mid-century.[17]

Another strand of thinking leaves art historical concerns and the (modernist) focus on genre and material behind, instead foregrounding processes of "sonification," where "unnoticeable aspects of our environment can be made perceptible."[18] In this, unheard or underheard aspects are foregrounded, and this requires invention and creation, i.e. imagination, interpretation, and translation of that which is barely discernible. From this perspective, that which has been retroactively called sound art could be said to have a special interest

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* The term "sound art" arose in the late 1970s, attributed to artist William Hellermann's SoundArt Foundation. The first exhibition on the topic, *Sound/Art*, was curated by Hellermann in 1984 at the Sculpture Center in New York. Participating artists included Vito Acconci, Connie Beckley, Bill and Mary Buchen, Nicolas Collins, Sari Dienes and Pauline Oliveros, Richard Dunlap, Terry Fox, William Hellermann, Jim Hobart, Richard Lerman, Les Levine, Joe Lewis, Tom Marioni, James Pomeroy, Alan Scarritt, Carolee Schneemann, Bonnie Sherk, Keith Sonnier, Norman Tuck, Hannah Wilke, and Yom Gagatzi. See "History," on the Sculpture Center website, accessed March 2, 2017, http://www.sculpture-center.org/aboutHistory.htm

** In this context, it is particularly interesting to see Andreas Engström and Åsa Stjerna choose to, instead, investigate how the concepts of "sound art" and *Klangkunst* in an English and a German context have been used in different ways to capture and categorize this new genre which, despite all efforts, is difficult to define. Andreas Engström and Åsa Stjerna, "Sound Art or Klangkunst. A Reading of the German and English Literature on Sound Art," *Organised Sound* 14, no. 1 (2009): 11–18.

in foregrounding the background, i.e. that which we usually perceive to be noise (or silence) rather than signal.* In his book *Background Noise: Perspectives on Sound Art*, artist Brandon LaBelle takes two points of departure: John Cage's spatial, contextual, and relational attitude; and the aesthetic purity of Pierre Schaeffer's *musique concrète*. LaBelle offers a very welcome and acoustically-oriented take on the history of contemporary art. "It has been my intention to historically follow the developments of sound as an artistic medium while teasing out sound's relational lessons."[19] One relational lesson he teases out points to an active engagement with listening as a mode and practice.

If we turn our attention from descriptions of how sound art might be defined and a focus on art historical overviews to the perspective of the practicing artist, other questions emerge as well. What can be done with listening? Artist Yolande Harris writes:

> I am attempting not so much to describe sound … but to create situations where sound can affect and activate people's experiences in a personal way. … Recognising the interaction between sound and space implies not simply describing works as activating acoustic properties on a technical level, but creatively understanding the implications for someone experiencing it.[20]

This point, to creatively understand the implications for the person experiencing the sound, seems to me an important one. It emphasizes the significance, in the context of artistic research, of not only knowing *that*, but also knowing *how*. In her work Harris draws from the traditions of Land Art (with artists such as Robert Smithson and Richard Long) and the Acoustic Ecology movement (that grew out of the World Soundscape Project initiated by composer R. Murray Schafer), which sought to engage directly in the site rather than represent it. She also connects these artistic practices to the simultaneously emerging environmental movement of the 1970s. Through the use of sound, Harris writes that she seeks to "explore the dynamic relationships between the environment and our cultural attempts to understand our place within it."

Here we approach the concept of "listening strategies," as a form of critical engagement with our surroundings, which has also been explored in the writing of artist Salomé Voegelin.** Another example is the sound art collective Ultra-red who have focused on social issues and the politics of sound. Rather than organizing sounds, they can be said to organize listening. Ultra-red uses the acousmatic situation to work with people in relation to specific political struggles or contested sites. In various participatory projects, they have use field-based interviews and site-specific recordings together with a provocative question, such as: what is the sound of citizenship? Through collective attention and guiding questions (What did you hear?) the participants listen for what is missing, that which is not heard or represented. In their sound investigations, acousmatic listening becomes an experience of collectivity. And, the decontextualization that occurs in the act of listening to the field recordings together at a different time and place has the potential to make heard that which is suppressed.

But, it should be added, the act of tuning in to the underheard might also imply what we could call overhearing, or surveillance.

When I started to use sound as an art school student in the early 2000s, sound art in Sweden was largely associated with the experimental music scene. Therefore, I didn't consider my own practice as part of that field. Nevertheless, at this time I made use of sound (primarily voice) in installations and audio walks. This practice was instigated by an urge to leave the video frame behind, as well as the white walls of the gallery space and engage in issues related to public space. As mentioned in the "Introduction," this practice was also inspired by the fascinating condition of alongsideness, as could be experienced through the use of informational audio guides, which at that point had begun to become widespread in, for example, historical and ethnographic museums for use by the general visitor, and not solely as an aid to the sight-impaired. In relation to the field of sound art then, I

* Luc Ferrari, for example, who was a part of *Groupe de Recherches de Musicales* along with Pierre Schaeffer and Pierre Henry, began to call his concrete music "anecdotal" in the mid-1960s, moving away from abstraction and towards compositions based on field recordings, as a sort of "sound photograph." This included *Presque rien n°1, le lever du jour au bord de la mer* [Almost Nothing No. 1, Daybreak at the Seashore] made between 1968–70 where one hears natural sounds and village sounds recorded in the morning hours in the small port town of Vela Luka. It is not completely unedited field recordings that Ferrari presents, but compositions of everyday occurrences. That which usually would be regarded as background noise is lifted to the forefront as the main attraction. What may have appeared to be "almost nothing" turns out to be very a rich space of precise observations.

** Brandon LaBelle, Salomé Voegelin, and Yolande Harris all came to my attention relatively late in my studies (summer and autumn 2016) and therefore are not discussed in as much depth as I would have wished.

could be said to exist on the "fringe" (as Licht puts it) as my work has also been characterized by narrative, temporal, and representational elements. This connects my work with that of Janet Cardiff and George Bures Miller, as well as others who have worked with audio walks and related formats in contemporary art and performing arts contexts. Using sound was a way for me to provide people an opportunity to stay with an experience, to prolong it, and to activate, or rather amplify what I thought of as "listening eyes." I worked with fictionalizations and drew from film and theater. Here, instead of a "disjunction of image and sound," or a focus on sound as an "entity," a kind of spatial montage emerged that explored other relationships between the seen and the heard. An audio walk could, like installation art, be said to install a space (an acoustic space) within an existing space. There is a layering of sensorial, physical, mental, and metaphysical components, which causes an oscillation between interior and exterior spaces. This could be thought of as a staging, or "editing" of space. Referentiality, rather than being shunned, is increased or sometimes short-circuited, encouraging another kind of visuality. Similarly, storytelling has been a way for me to edit diverse materials and sources together. A voiceover can join, jump, linger. It can draw the listener close as well as push her away, or insert a specific distance and point of view. It can install itself as an authority, yet easily be contradicted by other voices or occurrences. In these "edited" spaces, fictionalization and instructions have been equally important. I have worked solely with recorded voices, and it wasn't until the very last work included in this thesis, the lecture performance *Articulations from the Orifice (The Dry and the Wet)*, that I made use of animal as well as live voices. In this lecture performance, dolphin voices were used together with prerecorded human voices, synthetic voices, as well as my own amplified voice speaking live. I also used projected and printed words together with visualizations of sound waves in sand and water (this work constitutes the performed part of the "Outroduction").

When speaking of acoustic works and installations, it is also worth mentioning sound works meant to be installed in the human body. For example, Bernhard Leitner's *Headscapes* (2003), a collection of sculptural works released on CD created for the interior of the head, which can only be experienced using headphones. Or, Maryanne Amacher's *Sound Characters (Making the Third Ear)* (1999), composed to create clear so-called otoacoustic emissions where the ears themselves act as sound generating devices. The listeners' ears emit sounds that interact with the sound in the space where the music is played. The body becomes the very medium and conduit for the work in an acute and physically tangible sense, raising questions about control, pleasure, and liminality. Musicologist and violinist Gascia Ouzounian suggests that body-based soundworks compel "a mode of listening that accounts for physical and material experiences as well as metaphysical and immaterial ones, as these develop within and around the spaces of the body." She continues:

> An encounter with sound in these real and imagined spaces, as wrought in the body, can produce alternating fields of vibration: at times these beat positively to create an augmented awareness of self, spirit, and surrounding; at other times clashing to reveal the limits of the body – that it is socially determined and determining, that it is an instrument of control, that, ultimately, it fails the user.[21]

Listening, I find, is a vulnerable position. Active listening has the potential to open up new ways of seeing and perceiving, but it is also always encoded and formed by particular materials and social contexts where an openness to listening can be easily taken advantage of and exploited.

Apparatuses and Set-Ups

In Lilly's laboratories the technologies that were used to record the experiments with human and dolphin voices, and the environments that were created for these purposes, shaped behavior and influenced the results. Rather than a pure auditory perception of sonic facts what emerges is a series of audiovisual and spatial apparatuses. The English dictionary definition of "apparatus" points both to the technical equipment used in a particular activity and to the complex structure of a particular system or organization. The word can be derived from Latin *apparare* ("make ready for"). An apparatus thus shapes behavior, directs attention, and implies a set of rules and contracts – it could be said to prepare us (for certain ways of being

and perceiving) just as much as we prepare it.* And the various wet experiments – Lilly's floatation as well as Howe's wet live-in – certainly did "prepare" the participants, shaping their experiences. Without the associated apparatuses and the technical manipulations that amplified the signal, the animal voice would not have been heard.

If we leave the scientific laboratory and turn to the field of art, it becomes quite clear that similar issues arise in relation to artistic practices. The acousmatic voice requires an apparatus to come forth, as do the underheard and the not-yet-noticed. Though the *why* and *how* may differ between the scientific performance and the artistic, I find the questions that their differing work processes provoke to be similar: What forces are set in motion and for what purpose? What positions of power are revealed or enhanced? What boundaries are drawn and how is the situation framed? I discuss my own artworks as "set-ups" to highlight these mechanisms, and I do not mean to be cynical. A set-up is similar to an apparatus in the sense that it points to equipment as well as to an arrangement. But, it also refers to "bringing (someone) into a vulnerable position," or to being deceived or tricked. Furthermore, in the context of games, it can denote a "passing of the ball" that gives another player an opportunity to make a move. One could thus feel either trapped or enabled by a set-up. Because of the term's complexity and contradictions, I find it interesting to use in relation to my work, and especially in relation to listening.

How could an interspecies communication network be set up in an artistic context then? Below I give two quite different examples, both of which are also reminiscent of scientific experiments. In *Enki Experiment No. 1–4* (2006–2012) the artist Antony Hall attempted to facilitate communication between humans and electric fish using non-verbal means. Like Lilly's dolphins, these animals have been used in neurological research and are regarded as intelligent, with the ability to remember and learn. Hall has described his work as stimulating a shared human-fish empathy through physical connection. In the artwork, fish and humans are put into contact with the help of technology. In the set-up the human sits in a chair and can be said to be connected to the fish who is in an aquarium in another room via a headband that registers brainwaves, a pair of goggles that displays color fields, and headphones through which the electrical fields of the fish can be heard as sound. In this way, "bioelectric communication signals from live electric fish" shape an immersive sensory environment for humans "through which the human can communicate back to the fish." In other words, in this biofeedback system, the fish can sense human brain activity as an electric field, and the electric field of the fish is translated into sound and light for the human. This, in turn, affects the human's brain activity, influencing the electrical field in her brain, which the fish can then experience. In this body-based work, it is emotional states, rather than verbal communication, that are shared. The aim is to "discover if it is possible to create a harmonious state of interaction that can be of benefit to both species."[22]

Another fish-related communication network, the *Amphibious Architecture* project, was designed by artist Natalie Jeremijenko in collaboration with architect David Benjamin for the Bronx and East Rivers in New York City (2009). An array of lights mounted on buoys, with fish-triggered sensors below the surface of the water made visible the presence or absence of fish as well as shifts in water quality. The system included a sensor "for human interest" as Jeremijenko calls it, and people passing by could send a text to the installation with their smartphone. The installation replied with personalized text messages from the fish, so to speak, concerning the water quality and amount of fish present at that moment. Rather than connecting individuals from different species, the installation sets up an interface with the river itself, understood as an environment, but given a "voice" through the text messages.[23] Jeremijenko's work deals with urban systems and cross-species interaction, presenting alternative interfaces and institutions for how such interactions can be imagined and co-designed. In *OOZ projects*, for example, the concept of the zoo is turned around. Every

* I'm aware of Michel Foucault's use of the French term *dispositif*, which has often been translated as "apparatus." Following Foucault, but also expanding on his concept, Giorgio Agamben offers the following definition: "I shall call an apparatus literally anything that has in some way the capacity to capture, orient, determine, intercept, model, control, or secure the gestures, behaviors, opinions, or discourses of living beings. Not only, therefore, prisons, mad houses, the panopticon, schools, confession, factories, disciplines, juridical measures, and so forth (whose connection with power is in a certain sense evident), but also the pen, writing, literature, philosophy, agriculture, cigarettes, navigation, computers, cellular telephones, and-why not-language itself." And, he states, "At the root of each apparatus lies an all-too-human desire for happiness." The very capture of this desire, he says, is what makes these apparatuses so powerful. See Giorgio Agamben, *What is an Apparatus? And Other Essays*, trans. David Kishik and Stefan Pedatella (Stanford, CA: Stanford University Press, 2009), 14. In the "Outroduction" I have chosen to, in keeping with Bernard Stiegler, discuss these relations and related contexts in terms of technologies and organologies.

OOZ site consists of an "an architecture of reciprocity," and "an information architecture of collective observation and interpretation." Unlike Hall's *Enki Experiment*, there are no cages or aquariums and the animals are there by choice. In some set-ups the animals can trigger a prerecorded human voice, that urges the human to act in a specific way, for example to deliver a dose of beaver biscuits to the hungry beaver or provide a service to a pigeon.[24] Through these various reversed system designs, where animals can trigger acousmatic human voices, anthropomorphism could be said to be used as a tool to address environmental concerns and issues of interconnectedness. Communication is approached in terms of shared ecology rather than as a question of information transmission.*

Here it might be wise to pause for a moment and reconsider what is typically meant by the terms "communication" and "media." Media historian John Durham Peters asks, "What if we took not two human beings trying to share thoughts as our model of communication, but a population evolving in intelligent interaction with its environment?" He argues that media theory is about environment and infrastructure, as much as it is about messages. This is the model of communication instigated by Hall's and Jeremijenko's set-ups, or prototypes, involving fish. This is also what seems to occur over time in the wet live-in with Margaret Howe and Peter Dolphin. Not transmission of semantic content between two intelligent minds, but intelligent and meaningful interaction in an environment. Media is environmental and environments also operate as media, Peters claims. He says, "Digital devices invite us to think of media as environmental, as part of the habitat," and he continues, "so-called new media do not take us into uncharted waters: they revive the most basic problems of conjoined living in complex societies and cast the oldest troubles into relief."[25] Communication technologies do not necessarily fill an informational need, but an existential one, as my youngest son vividly illustrated for me when he at three-years-old did not have a need to speak with me "face to face" on the smartphone. Instead he took a pillow and blanket and snuggled with me (contained in the device) on the floor. How can one say goodbye to such a connection?

Jeremijenko's and Hall's work could be seen as part of a tradition of "systems art" and "systems esthetics," as theorized by artist, art historian, and critic Jack Burnham in the late 1960s.[26] Inspired by cybernetics – and with it, information theory, shared circuits, feedback loops, seriality, and new technology – many artists focused less on objects and turned to complex systems, be they biological, social, or informational. In short, in these practices it is the system that is to be regarded as the artistic medium. Much has been written about both cybernetics and system aesthetics elsewhere and the scope which they encompass is much too big to be covered in this study. Instead, I have chosen to work with the term "environment" for I find Peters' understanding of media as "habitat" more fruitful for the time we live in and the environmental, technological, and ethical challenges we face. Peters asks us to rethink the concept of media as something beyond messages and passive vessels of content, looking instead at media as habitats "through which we act and are."[27] This is media ecology, and his "philosophy of elemental media" includes not only new technologies, but also old ones such as calendars, as well as "natural" media such as sea, sky, and earth. For Peters, media are infrastructures and modes of being, and they are thus not exclusively modern, though the emergence of mass media might make us think so. Media provide conditions for existence and in Peters' sense media include things as diverse as graves, baskets, ships, fire, aqueducts, the body, stars, and writing. We live by means of them. "The body is the most basic of all media, and the richest with meaning, but its meanings are not principally those of language or signs, reaching instead into deep wells stocked with vaguer limbic fluids. The body is not one with itself: it is a network."[28] Which brings us back to the mingled body, listening as a mode of being, parasites, and situated practice.

In the two examples of aesthetic infrastructures developed by Hall and Jeremijenko described above, specific apparatuses are set up where interactions are shaped, as well as made perceptible. Habitats are framed and relations mapped out. In these set-ups a certain tension exists in relation to the body as well as between bodies. We could even say that there is a sort of triangulation of relations between human, animal, and technology that is brought forth. Each set-up is revealing, as well as ethically challenging, in the way it organizes space and positions individuals in relation to one another. The set-ups could also be seen as invitations to go visiting.

* OOZ projects also investigates ways of granting animals essential rights through making them shareholders in OOZ Inc., which would enable them to inhabit personhood in the same way a corporation is considered a "person," and thus have certain rights that other types of organizations, as well as nonhuman life, do not.

At this point, much has been brought to a simmer, and the stew thickens. Walk with me, drift, and linger… (Do you trust me? Should you?)

On Visiting and the Unavoidable Condition of *Para-*

The artworks included in this thesis, as well as the essay, engage in storytelling. Storytelling is one of the crucial ways by which we share and exchange experiences. Our need for stories, I think, is greater than our need for facts. It may seem a trivial assertion, but I do not believe that we are such seekers of truth as we make ourselves out to be. We are seekers of sense. But what kind of storytelling is even possible one might ask, when most of the public relations business is about distributing "stories," and we are confronted on a daily basis with the problems of fake news?

There are undeniably totalizing tendencies, or a lurking promise of authenticity in the efficient delivery of a story. In relation to this the *Verfremdungseffekt* (estrangement effect) of playwright and director Berthold Brecht, which aims to challenge the audience to critically and self-reflexively examine that which is presented to them through making the familiar "strange," is relevant. It could be understood as a kind of anti-story, a rupture and renegotiation of the expectations put into play in storytelling mode – expectations of consistency, beginning and end, identification, perhaps clarification, suspense and seduction, or a certain proper distance from the object under scrutiny.

Hannah Arendt wrote, "Storytelling reveals meaning without committing the error of defining it."[29] She argued that through storytelling we practice our ability to "go visiting," i.e. to keep several perspectives open at the same time and to inhabit different positions within this world rather than to search for universal overviews.[30] This is an act of imagination. Both Arendt and Brecht demand that one puts oneself in the picture, as a wanderer and active listener, and I will return to them in chapter 4, where I discuss *Verfremdungseffekt* in terms of sensorial estrangement. Interestingly enough, Serres talks about sight as a "visit," and as a sense related to voyaging.[31] Here, I imagine a listening eye (an acoustically oriented seeing). When traveling, neither the viewer nor the object of his or her looking (the scene) is fixed – instead, there is a continuous unfolding.

While storytelling invariably points to the presence and status of the voice, as well as of language, narrative potential also resides in everyday materials and occurrences. Things have agency.* My approach to storytelling has much in common with the act of dropping stones onto the still surface of a lake and experiencing how the ripples created by the stones interfere with one another over time, creating complex and unexpected patterns as a result of the stones themselves and the other materialities present (such as the wooden posts of the pier, the shoreline, and the waves from a boat that passed a few minutes earlier). In this nonlinear and material approach to narrativity, where relations emerge and reveal themselves rather than being laid out, storytelling becomes a mode of listening, a way of existing in time, of becoming. This kind of storytelling is, I propose, a way to relate and discover. To ask the erratic storyteller to get to the point would thus be completely beside the point. Inspired by Serres' book *The Parasite*, we could say that the language performed (parole) through the story (parable) *curves*, and the focal point of the story is revealed by the very curvature (parabola).** Without the curve, there is no focus. This could be a potential theory of the eye in motion, a listening and voyaging eye, always on the lookout for difference, rather than identification. Instead of reflection (of identical images), diffraction (of forces at work).

In *The Parasite*, Serres writes about three kinds of parasites, derived from three different meanings of the French word. There are the biological parasites: living organisms that physically attach themselves to and feed off of their host.*** Then, there are social parasites who provide entertainment in order to be welcomed as a guest at the table, as in the well-known figure of the travelling storyteller who "exchanges good talk for good food."[32] Finally, there is the static (noise) that interrupts or causes interference in an information network, at the same time as it relies upon this network for its very existence. Though different

* In Barad's words, "Agency is about response-ability, about the possibilities of mutual response, which is not to deny, but to attend to power imbalances. Agency is about possibilities for worldly re-configurings. So agency is not something possessed by humans, or non-humans for that matter. It is an enactment." Dolphijn and van der Tuin, "Interview with Karen Barad," 55.

** In the French language, *parabole* means both "parable" (an allegorical story, or analogy) and "parabola" (a mathematical formula describing a curve), which etymologically is related with *parole* ("word," or "speech").

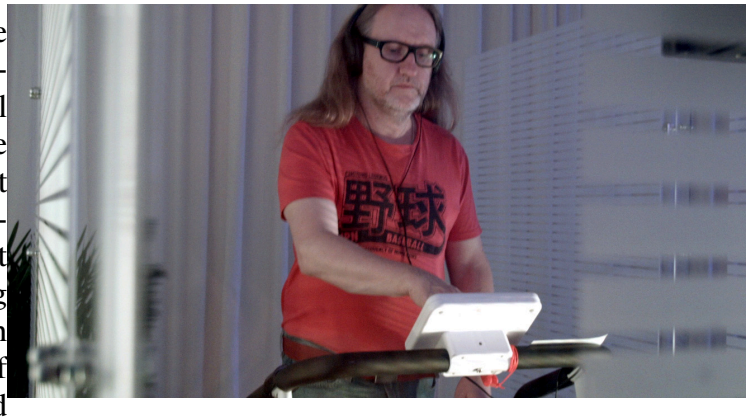
*** The Greek word *parasitos* means "one who lives at another's expense," or "feeding beside," from *para-* "beside" and *sitos* "food."

in kind, each of these parasites – the biological, the social, the noise – have the same function in the context of a larger system. "Quite simply, what is essential is neither the image nor the deep meaning, neither the representation nor its hall of mirrored reflections, but the system of relations."[33] The parasite interrupts, produces disorder, and in so doing, generates a different order. It estranges, disturbs, reroutes, and something new emerges; a new logic. But, positions change within the system, other parasites appear, and the degree of complexity increases over time. Who is the host and who is the guest? And, while being fed off, who is the host feeding from? For artists using systems as medium then, the parasite is an unavoidable companion.

In his book Serres could be said to explore the condition implied by the prefix *para-* (being beside, or side by side), which establishes a necessary distance that sets a series of differences in motion. In language, as in storytelling, we are always on the side, in need of examples and comparisons, wrestling with the differences and the parasitic relations generated by this condition. "The discourse, the course taken [parcours] … constructs the real by starting with the difference," Serres writes.[34] Speaking of *para-*, I'd like to point out that if the paraboloid shape is useless as mirror (as it distorts the images), it happens to be an excellent amplifier. In and through a situated listening, complex systemic relations could be said to be tangibly amplified.

The artworks presented as traces in chapter 3, make use of numerous and varied narrative materials in quite concrete ways. That is, the spatial and relational structure of each installation – how it has been set up – is an integral part of the narrative and as visitor one is asked to inhabit certain positions in order to access the work.

Limit-Cruisers (#1 Sphere), performance at Weld, Stockholm, 2014



Therapy in Junkspace, sound installation, part of the solo exhibition *In the Greenery* at Inter Arts Center, Malmö, 2016. Photo: Mikael Lindahl

Fluorescent You, sound and light installation, part of the solo exhibition *In the Greenery* at Inter Arts Center, Malmö, 2016. Photo: Mikael Lindahl

'Then ere the bark above their shoulders grew,' sound installation, part of the solo exhibition *In the Greenery* at Inter Arts Center, Malmö, 2016. Photo: Mikael Lindahl

Voices might narrate an event (i.e. engage in traditional storytelling), but also point to the narrativity of the event unfolding here and now. The narrative is played out as a set of tensions on different levels (spatially, visually, semantically, and socially) triggered by voices, occurrences, and positions in the space. To point to the events occurring in the here and now is not only a *meta* approach (elucidating to concepts and structures), but

also a *concrete* approach (pointing to the materiality of the situation one finds oneself in). This is a situated narrativity that insists on the materiality of meaning making, and the pragmatics of the communicative event. It is a technique that points to that which occurs in "front" of the artwork (in the audience's encounter with it), rather than referring to that which lies "behind" (i.e. the intention or biography of the artist).

Orality and Literacy (Co-Habitated and Extended Bodies)

In my works, acousmatic voices are used as a tool to put relations into play. It is neither oral storytelling as a tradition nor failed or perfected vocal performances that are in focus, but the presence of voice in relation to bodies, sound, and matter, i.e. cross-modal and multisensory interactions. The presence of voice, human or nonhuman, could be said to activate an *oral* register, which structures these relations in a markedly different way than the presence of text. What does this mean?

If we look at voice as a medium or marker of communication, we enter into the field of orality and literacy, as theorized in media and communication studies. Please, join me in a thought experiment for a moment inspired by media historian Walter J. Ong, to see if we can transport ourselves to a completely different mindset than we are accustomed to. Imagine that we live in a preliterate, or so-called primarily oral culture: we do not use or even know of the technology of writing. We constitute a community of tellers and listeners, and the most trusted way to both pass on and to store knowledge is through oral storytelling and performances – which rely on observation, practice, and apprenticeship. Language is perceived as sound, rhythm, time, and situation; knowledge resides in living flesh, in a storytelling tradition, and in the environment. There is no such thing as the original story, or original form. Truth is seen as emerging from communal processes, or as poet Éduoard Glissant says, "nothing is true, everything is alive."*

This oral culture could also be called a performance culture. What abilities, sensibilities, and conventions are fostered in such a listening culture? What modes of thinking are formed? In this thought experiment, a primarily oral culture could, in very simplistic terms and as proposed by Ong, be said to cultivate contextual, concrete, relational, and participatory abilities. On the other hand, a so-called literate culture, such as the culture existing at the university where Ong was a professor, tends to foster analytical thinking, abstract classifications, sequential reasoning, and logic.[35] In a literate culture then, archives and written records are valued, which gives rise to a specific way of understanding language that has implications for how knowledge and meaning are formed and transferred.**

Performance is often described as ephemeral, but isn't it ephemeral only in a culture which privileges literacy? Viewed from another perspective, through an oral prism, a performance is a highly concrete, knowledge activating, and reality producing event. But, the knowledge it embodies challenges the sensory hierarchies of the Western tradition and of modernity where the visual-textual dominates, and where the metaphor for knowing is to see. Orality requires a situational sensitivity, and utilizes many media in a multisensory whole. Ong's distinction between orality and literacy is not unproblematic though, and my aim is not to reproduce this dichotomy, but rather to make visible the different optics operating at the far ends of a spectrum.***

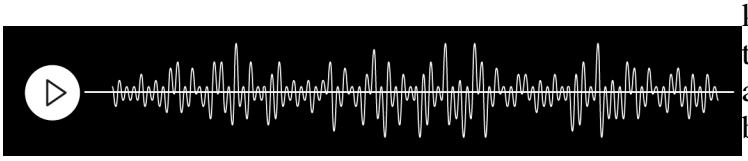
In Lilly's scientific experiments with dolphins, language is understood from the point of view of literacy and as a purely referential system that designates things. Orality with its inherent relationality is regarded as subjective, immersive, and unreliable. There is no outside from where it can be viewed, unless formalized and instituted as language lessons in very specific experimental set-ups and documented (transcribed) in the form of sound recordings, spectrograms, and photos. Thus, data is generated which can be studied and further translated into text. Evidence is extracted. But,

* "Rien n'est vrai, tout est vivant," is inscribed as Glissant's epitaph on his grave in Martinique.

** In ancient Greece, it was believed that knowledge could not be stored in books, only in living bodies inhabiting space. Writing and reading were not regarded as tools for transferring knowledge. On the contrary, Plato argued that the technology of writing would produce forgetfulness – because the reader is seduced by the written word to believe that thoughts and wisdom can be fixed once and for all and tends to forget that knowledge is a living thing.

*** Salomé Voegelin offers a quite beautiful (and less didactic) thought experiment in her philosophical fiction "Ethics of Listening," *Journal of Sonic Studies* 2, no. 1 (May 2012), accessed June 20, 2016, http://journal.sonicstudies.org/vol02/nr01/a08. Here, she tells the story of an encounter with a cultural context where the eye is secondary to the ear and relates the strange and confusing effects this has on the narrator.

in this transition from a "wet" to a "dry" lab (from the orality and situational sensitivity of Howe, referred to as her "motherly" quality, to the scientific literacy of Lilly), another kind of orality makes itself felt, evoked by the "loudspeaking" technology used in the playback of the recordings. The technology starts to speak out loud (so to speak), but this is not orality in Ong's sense, where the word (speech) is embodied: it is acousmatic speech. We could call this an *acousmatic* orality. Here, the document had a tendency to perform in concert with the observer/listener. (Please, *cogitate* for at least three minutes).



Sound excerpt, 3 min.
John C. Lilly, "Cogitate," courtesy of John C. Lilly Estate

Then again, after having examined these seemingly opposing modes, it is important to stress that orality and literacy cannot be separated or disentangled from one another; the one speaks through the other. (And, orality is certainly not the opposite of literacy, nor the mere absence of writing.) Throughout history humans have created systems for remembering and memory technologies to aid our thinking and ability to organize, share, and keep important knowledge alive, but the type of technology used to do so has in turn altered our cognition and social organization. Both orality and literacy imply that bodies are extended in various ways. In my understanding, literacy and orality point to social phenomena that condition us to cultivate certain modes of perception and not others. They are cultural, educational, sociopolitical, and technological processes. Using Lilly as a case study has helped me to explore these processes in relation to my own artistic practice and beyond. In the "Outroduction" these issues are elaborated further in terms of "organologies," where the body/mind forms a complex system together with technological extensions and social functions, as proposed by philosopher Bernard Stiegler.

The bodily "presence of the word," as Ong has written about extensively, is in an acousmatic orality paired and overlaid with a disembodied presence of the word. (Ong referred to the electronic age as a "secondary orality" or "secondarily oral culture.") Furthermore, in our current acousmatic situation, telematic as well as headphonic spaces have, for many, become part of everyday life. New relations between the seen and the heard are continuously being forged, and I find that disembodiment seems to work in tandem with re-embodiment. I will return to these changing relations between bodies and voices in more detail in chapter 4. As mentioned earlier, acousmatic voices are not bodiless beings. They tend to inhabit the body of the listener. When we turn to them, lend them our ears, we also lend them our bodies. The voice that I'm listening to resides in me, animates me. For example, when taking part in an audio walk – and through the use of headphones inviting a voice to be a guest into my head – a kind of voice-vision is formed that directs my attention and my body in space. Issues of trust and control are immediately activated as I suggested at the very beginning of this chapter (forces that I also have made use of in my artworks). I see/feel through this other voice that has entered and extended mine; thus, I also partake in someone else's movements and perspective. I become more-than-one (what a joyous expansion!). At the same time, the situation is somehow also reminiscent of ventriloquism, but here I become the doll, both breathed and spoken through – a disturbing and fascinating condition. The joy and dread of co-habitation are evoked: I, the host, invited a guest, but might find myself being taken hostage, or overtaken by a parasite. This is the voice as a site of desire and horror. In this specific kind of acousmatic orality, the borders between the ventriloquist and the doll seem to dissolve. There is a lingering threat of becoming possessed as the distinction between inner voices and those originating outside oneself blur; the acousmatic (or schizophonic as Murray Shafer preferred to call it) situation becomes paranoid schizophrenic. Then again, acousmatic voices and sounds not only animate bodies, but any object from which they appear to emanate.* This is the original art of ventriloquism, a topic I also will return to in chapter 4. Thus, in an electronically mediated acousmatic orality a new kind of animism emerges, where the acousmatic voices of the electronic age fraternize with the otherworldly spirits and ghosts of the past, and find a new home (body, shell) in the intelligent machine. Artificial intelligence has not only been depicted as another kind of "human," struggling to be treated as an equal, as in Ridley Scott's science fiction film *Blade Runner*, but also as a potentially god-like being that may even be able to save us from our own faulty humanness.[36] The speaking

* Loudspeakers and headphones are exceptions perhaps, since today we have become accustomed to think of them as the actual source.

machine becomes a potential oracle that addresses one from the depths of Deep Data with a voice of one's own choice (Alex, Susan, or maybe Veena who speaks English with an Indian accent, or why not Melina who speaks Greek?). This new sort of intelligence has a message for you, and it already knows more about you than your own mother, based on your consumer habits and interactions with digital media.

Similarly, dolphins would take on supernatural powers after having been given a "voice" in Lilly's work. Considered at first to be "biological machines," but discovered to be intelligent, they rose from the deep sea, and instead of being confined to the role of industrial commodity or Sea World entertainer, were depicted as healers and carriers of ancient oral history and wisdom, with a message for humanity. This is also part of the story that will be told in the following chapter.

A/O (Please Mind the Gap)

I think it is poet Octavio Paz who once said that while discourse seeks to determine concepts and force language into one sense that enables univocal communication, in the poem language recovers its diversity of meaning. To me, Lilly's sound loop "Cogitate" is in this sense pure poetry. As related in the "Prelude," this sonorous object, or sonic fact, when mechanically repeated over and over again, turns into a sonic fiction. The sound ceases to follow sense: it *makes* sense.

If orality and literacy are stages, they are stages not on a path from orality to literacy (as the notion of oral and literate *cultures* tends to indicate), rather they are "stages for performance: *modalities* of reason," as poet Charles Bernstein writes.[37] The presence of voice could be said to activate an oral modality of reason, which is multisensory, and thus it is a rather messy business to try to sort out exactly what this modality entails – it has a tendency to escape us. The inclination to create a division between and even a hierarchy of these modes and ways of being in the world creates a gap that we constantly try to bridge, for example between embodied and analytical knowledge, practice-led and abstract reasoning, subjectivity and objectivity, fictional and factual. It is as if we cannot think without dualisms such as these. In my doctoral work, I have sought to operate in and with this gap. The gap provides resonance. My aim has been to dwell (oscillate) in the space between, not to choose sides. What I wish to bring forward is thus not the opposite of reason, objectivity, or analysis. Instead, I want to focus on practices that feed orality back into literacy, and vice versa. But, in my doctoral work the orality-literacy contrast, even when thought of as a continuum rather than a divide, became a trap. While at first eye-opening and instructive it also lured me, in my own practice, to reproduce the divisions I sought to displace. Though, even here, poetry offered respite.

While working with sonic performance installations and text-as-sound, I was drawn to Bernstein's concept of *a/orality*. Once again our attention is brought to the border, to the space between, the intersection:

/

What happens in this space?

A/orality refers to "aurality" as well as "orality": to the ear and the mouth; the receiver and the emitter. Bernstein intends a/orality to invoke language grounded in its embodiments. The slash could be said to hold the oral, textual, material, sensual, and semantic together at the same time as it cuts them apart. It marks what Barad would call the holding together of the disparate itself, a "cutting together/apart."[38] The concept of a/orality focuses on the work (in Bernstein's case, a poem) as a performative event, the poem-in-performance, not to be confused with the stylistic markers displayed through the poet's oral reading style. Bernstein writes in relation to poetry readings (and from within a textually oriented tradition):

> By *aurality* I mean to emphasize the sounding of the writing, and to make a sharp contrast with orality and its emphasis on breath, voice, and speech. … Aurality is connected to the body – what the mouth and tongue and vocal chords enact – not the presence of the poet. … The poetry reading enacts the poem not the poet; it materializes the text not the author; it performs the work not the one who composed it. My insistence on aurality is not intended to valorize the material ear over the metaphysical mouth but to find a term that averts the identification of orality with speech. Aurality is meant to invoke a performative sense of "phonotext" or audiotext and might better be spelled *a/orality*.[39]

It is Bernstein's performative, material, and quite pragmatic approach, together with the decentering of the

poet/performer/artist that I transfer to my own practice. The exhibition enacts and performs the work, not the one who composed it. The artist is *not* present (i.e. is not to be confused with the work itself), even if she happens to be performing live. In my use (or appropriation) of the term, a/orality opens up a resounding, resonant space made up of a totality of referrals.

aorality
aoreality
areality
audioreality
ah reality
uh-oh
oh really
a, uhm
aum
aom
.ao
AO
ow!

This is a space of oscillations and displacement, which works both with and against the desire to understand. My extended use of a/orality implies how a work of art might perform a constant movement between states, positions, materialities, and sensibilities. Where Bernstein refers to an "audiotext," I refer to an installation, a set-up. I squeeze and knead the concept in an attempt to invoke the intra-action of voices, bodies, sound, and matter – to point to (but not define) how sound and voice structure audiovisual and spatial relations in concrete material situations. It is the work that speaks, not the author or artist, and the gestural logic of the media is a vital part of the content produced. That is, the media and technologies we use (for example, the written word or recorded sound) embody a particular logic, set of procedures, and gestures. They are not neutral bearers of "content," but instead materially perform and enact. That is why I stress the importance of the set-up, and the larger apparatus of which it is a part: it is the alpha and the omega, a/o. And if in need of thorough analysis, please hold together while cutting apart. How is that to be done? Through close listening.

Close listening, Bernstein explains, may contradict "readings" of the same work that are based exclusively on the printed text.[40] Bernstein writes, with reference to Erving Goffman's "Frame Analysis," that the material dimension of poetry – the sound of a work as it is performed, or the visual appearance of the text on the page – is often put into the "disattend track." This means that "the cued frame through which a situation (or work) is viewed necessarily puts other features out of frame," they are simply not attended to.[41] In contrast, close listening causes a proliferation of possible interpretive frames. Consequentially, a poetic work cannot be seen as a uniform whole, nor can one true original be deduced. Instead, the work performs its multi-layered complexity. I regard this as an ability to listen (attend) additively rather than reductively through the sensory, while staying with the matter at hand. A/orality allows for the entanglement of orality and literacy, a feeding back of the one into the other. This (at first intuitive) insight was, over time, slowly absorbed into my work through the research process, and for me a/orality has become a compositional technique, a method of inquiry, and a teaching method.

Close listening, I propose, understood as an *a/oral* mode and practice, asks us to come to our senses, literally speaking.

The Abyss

In the process of writing (as a thinking-through-practice), the "Prelude" drew its own curve. And when I tried to see where its focus lay, to extract a clearly defined core from its depths, I was drawn into "infinite detail." These details are not isolated fragments, but immediate openings that enable us to approach a totality, as Glissant writes. By entering into infinite detail we begin to perceive diversity everywhere, tangled and unpredictable.* What I hope to achieve here is not to offer a construct, but rather a way to dwell and navigate through "sinuating" as Glissant calls it. That is to say, to follow a winding road, through its many bends and curves. By "sinuating" we can prevent things from stiffening and solidifying.[42] Rather than wanting to untangle, I seek to amplify. And in doing so, the curve brought my attention to the oceans.

* Éduoard Glissant, *Relationens filosofi*, trans. Christina Kullberg and Johan Sehlberg (Göteborg: Glänta, 2011), 28. Glissant continues: "There is then no realistic description that holds. A detail is not a fragment, it addresses the whole. … Poetry reveals, in the appearance of the real, that which has been buried, that which has disappeared, that which has gone silent." Ibid., 85. Thank you to Christina Kullberg for help with the translation of Glissant's original French text to English, Éduoard Glissant, *Philosophie de la relation, poésie en étendue* (Paris: Gallimard, 2009), 102.

The abyss is a place "of sensorial estrangement (for humans) where our visual modes of perception are compromised," writes literature scholar Melody Jue. In "Vampire Squid Media" she proposes a milieu-specific philosophy, which takes medium, environment, and materiality seriously. A "liquid intelligence" emerges, as opposed to a dry, which I find significant in relation to listening as a rather fluid experience (a kind of wet live-in as proposed earlier), and the mingled bodies of seaman/philosopher Serres.* "To develop a more radical milieu-specificity of fluids, we need a vocabulary beyond 'inscription' in the sense of marking on objects, and we need to consider a more distributed sense of agency in communication, a kind of ambient, disseminative production of change and movement."[43]

Now, let's start to drift.

* When speaking of liquid intelligence, Jue is quoting photographer Jeff Wall. Since I have spoken in terms of "the dry and the wet," I am thankful to Cecilia Grönberg for pointing Melody Jue's work out to me. For a more elaborate discussion of wet and dry technologies, the distributed condition of digital photography, and the visual and artistic implications of this, see Cecilia Grönberg, *Händelsehorisont || Event Horizon. Distribuerad fotografi*, Ph.D. diss. University of Gothenburg. Faculty of Fine, Applied and Performing Arts, 2016. (Stockholm: OEI Editör, 2016).

CHAPTER

2. GOING VISITING: ARE YOU READY FOR A WET LIVE-IN? OR THE HOW OF MS. HOWE

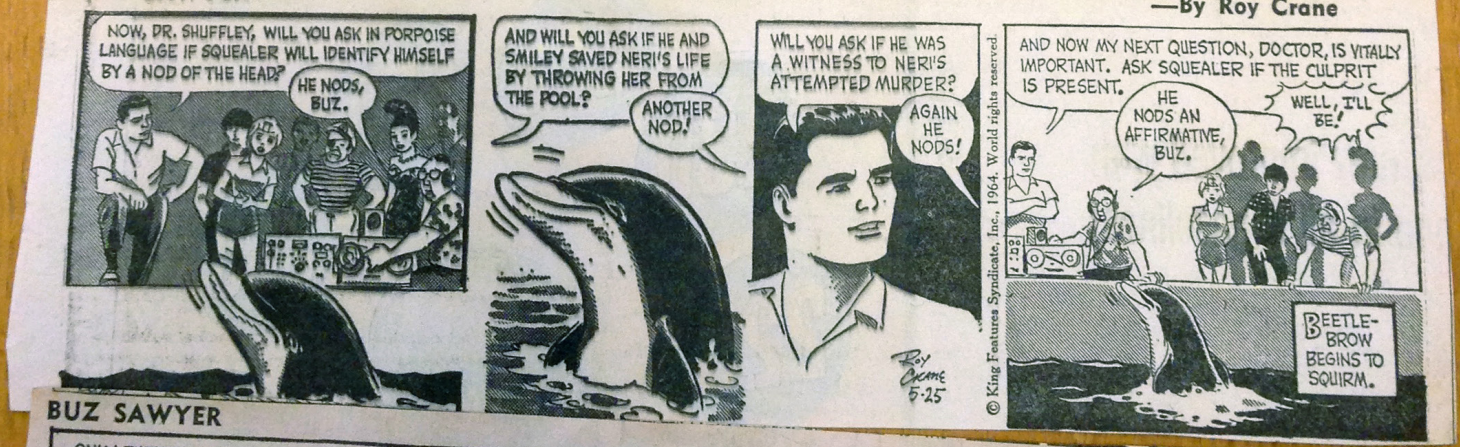
From the Archive: The Dolphin as Witness
Comic strip with the adventures of Buz Sawyer by Roy Crane, with Lilly's comment on a note, 1964. Lilly Papers, box 20, folder 9. Courtesy of the Department of Special Collections and University Archives, Stanford University Libraries.

BUZ SAWYER —By Roy Crane

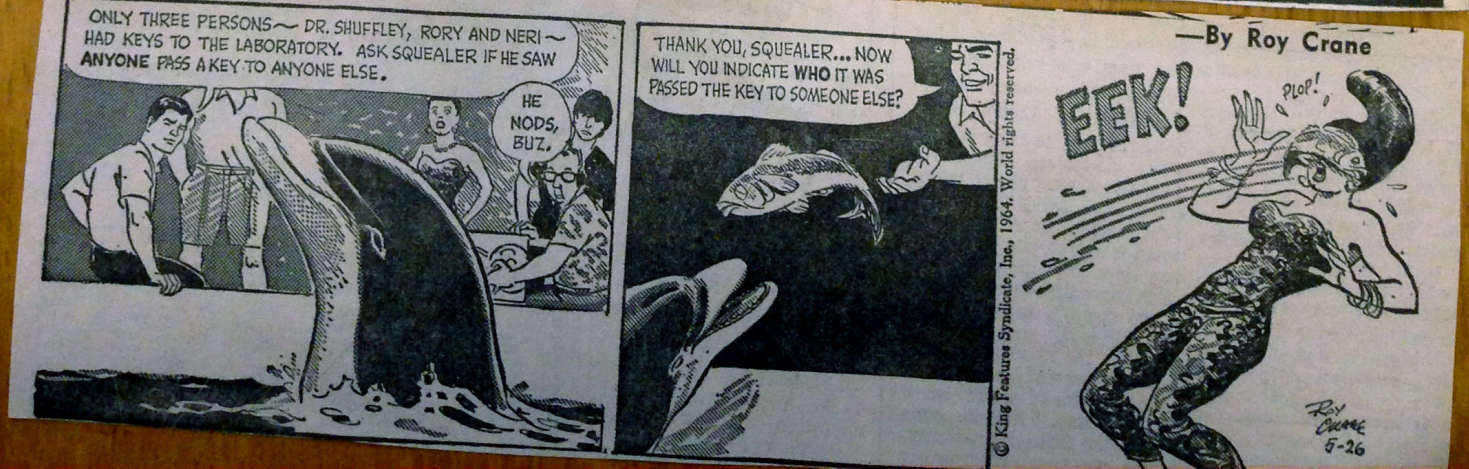
AH - HA !!!

BUZ SAWYER —By Roy Crane

BUZ SAWYER —By Roy Crane



BUZ SAWYER —By Roy Crane



On Virgin Ground (From Maryland to Nazareth Bay, U.S. Virgin Islands)

Virgin Mary, Holy Mother of God! Something human-like had emerged from an animal orifice, and then that body and being could no longer be held at the same distance. Sound could not be held at a distance; there was neither a reliable object, nor observer.

abdicate
all the straight
amputate
armor plate

How did he end up here?

Lilly's sensational dolphin research received media attention from its early stages and his popular science book *Man and Dolphin: Adventures of a New Scientific Frontier* (1961) brought him fame. Researchers, journalists, authors, as well as film stars and other celebrities visited Lilly's Communication Research Institute (CRI) in Nazareth Bay on the island of St. Thomas in the U.S. Virgin Islands. Lilly was trained in medicine, neurology, and psychoanalysis and was in tune with his time. He studied the workings of the brain, the psychological effects of drugs such as LSD on humans as well as animals, and sensory deprivation. As a respected neurophysiologist in the 1940s and 1950s he mapped the brains of monkeys at the National Institute of Mental Health (NIMH) in Maryland and dreamed of creating a brain-recording machine. In an attempt do this he inserted electrodes into the brains of living monkeys. In a newspaper clip from 1951 I read that Lilly and his associates managed to create a "brain-television" using a cat. They inserted 25 electrodes into the cat's brain, which were connected to an equal number of amplifiers and glow lamps. The electrical signals from the cat's brain were transformed into patterns of light, which were recorded with a film camera. The live activity of the cat's brain was made visible as a series of moving forms, shapes, and figures. The researchers made contour maps of these "apparitions," while attempting to track their correlating stimuli. Lilly hoped that, "We may be able some day to describe psychological states and behavior in neuro-physiological terms."[1]

Mapping the brain and its functions led Lilly to speculate on possible uses of the knowledge gained through these types of experiments. "Remote control" of humans did not seem far away: "The elicitation of information from and the injection of new information into biological organisms including man by use of biological techniques is speeding up rapidly and it is expected to be of prime importance within a relatively few years," Lilly wrote in an unpublished report from 1958. In the report he also speculates on the possibility of thought control: "This method will lead to master-slave controls directly of one brain over another in greater or lesser degree. … The ultimate uses of such techniques in the military spheres seem to be obvious."[2]

Lilly's speculations were all part of the Cold War repertoire. The fear of being taken over and controlled from a distance by foreign powers (or the promise of mastering such techniques) seemed to co-exist with dreams of cracking the code of consciousness, the possibility of curing diseases, and of improving humans through technological extension. Neurophysiologist José Manuel Rodriguez Delgado conducted similar research at Yale University from 1946–1974, and he invented a "stimoceiver" which he used on monkeys, cats, and mentally ill humans, mostly women. In an experiment undertaken in 1964, widely reported by popular media charmed by the scientist acting as a "matador," he stepped into a bullring and stopped a charging bull by using a remote control device.[3] Delgado hoped to be able to cure mental illness using electrical stimulation and brain implants,[4] and he speculated about the possibility of developing "a future psychocivilized human being; a less cruel, happier, and better man."* In an interview in *New York Times Magazine* in 1970, Delgado speaks as though he was an early devotee of transhumanism: "The human race is at an evolutionary turning point. We're very close to having the power to construct our own mental functions, through a knowledge of genetics (which I think will be complete within the next 25 years); and through a knowledge of the cerebral mechanisms which underlie our behavior. The question is what sort of humans would we like,

* Is this utopia or dystopia? Both Delgado's and Lilly's research coincided with covert CIA "mind control" experiments, initiated in the McCarthy era in the name of fighting communism. This work extended into the mid-1960s (known as MK-ULTRA). Both Lilly and Delgado were funded by military agencies such as the Office of Naval Research, though not by the CIA. See Barry Blackwell, "Jose Manuel Rodriguez Delgado," *Neuropsychopharmacology* 37 (2012): 2883-84, doi:10.1038/npp.2012.160

ideally, to construct?"[5] An unexpected model for what an evolved consciousness might look like had recently appeared thanks to Lilly: dolphins.

Lilly's interest in dolphins developed when he realized that they have large and complex brains. With funding from NIMH, the Air Force Office of Scientific Research, the Office of Naval Research, and others, he began his attempts to penetrate the brain of this alien creature. In 1955 Lilly, along with seven other researchers from five different institutions,[6] got access to five dolphins at Marineland in Florida for a period of two weeks.* The animals died one after another because, as the researchers discovered, when they were put under general anesthesia they stopped breathing. They succeeded in reviving several dolphins with the help of a respirator that Lilly had built, but the animals were seriously injured in the process and were put down to end their suffering. "The personnel at Marineland were nobly suppressing their displeasure at the way we were treating their friends," Lilly wrote, emphasizing that the staff had great respect for the dolphins and that they described them as extremely intelligent, playful, and friendly towards humans.[7]

In October 1957 Lilly returned to Marineland with his wife Mary Lilly and Alice M. Miller (who he would come to co-author many of his academic articles with). This time he was "armed with the sleeve-guide technique," a new method of working with animals and their brains without general anesthesia, which he had tested on monkeys at NMIH.[8] With the animal held in a tank, firmly restrained and partially submerged in water so as not to dry out, Lilly hammered a 30-millimeter-long sleeve-guide into dolphin number six's skull, and through this inserted an electrode. The animal "jumped every time the hammer hit the mandrel of the sleeve guide, because this made a very loud noise inside his head." Lilly describes how they painstakingly moved one millimeter at a time, and spent all of Saturday afternoon penetrating deeper and deeper into the brain with the electrode. Each position along the way was stimulated with electricity, and the dolphin's reaction was noted. On Sunday morning, they located the "positive system" in the brain, which was the source of pleasure and positive motivation, according to Lilly. In the experiment, the dolphin stimulated himself by pushing a switch. He learned how to do this remarkably quickly by using his beak, and for the first time the researchers observed the mimicry effect: the dolphin seemed to mimic the tones emitted by the audio oscillator in the room, as well as human speech.[9]

Animal Number 8 was restrained in the same fashion, with electrodes placed in his head.[10] As time drew on, Lilly found that Number 8 started to "experiment" on him, as if to determine what his hearing range was. Over the period in which the animal was kept in the tank for the purposes of the study, the water temperature dropped. Unfortunately, the researchers did not realize this was harmful. "After several days of restraint we put him back in the main laboratory holding tank with two other animals. He had developed an S-shaped curve along his back and could not swim."[11]

Lilly later described the experience of hearing the dolphin voices as a turning point, and as the eerie feeling of encountering *Someone*:

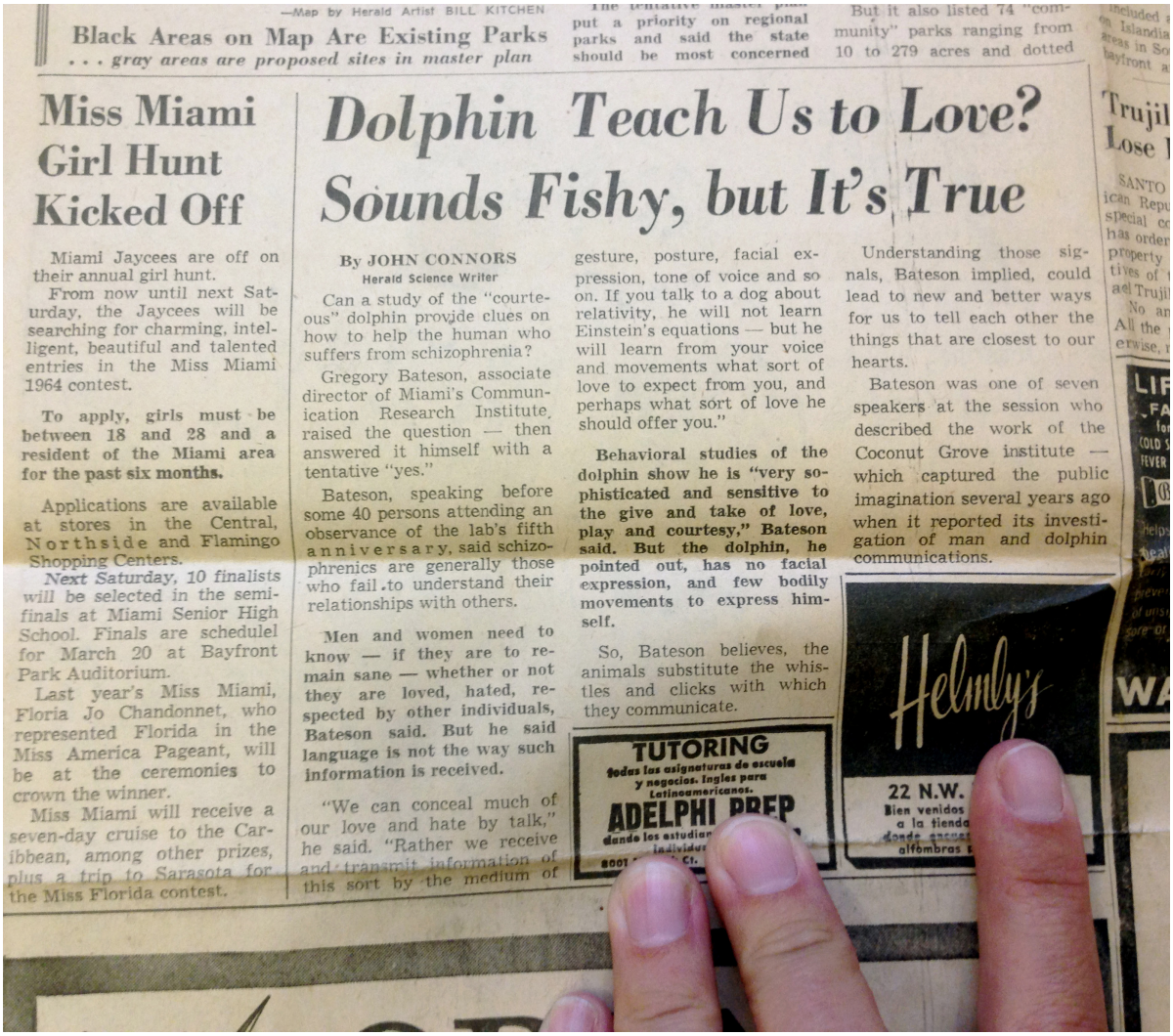
> The feeling was that we were up against the edge of a vast uncharted region in which we were about to embark with a good deal of mistrust concerning the appropriateness of our own equipment. The feeling of weirdness came on us as the sounds of this small whale seemed more and more to be forming words in our own language. … We began to look at this small whale's body with newly opened eyes and began to think in terms of its possible "mental processes," rather than in terms of the classical view of a conditionable, instinctually functioning "animal." We began to apologize to one another for slips of the tongue in which we would call dolphins "persons" and in which we began to use their names as if they *were* persons.[12]

Was the mimicry a result of the unusual way that the dolphins' brains were stimulated in the experiments, or evidence of complex mental activity? At this point Lilly's research took a new and drastic turn, and in 1958 he left NIMH. At this time, it was revolutionary to suggest that animals could be intelligent (let alone possess intellectual abilities), but Lilly eventually acquired enough funding to set up and run his own scientific establishment to study interspecies communication, equipped with state-of-the-art sound recording equipment and computers: the Communication Research Institute (CRI). As early as 1958-59 Lilly began the

* Marineland was previously called Marine Studios and opened in 1938 as an oceanarium that could also be used as film studio. It was the first attempt to hold sea creatures and show them to a public. Trained dolphins became a main attraction in the 1950s. This also provided researchers with the opportunity to study the animals in captivity. A short and difficult to stomach description of how these animals were captured in the wild as well as the catastrophic consequences for the population at large can be found in Carl Safina, *Beyond Words. What Animals Think and Feel* (New York: Picador, 2015), 379–403.

construction of a new laboratory in the U.S. Virgin Islands with the use of his own funds. In Nazareth Bay on the island of St. Thomas, workers felled jungle and dynamited underwater terrain to create the research center. An additional laboratory was established in Miami, Florida. Lilly divorced during this period and he and his new wife, Elisabeth Bjerg, managed the center. In 1960 additional funding began to roll in, primarily from military agencies – quite possibly because Lilly emphasized military applications of his research – and later also from NASA.*

* The research at CRI was funded by the Office of Naval Research, National Science Foundation, National Institutes of Health, Department of Defense, and by the Bioscience Program of NASA's Office of Space Science. See Burnett, *Sounding of the Whale*, 582. Later, funding was also received from the Air Force Office of Scientific Research and NIMH.



—Map by Herald Artist BILL KITCHEN

Black Areas on Map Are Existing Parks
. . . gray areas are proposed sites in master plan

put a priority on regional parks and said the state should be most concerned

But it also listed 74 "community" parks ranging from 10 to 279 acres and dotted

Miss Miami Girl Hunt Kicked Off

Miami Jaycees are off on their annual girl hunt.

From now until next Saturday, the Jaycees will be searching for charming, intelligent, beautiful and talented entries in the Miss Miami 1964 contest.

To apply, girls must be between 18 and 28 and a resident of the Miami area for the past six months.

Applications are available at stores in the Central, Northside and Flamingo Shopping Centers.

Next Saturday, 10 finalists will be selected in the semi-finals at Miami Senior High School. Finals are schedulel for March 20 at Bayfront Park Auditorium.

Last year's Miss Miami, Floria Jo Chandonnet, who represented Florida in the Miss America Pageant, will be at the ceremonies to crown the winner.

Miss Miami will receive a seven-day cruise to the Caribbean, among other prizes, plus a trip to Sarasota for the Miss Florida contest.

Dolphin Teach Us to Love? Sounds Fishy, but It's True

By JOHN CONNORS
Herald Science Writer

Can a study of the "courteous" dolphin provide clues on how to help the human who suffers from schizophrenia?

Gregory Bateson, associate director of Miami's Communication Research Institute, raised the question — then answered it himself with a tentative "yes."

Bateson, speaking before some 40 persons attending an observance of the lab's fifth anniversary, said schizophrenics are generally those who fail to understand their relationships with others.

Men and women need to know — if they are to remain sane — whether or not they are loved, hated, respected by other individuals, Bateson said. But he said language is not the way such information is received.

"We can conceal much of our love and hate by talk," he said. "Rather we receive and transmit information of this sort by the medium of gesture, posture, facial expression, tone of voice and so on. If you talk to a dog about relativity, he will not learn Einstein's equations — but he will learn from your voice and movements what sort of love to expect from you, and perhaps what sort of love he should offer you."

Behavioral studies of the dolphin show he is "very sophisticated and sensitive to the give and take of love, play and courtesy," Bateson said. But the dolphin, he pointed out, has no facial expression, and few bodily movements to express himself.

So, Bateson believes, the animals substitute the whistles and clicks with which they communicate.

Understanding those signals, Bateson implied, could lead to new and better ways for us to tell each other the things that are closest to our hearts.

Bateson was one of seven speakers at the session who described the work of the Coconut Grove institute — which captured the public imagination several years ago when it reported its investigation of man and dolphin communications.

TUTORING
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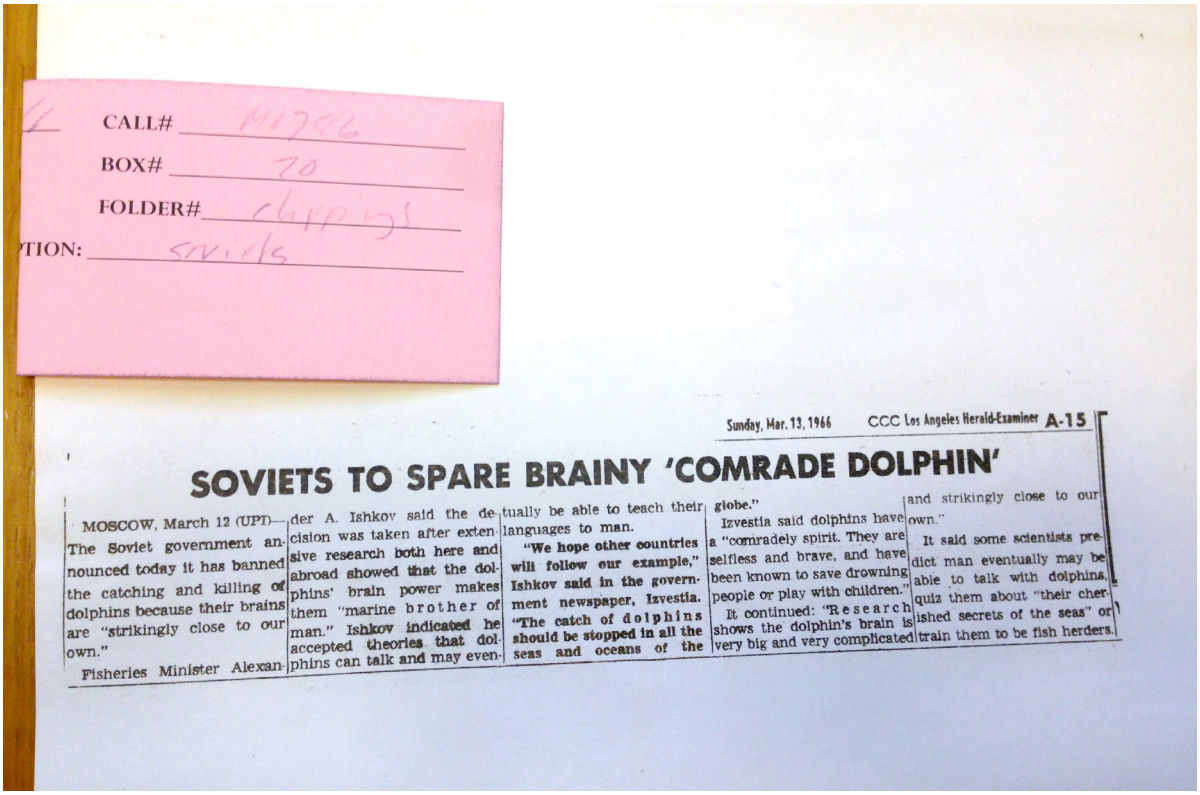
From the Archive: Dolphins in Media
Miami Herald, February 14, 1964. Lilly Papers, box 20, folder 9. Courtesy of the John C. Lilly Estate and the Department of Special Collections and University Archives, Stanford University Libraries



CALL# M1966
BOX# 20
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Sunday, Mar. 13, 1966 CCC Los Angeles Herald-Examiner A-15

SOVIETS TO SPARE BRAINY 'COMRADE DOLPHIN'

MOSCOW, March 12 (UPI)—The Soviet government announced today it has banned the catching and killing of dolphins because their brains are "strikingly close to our own."

Fisheries Minister Alexander A. Ishkov said the decision was taken after extensive research both here and abroad showed that the dolphins' brain power makes them "marine brother of man." Ishkov indicated he accepted theories that dolphins can talk and may eventually be able to teach their languages to man.

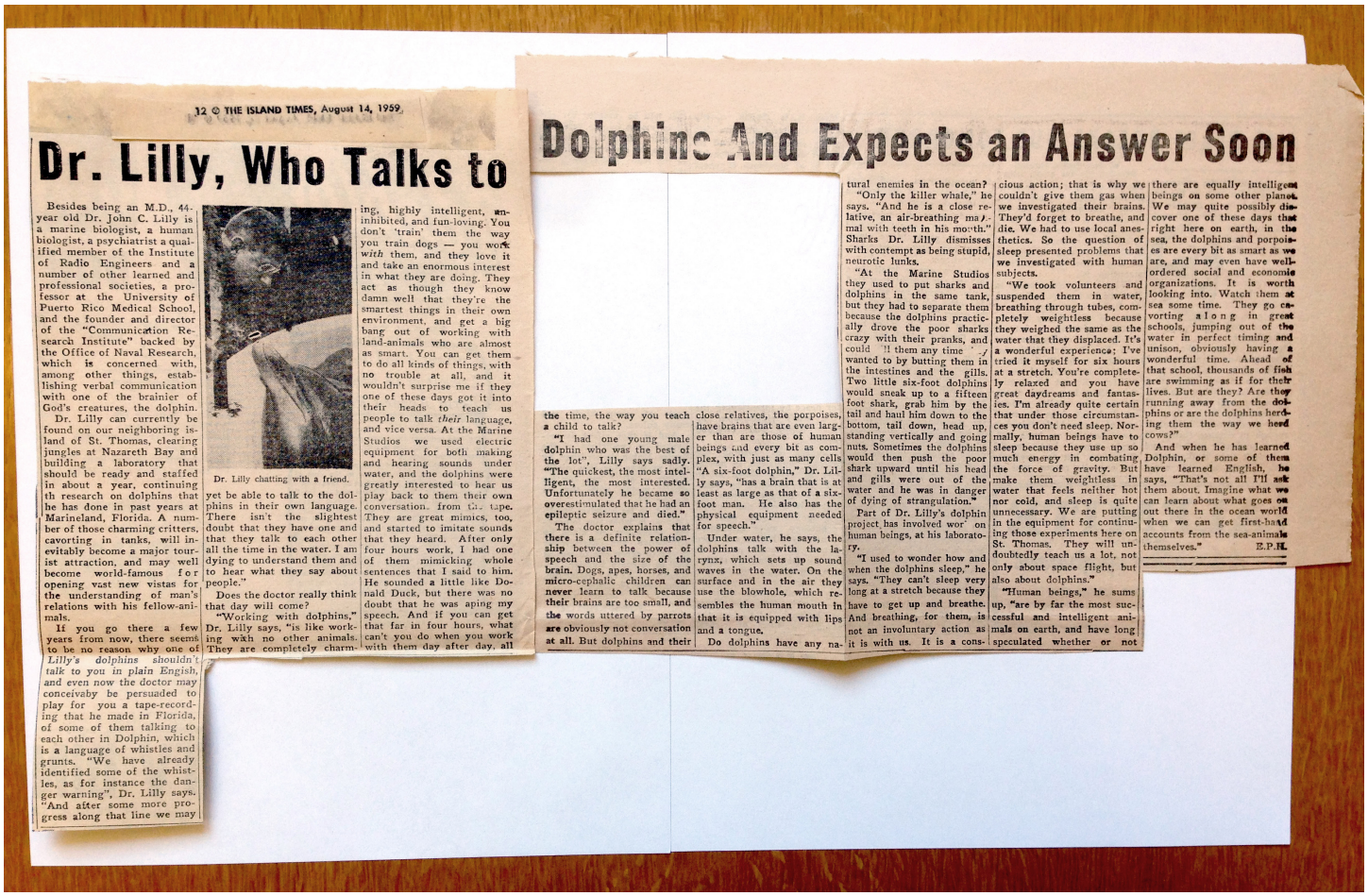
"We hope other countries will follow our example," Ishkov said in the government newspaper, Izvestia. "The catch of dolphins should be stopped in all the seas and oceans of the globe."

Izvestia said dolphins have a "comradely spirit. They are selfless and brave, and have been known to save drowning people or play with children."

It continued: "Research shows the dolphin's brain is very big and very complicated and strikingly close to our own."

It said some scientists predict man eventually may be able to talk with dolphins, quiz them about "their cherished secrets of the seas" or train them to be fish herders.

From the Archive: Dolphins in Media
Los Angeles Herald-Examiner, March 13, 1966. Lilly Papers, box 20, folder 9. Courtesy of the John C. Lilly Estate and the Department of Special Collections and University Archives, Stanford University Libraries



12 © THE ISLAND TIMES, August 14, 1959

Dr. Lilly, Who Talks to Dolphins And Expects an Answer Soon

Besides being an M.D., 44-year old Dr. John C. Lilly is a marine biologist, a human biologist, a psychiatrist a qualified member of the Institute of Radio Engineers and a number of other learned and professional societies, a professor at the University of Puerto Rico Medical School, and the founder and director of the "Communication Research Institute" backed by the Office of Naval Research, which is concerned with, among other things, establishing verbal communication with one of the brainier of God's creatures, the dolphin.

Dr. Lilly can currently be found on our neighboring island of St. Thomas, clearing jungles at Nazareth Bay and building a laboratory that should be ready and staffed in about a year, continuing th research on dolphins that he has done in past years at Marineland, Florida. A number of those charming critters, cavorting in tanks, will inevitably become a major tourist attraction, and may well become world-famous for opening wast new vistas for the understanding of man's relations with his fellow-animals.

If you go there a few years from now, there seems to be no reason why one of *Lilly's dolphins shouldn't talk to you in plain Engish, and even now the doctor may conceivaby* be persuaded to play for you a tape-recording that he made in Florida, of some of them talking to each other in Dolphin, which is a language of whistles and grunts. "We have already identified some of the whistles, as for instance the danger warning", Dr. Lilly says. "And after some more progress along that line we may yet be able to talk to the dolphins in their own language. There isn't the slightest doubt that they have one and that they talk to each other all the time in the water. I am dying to understand them and to hear what they say about people."

Dr. Lilly chatting with a friend.

Does the doctor really think that day will come?

"Working with dolphins," Dr. Lilly says, "is like working with no other animals. They are completely charming, highly intelligent, uninhibited, and fun-loving. You don't 'train' them the way you train dogs — you work *with* them, and they love it and take an enormous interest in what they are doing. They act as though they know damn well that they're the smartest things in their own environment, and get a big bang out of working with land-animals who are almost as smart. You can get them to do all kinds of things, with no trouble at all, and it wouldn't surprise me if they one of these days got it into their heads to teach us people to talk *their* language, and vice versa. At the Marine Studios we used electric equipment for both making and hearing sounds under water, and the dolphins were greatly interested to hear us play back to them their own conversation. from G.. tape. They are great mimics, too, and started to imitate sounds that they heard. After only four hours work, I had one of them mimicking whole sentences that I said to him. He sounded a little like Donald Duck, but there was no doubt that he was aping my speech. And if you can get that far in four hours, what can't you do when you work with them day after day, all the time, the way you teach a child to talk?

"I had one young male dolphin who was the best of the lot", Lilly says sadly. "The quickest, the most intelligent, the most interested. Unfortunately he became so overestimulated that he had an epileptic seizure and died."

The doctor explains that there is a definite relationship between the power of speech and the size of the brain. Dogs, apes, horses, and micro-cephalic children can never learn to talk because their brains are too small, and the words uttered by parrots are obviously not conversation at all. But dolphins and their close relatives, the porpoises, have brains that are even larger than are those of human beings and every bit as complex, with just as many cells "A six-foot dolphin," Dr. Lilly says, "has a brain that is at least as large as that of a six-foot man. He also has the physical equipment needed for speech."

Under water, he says, the dolphins talk with the lyrnx, which sets up sound waves in the water. On the surface and in the air they use the blowhole, which resembles the human mouth in that it is equipped with lips and a tongue.

Do dolphins have any natural enemies in the ocean?

"Only the killer whale," he says. "And he is a close relative, an air-breathing mammal with teeth in his mouth." Sharks Dr. Lilly dismisses with contempt as being stupid, neurotic lunks.

"At the Marine Studios they used to put sharks and dolphins in the same tank, but they had to separate them because the dolphins practically drove the poor sharks crazy with their pranks, and could 'l them any time ' .; wanted to by butting them in the intestines and the gills. Two little six-foot dolphins would sneak up to a fifteen foot shark, grab him by the tail and haul him down to the bottom, tail down, head up, standing vertically and going nuts. Sometimes the dolphins would then push the poor shark upward until his head and gills were out of the water and he was in danger of dying of strangulation."

Part of Dr. Lilly's dolphin project has involved wor on human beings, at his laboratory.

"I used to wonder how and when the dolphins sleep," he says. "They can't sleep very long at a stretch because they have to get up and breathe. And breathing, for them, is not an involuntary action as it is with us. It is a conscious action; that is why we couldn't give them gas when we investigated their brains. They'd forget to breathe, and die. We had to use local anesthetics. So the question of sleep presented problems that we investigated with human subjects.

"We took volunteers and suspended them in water, breathing through tubes, completely weightless because they weighed the same as the water that they displaced. It's a wonderful experience; I've tried it myself for six hours at a stretch. You're completely relaxed and you have great daydreams and fantasies. I'm already quite certain that under those circumstances you don't need sleep. Normally, human beings have to sleep because they use up so much energy in combating the force of gravity. But make them weightless in water that feels neither hot nor cold, and sleep is quite unnecessary. We are putting in the equipment for continuing those experiments here on St. Thomas. They will undoubtedly teach us a lot, not only about space flight, but also about dolphins."

"Human beings," he sums up, "are by far the most successful and intelligent animals on earth, and have long speculated whether or not there are equally intelligent beings on some other planet. We may quite possibly discover one of these days that right here on earth, in the sea, the dolphins and porpoises are every bit as smart as we are, and may even have well-ordered social and economic organizations. It is worth looking into. Watch them at sea some time. They go cavorting along in great schools, jumping out of the water in perfect timing and unison, obviously having a wonderful time. Ahead of that school, thousands of fish are swimming as if for their lives. But are they? Are they running away from the dolphins or are the dolphins herding them the way we herd cows?"

And when he has learned Dolphin, or some of them have learned English, he says, "That's not all I'll ask them about. Imagine what we can learn about what goes on out there in the ocean world when we can get first-hand accounts from the sea-animals themselves." E.P.H.

From the Archive: Dolphins in Media
Island Times, August 14, 1959. Lilly Papers, box 19, folder 5. Courtesy of the John C. Lilly Estate and the Department of Special Collections and University Archives, Stanford University Libraries

SCIENCE

INTELLIGENCE:

This Fish Is a Smarty

Man may not have to wait for visitors from outer space to discover what it's like to find a more intelligent species than himself. There already may be such an animal on earth.

Meet the bottle-nosed dolphin, a speedy (up to 35 knots) and small (5 to 14 feet long) member of the whale family. Known popularly as the porpoise, this mammal has been under observation since 1949 by neurophysiologist John Lilly, whose work is financed by the Office of Naval Research. Five years ago, Dr. Lilly sent five dolphin brains to Johns Hopkins University for extensive study. Though the analysis is not completed yet, Dr. Lilly said in Washington last week, it is clear that "man is no longer at the top of the heap as far as brain structure is concerned."

According to Dr. Lilly, "the cell counts in dolphin brains are the same as our own per cubic centimeter. This means their brains are not only larger [by 40 per cent] but first-class as well." The Johns Hopkins brain study backs up Dr. Lilly's own independent findings about dolphin IQ: They are fast learners—only one lesson is required to teach them to avoid electric shock by flipping a switch with their beaks. More fantastic, Dr. Lilly found that dolphins not only talk to each other in a language of whistles, squawks, and buzzes (their voice boxes can weave twenty identifiable noises into thousands of complex "words"), but can even imitate English in Donald Duck voices.

All of which makes Dr. Lilly wonder about "the intriguing possibility of intellectual communication with this aquatic animal. This research can give us . . . experience in dealing with extraterrestrial creatures—if we ever meet them."

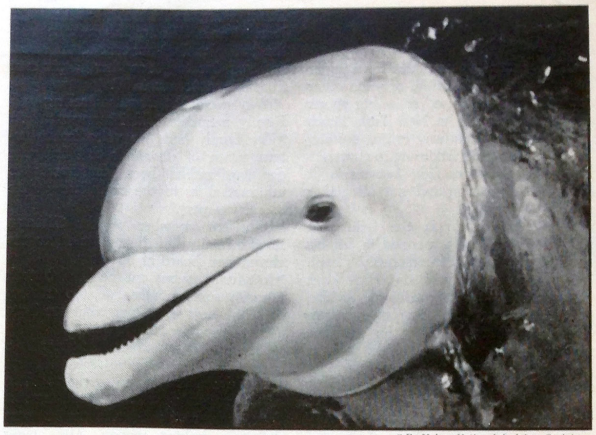
But he doesn't minimize the difficulties of communicating with dolphins either in their own language or in English. "What do we have in common with each other?" Dr. Lilly asked. "They live in a different universe. Even testing their intelligence is difficult, because what are you going to test? Compared with me, a dolphin is a genius in the water, but he would be a moron in the Library of Congress."

This Gadget's a 'Brain'

The scene was reminiscent of the nursery or kindergarten.

A huge letter "A"—a foot and a half tall on a 3-foot-high cardboard—was flashed in front of the pupil's eye, allowing time for the image to be perceived and memorized. Then "B" was flashed, then "C," and so on.

The simple lesson was going quite straightforwardly, but this was no human pupil learning the ABC's; it was a machine. The strange contraption consisted of a bellows camera, an electrical cable, and a huge, transistor-packed cabinet—the total collectively known as the Mark I Perceptron.



C.E. Mohr—National Audubon Society

A genius in his element: The cerebral dolphin can even speak English

The Perceptron, which last week gave the first public demonstration of its human-like learning abilities, is a major milestone in man's somewhat paradoxical efforts to design machines to replace himself. It is the brain child of 31-year-old Frank Rosenblatt of Cornell Aeronautical Laboratory, Inc., Buffalo, N.Y., who has set for himself the monumental task of building a mechanical brain along the lines of the human thinking machine.

The Perceptron is, in a sense, a theoretical model of the human brain, though simpler. "It is capable," Rosenblatt said, "of the same functions of sensing, recognition, retention, and response-selection [answering] as its biological counterpart." Perceptron is taught and then left to itself—just like a human. Its "anatomy" duplicates, insofar as possible, what is now known about the human brain:

▶First, there is the "eye"—photocells to record light given off by objects.

▶Then, the light impulse travels along "nerve" pathways—a maze of wires. Different objects send characteristically different impulses along the wires.

▶In the Perceptron "brain" there are 512 transistor-driven relay circuits—artificial "cells" which register the different impulses and "remember" the electrical potential and strength of past impulses. (By contrast, the human brain has 10 billion cells, but some, Rosenblatt says, are "redundant.")

▶After this memory system associates a present stimulus (e.g., "A") with its past electrical "experience," it flashes the response via lights on the cabinet.

Compared with humans, the Perceptron learns quite well in very elementary situations. In the alphabet recognition test, it achieved "errorless performance" after just fifteen exposures to each letter.

Rosenblatt is already looking beyond the ABC's and his admittedly primitive Perceptron to better models and more complicated tasks. A Mark II model with 5,000 to 10,000 "cells" is now on the drawing boards.

Both the Navy and the Air Force are backing the Perceptron with an eye to photo interpretation. Perceptron could look for designated patterns like an airfield. Farther off, the Perceptron's ability to distinguish and remember may be put to work in business billing operations, machine translating, inventory control—in fact, in any clerical operation where pattern recognitions are required.

Will man stay in control? "A good question," Rosenblatt said diffidently. "If he uses his head, he probably will."

Periscoping Science

When the twelve-nation International Indian Ocean Expedition gets under way later this year, the Russians will be out in full force, with 200 scientists aboard three 6,000-ton ships exploring this unknown ocean. The U.S. effort will be more modest: 50 scientists manning three 2,100-ton research ships . . . The U.S. is planning a gigantic aerial photography program to map some half-million square miles of Antarctica this fall. Coastal areas and mountain ranges are the prime interest.

From the Archive: Dolphins in Media
Newsweek Magazine, July 4, 1960. Lilly Papers, box 19, folder 14.
Courtesy of the John C. Lilly Estate and the Department of Special Collections and University Archives, Stanford University Libraries

I sift through old newspaper clippings, typescripts, letters, and reports in the archive. In his popular book from 1961, Lilly speculated that dolphins could

> be very useful as antipersonnel self-directing weapons. They could do nocturnal harbor work, capture spies let out of submarines or dropped from airplanes, attacking silently and bringing back information from such contacts. They could deliver atomic nuclear warheads and attach them to submarines or surface vessels and to torpedoes and missiles.
>
> They could help us carry on a sort of psychological warfare.... [and] sneak up on an enemy submarine sitting on the bottom and shout something into the listening gear, as if it were a human communicating with them.[13]

My gaze is colored by my own time. My glasses, though 1950s retro in style, are marked not by the Cold War, but by the so-called War on Terror and a new wave of brain research. Instead of brain-televisions, we are presented with "brainbows," where the brains of mice are lit up by fluorescent proteins, and electrocorticography (ECoG) is used as a platform for brain-computer interfaces, i.e. brain implants that can be connected to thought-controlled prostheses and computer software. On April 2, 2013, U.S. President Barack Obama announced the BRAIN Initiative (Brain Research through Advancing Innovative Neurotechnologies). And, on October 1 of that same year, the EU-financed Human Brain Project was officially launched – its goal is to create a simulation of the entire human brain, mapping each and every neuron. Some sixty years after Lilly's and Delgado's experiments, we see, yet again, the launch of Big Science initiatives that attract big money, and involve military agencies.[14]

However fanciful Lilly's ideas about the military use of trained dolphins may sound, they have actually been explored through the U.S. Navy's Marine Mammal Program, which began in 1959.[15] The program has an official and an unofficial history, and is still in existence today. Dolphins and sea lions are trained in San Diego. The animals serve as underwater watchdogs, and are used in mine detection operations. They were deployed in the Vietnam and Persian Gulf wars.

Dolphins and other sea mammals have also been used for military purposes in the Soviet Union, where a training center was established in Crimea in 1965.[16] I learn from BBC articles online that the center fell into neglect in the 1990s and that some of the animals were sold to Iran, among them a white Beluga whale. (BBC reports that, according to the center's chief trainer, the animals were trained to attack enemy frogmen as well as to undertake kamikaze strikes against enemy ships with explosives).[17] Some animals remained at the center in Crimea and participated in a dolphin-therapy program that began in 1986, where, still on Navy ground, patients, including autistic children, could swim with dolphins.[18] Apparently, the military program was resurrected in 2012 by the Ukrainian navy, and then fell into Russian hands with the annexation of Crimea in 2014. By 2016 the Russian military had made significant investments to upgrade the facilities and purchase new dolphins: the Soviet-era use of combat dolphins lives on.[19]

back and forth
back and flip
bob and dick
bomb the tape
but hesitate
counterfeit
fabricate

How did I end up here? Somewhat overwhelmed by these unnerving connections and entanglements that emerge when following in Lilly's trail, I continue to look for the sound recordings from the dolphin experiments. The John C. Lilly Papers at Stanford University Libraries occupy 240 linear feet (73 meters). Out of about 116 boxes in total, 48 cartons are filled with audiotape reels with recordings of dolphin experiments conducted between 1961–1968. Each carton contains between 11–81 reels, for a total of approximately 1,432 reels. I cannot listen to any of them unless they are digitized first.

A World of Sound (Extending the Ear)

Close your eyes and your ears will open; sound travels through the auricle, makes the eardrum bulge and the hammer vibrate. Liquid begins to move in a snail-shaped tube. Waves of sound. Wrap your ears in headphones, extend them with cables and microphones. Connect yourself to recording devices that can inscribe, magnetize, or code a medium so that sound waves can be stored through time. Plunge your microphone into

the sea, or into the body; attach it to a building; hide it in a bush, or bury it beneath the earth. Listen.

We could regard the 20th century as the century of the extended ear, characterized by a growing awareness of the hitherto unheard. It was not just Lilly who, with access to new recording technology, was confronted by a world of sound and its implications. Something elusive and effervescent had suddenly become possible to capture, hold, record. A new way of "writing" had been found. The devices for sound recording, playback and reproduction, which began to emerge as early as 1877, meant that sound, in the same way as light through photography, could now be captured as an *object*. The phonograph, for example, made use of mechanical technology, inscribing sound in rolls of wax. Small and portable versions of the phonograph became popular for ethnographic field recordings of speech and music in far flung places at the beginning of the 1900s. The collection and archiving of audio-documents – dialects, songs, animal sounds – began. With the electrical recording technologies and amplifiers that were developed in the 1920s, and later with the development of magnetic audio tapes, it became possible to work with and manipulate recorded sounds in a wholly new way. Manipulating the speed of sound, as the dolphin Elvar had done live in the wet lab (and which Lilly had done as well with the recordings of Elvar's language lessons to make the dolphin's humanoid articulations audible), was also a method used by the Germans during World War I. They inscribed sound on magnetic reels and sent coded messages. When the recording was slowed down the message could be heard. This fascination with signal versus noise, decoding and coding, sampling, amplifying, and looping was not only of interest to the military, but was shared by many others who encountered the new medium, including amateurs and professionals, spies and poets, spirit mediums, composers, and artists. Friedrich Jürgenson, for example, succeeded in capturing Hitler's spirit on his radio. Other spirits of the dead left messages through the radio too, mostly between the frequencies of 1445–1500 kHz, and Jürgenson captured them with his microphone. One of the spirits had advised him to use the radio as a channel. The recordings began in 1960 and continued, as far as I know, until his death in 1987. Jürgenson inspired a whole movement, Instrumental Transcommunication (ITC), and special devices are available for sale that make recording spirit voices easier. In 2014, an ITC-enthusiast succeeded in recording Jürgenson himself.[20] In parapsychology circles, this is referred to as the *electronic voice phenomena* (EVP), but has also been described as a *verbal transformation effect* by chemist and professor of psychology Richard M. Warren in a paper published in 1961 that describes illusory perceptual changes in normal listeners as a result of continuous listening to recorded repetitions of a monotonous stimulus, which can explain the appearance of ghostly voices on tape.[21] Thus, at this time, Lilly was far from alone in his fascination with strange voice phenomena. Sound recording technologies seemingly encouraged and made possible the documentation of another kind of reality, at the same time pushing the boundaries of what was real, illusionary, and hallucinatory. Your noise might be my data. Turn on the noise.

In "Russian Pioneers of Sound Art in the 1920s" Andrey Smirnov and Liubov Pchelkina recount how, as early as 1916, Dziga Vertov wanted to create musical compositions by sampling existing sounds – a symphony of the world's noises. Italian futurists had similar ideas. Luigi Russolo spoke about the development of a new acoustic sensibility in the urban industrial landscape and held "noise concerts" together with Filippo Tommaso Marinetti, among others. They used a collection of self-built instruments, called *Intonarumori*, that Russolo began constructing in 1910. In his manifesto "Art of Noises" (1913) Russolo writes that the modern orchestra's sound repertoire cannot allow itself to be limited by traditional, instrumental sounds. Russolo imagines a future where the acoustic environment of the urban landscape is consciously composed, "so that every factory will be transformed into an intoxicating orchestra of noises."[22] Perhaps this would have been something like what Arseny Avraamov attempted to achieve with his performances of *Symphony of Sirens* in Baku and Moscow 1922–1923:

> Hydroplane motors, sirens of factories, boats and locomotives formed a gigantic orchestra, with two artillery batteries replacing the percussion section, the machine guns playing the part of the snare drums and the heavy artillery the bass drums. The conductor was perched on a special platform, directing the action with coloured flags. The central sound machine, referred to as 'Magistral' (the steam main), was made up of fifty locomotive whistles directed by a crowd of musicians following special scores.[23]

In these concerts the whole city and its machine-instruments were orchestrated with Avraamov himself as conductor. This reminds me of what composer Delia Derbyshire, one of the pioneers of electronic music, said about sounds that made a big impression on her as a child, and that came to color her world of sound: the air raid sirens, and then the "all-clear" signal used during a series of German bombing raids on Coventry, England (the Coventry Blitz) during World War II. "That's electronic music, in those days," Derbyshire said.[24]

Due to inadequate technology Dziga Vertov had to wait until 1931 before he could realize his vision of composing with "documentary" sounds, which he accomplished in the film *Enthusiasm: Symphony of the Donbass*.* The device that finally made it possible for Vertov to make field recordings optically on motion picture film weighed more than a ton. The composition included, among other things, sounds recorded on the street and in factories and could be described with a term coined by the composer Pierre Schaeffer twenty years later, *musique concrète*. But, Vertov regarded his first sound film, which could be described as a rhythmic, visual, and auditory montage, first and foremost as a documentary.

This was before the voiceover and the commentator became the hallmark of documentary film – something which came to limit its visual complexity and potential considerably as images were subjected to words and the audiovisual form of the documentary became solidified. Is the voiceover meant to serve as a stand in for a detached observer, explaining the action on the screen? A commentating voice does invoke a certain distance. Should the documentary voiceover be seen as a teacher, the voice of a Master, ready to guide us so that we don't see what shouldn't be seen? As if what is seen cannot be entirely trusted, and that a reliable acousmatic voice can prevent us from being deceived by appearances. In cinema though, Chion writes, "the voice frequently *turns against the image*."[25] Here, rather than acting as a stabilizing force, the acousmatic voice is used to question and decenter.

In the postwar period, it was Schaeffer who re-introduced the term "acousmatic" to denote a situation where a sound is split from its visible source. This experience of sound was not new. It had become commonplace with the arrival of radio, telephone, and gramophone recordings – but, its effects had not been seriously examined. According to Michael Chion, the word *acousmatique* (acousmatic) appeared in old French dictionaries to describe sound we hear, but whose source cannot be seen. Chion writes that Schaeffer, "emphasizes the *initiatory* significance of the acousmatic experience" and he adds that the rare word "acousmatic" also

> described in Greek a sect of the disciples of Pythagoras who were said to follow a form of teaching where the Master spoke to them hidden behind a veil. This was done in order to distract their visual attention from his physical appearance.[26]

In other words, the Master's voice was split from his body. After five years of attentive listening the disciples (the *akousmatikoi*) were initiated and the Master revealed. Thus, one of the first schools of philosophy made use of this auditory device, which sets up a particular relationship between space, sound, and (in)visiblity. We see it as well in Judaism and Christianity (the holy is hidden behind a veil and God appears as a voice), and in Freudian analysis where the analysand hears the analyst's voice but does not look directly at him. What are the effects of this? The hiding serves to reveal the truth hidden by appearances, and to move the focus away from the speaker to what is being said. To see in these matters is not the point, it contaminates and distorts. The act of hiding one's physical body as Pythagoras is said to have done, could be understood as a way of creating distance from sociality and human interaction. At the same time, this hiddenness awakens the more-than-human – as the Wizard of Oz knew.

Before the arrival of the telephone, gramophone, and radio at the turn of the previous century, disembodied voices had not been a normal part of human life, but something supernatural. Yet, new media and recording technologies made these eerie appearances a part of

* After a screening in Europe in 1931 Charlie Chaplin wrote to Vertov, "I would never have believed it possible to assemble mechanical noises to create such beauty. One of the most superb symphonies I have known. Dziga Vertov is a musician." See "Sound Experiments in the Russian Avant-Garde. Dziga Vertov (1896–1954): Enthusiasm! (1930)," on the UbuWeb website, Ubuweb: Sound, accessed January 27, 2015, http://www.ubu.com/sound/russian_avant.html. Vertov's early films also inspired the German artist Walther Ruttman. He directed a filmic city symphony as well, the silent film *Berlin: Die Sinfonie der Grosstadt* (1927) with original music by Edmund Meisel. But Vertov, who had seen Ruttman's films, did not want to use music and sounds made in a studio; he insisted on composing with "documentary" material. Ruttman also composed a sound piece, *Weekend* (1930). It was recorded on the soundtrack of an optical sound film, but without image. Retroactively, it could be called a soundscape composition.

daily life. We no longer, for example, experience the voices we hear over the telephone as coming from the dead, a feeling that wasn't entirely unusual in telephony's infancy. In *The Guermantes Way* (the third volume of *In Search of Lost Time*) Marcel Proust writes about the experience of hearing his grandmother's voice on the telephone for the first time and how the voice, present but deprived of body, evoked for him the anxiety of death and final separation.* He encountered a voice that he felt he knew, but now, naked and fragile, it was as though he heard it for the first time: "Having it alone beside me, seen without the mask of her face, I noticed in it for the first time the sorrows that had cracked it in the course of a lifetime."[27] The experience created a gap between his grandmother's body and her voice, and it was as though he was not able to put the parts together again. The acousmatic experience had left its mark, at the same time revealing something he had not noticed before. Was this his real grandmother? What am I really hearing when I think I'm listening?

According to Schaeffer, the acousmatic experience modifies our way of listening. It draws our attention to aspects of sound that are normally hidden from us, and at the same time the listener becomes, to some extent, aware of the act of listening itself. There is an element of estrangement and self-reflexivity. The acousmatic situation, in which a sound's source is not visible, creates a "reduced listening," as Schaeffer calls it, where one's attention is focused on the sound and its material and concrete qualities. Sound is no longer treated merely as a vehicle for something else. In this reduced listening mode, if we let go of our habitual search for causes or messages, sound becomes isolated and the listener can concentrate on the "sound object," as Schaeffer calls it. To treat sounds as "objects" is precisely what the processes of sound recording and editing have made possible. Schaeffer's sound object should not be understood as an objectively existing entity though. In Schaeffer's understanding, modeled on Husserl's phenomenology, the "sound object is the meeting point of an acoustic action and a listening intention."[28] The sound object is thus situated neither "outside" nor "inside," but arises from an act of synthesis between a subject and an object. The reduced listening mode was Schaeffer's version of Husserl's *epoché*, i.e. a method for bracketing sounds from their causes.

In Schaffer's model, there are four primary listening modes that can be differentiated through acousmatic listening, but which are not mutually exclusive: *oüir* (translated as "perceiving"), a passive and "raw" perception where we are simply in the midst of a sounding environment; *entendre* ("hearing"), which is selective and intentional, i.e. we choose from what we perceive and focus on certain qualities; *comprendre* ("comprehending"), treating the sound as a sign and looking for a message or a code, i.e. a semantic listening; *écouter* ("listening"), which is selective, aimed at identifying the sound (distance, location, source) and treating it as an index of this source. Schaeffer calls these two latter modes of listening ordinary, or "natural." These modes point directly to the source of the sound, but are mostly unreflective. Meanwhile, "specialist listening" employs a particular manner of listening. The "reduced listening" that Schaeffer introduces in relation to music, could then be understood as a type of specialist listening, representing a *new* listening intention, associated with *entendre* (hearing).** Schaeffer writes, "Nothing can stop a listener from varying [between intentions] passing from one system to another or from a reduced listening to one that is not. … It is this swirl of intentions that creates connections or exchanges of information."[29] The ability to engage in a reduced mode of listening requires, as a rule, conscious training, but it can be triggered by constant repetition of the same sound, or by other manipulations that shave away a part of the sound and make it more difficult to identify, as in Lilly's cogitate-loop.***

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* The blurring of the line between the living and the dead, the present and non-present was certainly accentuated with the telephone and audiovisual recording technologies. But, this eerie effect has a longer history – going back as far as the advent of the written word. Reading, which in ancient Greece was done out loud, and often by slaves, stirred a sense of the reader being possessed by another person's voice.

** Chion clarifies: "Reduced listening as defined by Pierre Schaeffer does not consist in invalidating 'natural' listening modes (of sound as index or sign) or calling them an 'illusion', but in unravelling the various *intentions of which it is composed* and turning these intentions back on to the *sound object*, … and so defining it through a new *specific intentionality, reduced listening*." Chion, *Guide to Sound Objects*, 30 (emphasis in the original). This is a question of training and self-reflexivity; an act of removing all our habitual references in listening and an "effort to perceive what previously unconsciously determined consciousness." Ibid. This is the initiatory aspect of reduced listening.

*** Chion makes the important remark that acousmatic listening in and of itself does not necessarily lead to reduced listening, rather "the opposite occurs, at least at first, since the acousmatic situation intensifies causal listening in taking away the aid of sight." Furthermore, "reduced listening cannot be practiced at a stroke; to achieve it we have to go through deconditioning exercises to become aware of our 'by reference' hearing reflexes and be capable of 'suspending' them. It is thus simultaneously a process of elucidation and of deconditioning." Ibid., 30-31.

Schaeffer wanted to liberate sound from the dominance of speech, from the interpretive zeal of semantics, and the traditional code of music. He experimented with found sound material (bells, voices, trains, etc.) from the archives of French National Radio (*Radiodiffusion-Television Francaise, RTF*). He isolated sound sequences, removed them from their contexts, changed their speed, and created loops. In this way, new sound objects were formed where defined meaning and cultural associations, if not eliminated were, at least, reduced to a minimum. The sound objects were included in his concrete music compositions. He analyzed them as well and they became the basis of the research he carried out on French radio and as part of the group *Groupe de Recherche de Musique Concrète*.* Unlike Lilly, it wasn't the "acoustic image," i.e. the meaning-carrying signal, that Schaeffer wanted to emphasize, but the materiality of sound itself. In his concrete world of sound Schaeffer sought a new form of abstraction, where sound was freed from context and other forms of contamination – as in the Pythagorean set-up. He hoped to reach a pure musical experience that did not make use of the traditional components of music, and where sound was not there to signify something else, to represent or symbolize, but to simply resound in the here and now. "The tape recorder in this research plays the initiatory role of 'the screen of Pythagoras,' by creating not only new phenomena to be studied (by manipulations in the studio), but also and above all 'new conditions for observation'."[30] Through isolating sound objects and practicing reduced listening, Schaeffer also attempted to formulate a descriptive system for sounds that was neither dependent on the cause of the sound, nor on explanatory references and visual ques. To make sound matter he invented a language for listening. He proposed a possible system of classification in his *Traité des objects musicaux* from 1966.[31]

It is not a sonic "purity" or the phenomenological reduction and bracketing that interests me in this specific listening practice, but the acousmatic situation – the resonant space-time opened up, the attentive suspense, and the swirl of connectivity caused by conscious as well as involuntary shifts between listening intentions. A sense of continuous discovery: what am I really hearing? This kind of acousmatic listening, when cracked open and deprived of its "masks," is not necessarily an escape from language or vision. I prefer to see it as an attempt to turn the attention from *what* creates sound to *how* sound creates – from causality to intra-action.**

It is worth noting that composer and theorist Brian Kane points out that the story about how Pythagoras delivered his lectures from behind a screen and the rediscovery of the term "acousmatic" is a foundational fiction of the "Schaefferian tradition," which has been repeated by several different authors, but which may not be historically accurate. The very split between sound and vision is constructed in the French transcription of the plural Greek noun *akousmata*, which simply means "the things heard," into *acousmatique,* understood as de-visualized listening. In the Schafferian tradition, the composer works hidden from view and delivers his compositions to his attentive *akusmatikoi*. Kane claims that this focus on the "pure" listening experience causes an excessive division of the eye and the ear. Another historical source turns this relation on its head, asserting that the Pythagorean veil was not physically present, but should be understood as a figure of speech. The *akousmata*, or *sayings* in the Pythagorean tradition, were coded (veiled) statements, which served to preserve "the meaning of the discourse from the uninitiated or ignorant" (i.e. the *akousmatikoi*), whereas the genuine students of philosophy, *mathematikoi*, demanded demonstration and argumentation. Here the *akousmatikoi* is portrayed as a listening multitude that accepts doctrines without examining them. The veiling (as well as initiatory potential) turns out to be a function of language, not a splitting of the Master's body from his voice.[32]

Listening to acousmatic sounds, I would argue, is not a-visual (just as the reading of a text is not mute). Visual associations are not deleted; they may even be stimulated. The *akousmata*, the things heard, as mentioned in the previous chapter, are engaged in processes of meaning-making and mattering that involve physical bodies in particular situations, which are socially and culturally determined. In my work, I think of this as an *acousmatic* orality.

Schaeffer was not blind to these relations, he thought it possible to remove our habitual references. The practice of reduced listening was an effort to make conscious that which is unconscious. It involved strict mental training and re-conditioning. What I find

* Schaeffer founded the group in 1951 together with Pierre Henry. Its name changed to *Groupe de Recherche Musicales* in 1958.

** It is for this reason that I choose not to discuss Schaeffer's phenomenology: it points to interactivity between a subject and an object (resulting in a synthesis, the sound object), and a representationalist epistemology, rather than intra-action where diffraction and resonance are at work.

interesting, is that the reduced mode does not cause sameness, repetition, or certainty, but multiplicity and variation – an explosion of things heard. It inserts doubt as well as captures one's attention. Lilly too became captivated by the strange effects encountered in his many listening experiments (as mentioned in the "Prelude," he even tripped out).

It is noteworthy that with the advent of new aural technologies at the beginning of the 20th century, it is as if orality was, in a sense, rediscovered by Western scholars as they tuned in to a world of sound and encountered the human voice in a new guise: disembodied and storable as audio-documents. "Illiterate" cultures, which had previously been dismissed as undeveloped or characterized in largely negative terms, were reconsidered and reframed as "primary oral cultures," as studies of oral communication began to be carried out, as discussed in chapter 1.[33] The shift in communication and perception that new electronic media brought about was described by Walter J. Ong as an entry into a "secondary orality."[34] This did not necessarily imply a "return" to primary orality, but led to a reframing and reconsideration of the perception and status of language, speech, and voice respectively.* And, I would like to add, their relation to non-verbal and non-visual expressions.** Furthermore, new media had to grapple with the effects of distance, and in attempts to bridge it, produced new forms of intimacy and immediacy. Electronic media could to a large extent be said to function as immersive environments; we do not think of them as being there, and thus overlook their formative powers. Electronic media have become an extension of our nervous system, as media historian Marshall McLuhan famously put it,[35] in much the same way as the gymnastics bar becomes an extension of the gymnast's body, or the musical instrument an extension of the musician. In light of the new media landscape that has emerged, I find Kane's proposal fruitful: that we re-conceptualize *acousmatic listening* from a de-visualized listening to "a set of techniques for manipulating [or, perhaps, creatively reorienting] the senses," and that *acousmatic* could be understood as "a set of cultural practices concerning the relationship of seeing and hearing."[36] (Hear, hear!)

The Sounds of the Sea

In contrast to the chaotic noise of modern urban life that captivated artists such as Russolo and Vertov at the beginning of the last century, the ocean might seem to be a quietly majestic, mesmerizingly beautiful world – "the silent world," as Jacques-Yves Cousteau called it in the 1950s. But, this quiet majesty was about to explode with sound.

Due to the significance of submarine warfare during World War II, different systems for underwater listening, ranging, and target detection were developed in attempts to master the underwater domain. The ocean's strange and surprisingly noisy soundscape made the US Navy personnel of the 1940s uneasy. Among all the acousmatic beeps, pings, clanks, hammerings, and whistles they heard, which sounds were man-made and which were natural? How could they detect meaningful signals in the midst of all the noise? Ocean sounds were recorded, analyzed, and categorized (reminiscent of Schaeffer's endeavor, but in reverse since the Navy was desperately looking for the causes and meaning of the sounds) – and classified as top-secret. "Dozens of researchers with navy-loaned hydrophones applied themselves to the collective task of creating an exhaustive catalogue of the sounds of the sea," D. Graham Burnett writes in his brilliant book *The Sounding of the Whale: Science and Cetaceans in the Twentieth Century*,[37] where he offers an extensive and fascinating account of the history of cetacean research, while mapping out the entanglements and interplays between science, the whaling industry, military bioscience, politics, whale conservation, and environmentalism, not to mention human-animal relations.

Cetaceans (whales, dolphins, and porpoises) are descendants of mammals that returned to the sea some 50 million years ago and became fully adapted to a

* I'm aware of the critique directed at the Toronto School of Communication (that Walter J. Ong and Marshall McLuhan were part of), which points out that the concepts of "oral" and "literate" culture tend to be inscribed into a hierarchical and evolutionary framework that, despite other possible intentions, encourages the notion of orality as a primitive or undeveloped medium – or it allows for idealization where a "return" to orality will reconnect us with a lost, sensuous world. This is a binary perspective that denies the entanglement of writing and speech. That is why, in chapter 1, I presented these concepts in terms of a thought experiment. One should also bear in mind that orality and literacy (as well as performance) work on many levels: as communicative media, as art forms, and as tools for knowledge exchange. For a critique and overview of alternative terminologies, see Courtney MacNeil's entry "Orality," posted winter 2007, on the Chicago School of Media Theory website, accessed September 9, 2013, http://csmt.uchicago.edu/glossary2004/orality.htm

** The terms "orality," "oral culture," and "oral communication" tend to downplay the multisensory and simultaneous use of many media in favor of the *verbal*.

marine environment, which obviously is a very different habitat than the terrestrial. Their sense organs and ways of sensing are thus organized differently than for humans, and they communicate and orient themselves through sound. Quacks, squawks, wails, bleats, barks, moans, trumpeting, clicks, and buzzings – that is how the sounds of the bottlenose dolphin (*Tursiops truncatus*) have been described. Dolphins produce stereo sounds and can create three-dimensional objects in the water. They use signature sounds and thus call each other by "name." Dolphins navigate and explore features of their environment with the help of echolocation clicks using ultrasonic frequency ranges, just like bats. Thus, they use frequencies not audible to the human ear and are extremely rapid in their emissions. Furthermore, in water sound behaves differently than in air and can travel at a speed of 1500 m/s, compared to only 340 m/s in air. Depending on temperature, pressure, acidity, and salinity sound can travel for thousands of kilometers in the ocean. Underwater sound waves can become trapped in a sound "channel," called the SOFAR channel, and have been measured as traveling over 10,000 kilometers. Whales are thought to use the "channel" to communicate over large distances as they migrate.*

"As our listening technologies continue to develop, I expect we'll soon be able to hear the breathing of the planet from the aggregate rise and fall of billions of phytoplankton and zooplankton in the ocean as they move up and down in their daily cycle of life," says marine bioacoustic Christopher Clark, who has spent his life listening in on the oceans.[38] I myself have heard the sound of photosynthesis in small plants, but to listen to "breathing" on this scale would be, I imagine, mind-blowing. Would it be a sonic counterpart to the iconic NASA image of Earth – the god's-eye view of our planet from outer space? What kind of views and positions could be generated from such a listening? Would we even be able to hear it, as an untrained ear tends to hear either nothing or everything?

It took a musically trained mind to realize that whales "sing." Acoustic biologist Katherine "Katy" Payne had a major in music which proved to be crucial when she, in 1964, heard a recording of a humpback whale for the first time, handed to her by a Navy engineer, Frank Watlington. He was stationed in Bermuda and kept the recordings he had made of whales since 1953 secret out of fear that whalers would use the whale sounds to help locate their prey. Katy Payne is a self-educated bioacoustician and she worked closely with her then husband Roger S. Payne. She never earned a graduate degree in biology, as a result of having four children in four years, but she devoted herself to patient listening and analysis of the recordings made by Watlington. With the help of spectrograms, i.e. visual representation of frequencies, she traced melodies and rhythms – patterns that were not random, and wrote out scores. Together with her husband she would pioneer the study of whales through the discovery that humpback whales "sing" and compose together, and that their "songs" change over time. He wrote the scientific papers though, and is thus usually credited for the work they did together. The seminal study on humpback songs was authored by Roger S. Payne and Scott McVay, "Songs of Humpback Whales," and published in *Science*, 1971.[39] As it happens, it was the Paynes that would introduce Clarke to the singers of the sea in 1972; following that encounter the young engineer and former choir boy would go on to become a pioneer in the emerging field of bioacoustics.**

The oceans cover 71 percent of the Earth's surface and contain 99 percent of the living space on the planet, yet for humans at large they are a blind spot. In the age of Google Earth, it is easy to think of the planet as thoroughly mapped and photographed: every millimeter covered, seen, and made accessible by satellite cameras. These extended eyes, though, do not reach the depths of the oceans.*** If the discovery of the noisy

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* SOFAR stands for Sound Fixing and Ranging. The existence of the channel was verified in 1944 using underwater explosives and an array of hydrophones. See, for example, "History of the SOFAR Channel," on the Discovery of Sound in the Sea website, accessed August 30, 2016, http://www.dosits.org/science/soundmovement/sofar/sofarhistory/

** For an interesting discussion on how comparing whale sounds to human music can be misleading, in part due to the limited hearing capabilities of humans as well as reliance on recording technologies that are not sufficiently sensitive to capture the full range of whale frequencies, see Harris, "Whale," chapter 5 in *Scorescapes*. Harris argues, for example, in relation to Payne's and McVay's paper that the "choice of what information to remove from the spectrograms [and keep in the interpretative graphic tracings] resulted in an interpretation of the whale song that conforms to the basic parameters of Western musical notation." What is excluded Is the environmental context and how the emitted sounds behave and are spaced, in favor of notating the produced 'signals'." Harris also reflects on Payne and McVay's paper in relation to later studies of rhythmic patterns produced by sperm whales where an expert drummer was consulted, and to the sound work *Quasimodo the Great Lover* by artist Alvin Lucier (1970), which was inspired by the ability of whales to communicate over very long distances. I'm grateful that Brandon LaBelle pointed me to her dissertation in the autumn 2016, as it covers related fields of interest, though it was too late in my writing process to fully integrate it.

*** Though Google Street View continues their photographic quest and does now offer a peek into the oceans, as well as into the Amazon, and other remote or inaccessible locations.

world below initially spooked Navy personnel, what are the effects of manmade noises on life in the oceans?

The alarming and harmful amount of plastic waste in the sea has come to be increasingly recognized, as the effects have become ever more visible; furthermore, the particles and toxins are in our food chain. But, the invisible pollution caused by sound is equally devastating. Since the 1940s the level of sound has increased dramatically due to human activities. The Right Whale Listening Network website states, "Scientists estimate that the area over which right whales can hear one another has dropped by 90 percent. It's like trying to have a conversation on the median strip of a busy interstate."[40] Clark describes two major types of noise pollution. One is caused by shipping traffic and it is doubling every decade. The other is caused by seismic air guns used in exploration for oil and gas – an activity that continues nonstop for weeks and months at a time, causing veritable storms of noise spreading through the oceans. Clark calls this an "acoustical bleaching of the oceans, a human-made cacophony that can tear apart the social networks of whales," severely threatening survival since their communication is interrupted and silenced by the noise. Communication here means social bonds, navigation, and mating – whales live in and through sound.* The extreme loudness of it all is difficult to comprehend: it causes deafness and tissue rupture. In addition to this, Navy sonar exercises and underwater detonations have been shown to cause mass strandings of whales.[41]

Before the 1950s very little was known about ocean life. But, when the deep blue started to "speak," and scientists started to listen, attitudes about sea life changed. Cetaceans in particular came to be seen with new eyes. In the period of 1960–75, whales and dolphins went from being considered beasts – useful as an industrial commodity hunted to near extinction for oil and meat, to being seen as intelligent beings with great symbolic value – and as possible role models for a new peace-loving human (Make Love, Not War). The animals rose up out of the sea, taking on mythical proportions in the form of ancient, sacred beings. In this process, cetaceans were idealized and endowed with both healing and telepathic abilities, while aggressive behavior was deemphasized.[42] This shift from beast to sacred can partially, and paradoxically, be explained by the close link between cetacean research and military research on marine bioacoustics in the 1940–50s. In other words, the fact that Lilly's dolphin research at that time had close connections to the military is not surprising.[43]

As earlier research on whales had been made possible by the whaling industry, when researchers were allowed to follow whaler's trails and dig into the carcasses together with them, a new form of marine research was developed in relation to underwater warfare. In 1960 military studies confirmed the speculation that the bottlenose dolphin uses sound to navigate, just like submarines. The fatty melon on their forehead seemed to serve as an acoustic lens. But, if cetaceans were sophisticated makers and analyzers of sound, did this mean that they also could communicate with each other? Did they have a language?** In the 1960s these questions connected the emerging field of marine mammal science, or cetology, to information theory, as well as to linguistics, and – quite surprisingly – to outer space. Similarly, astronomers of this time turned their extended parabolic ears to space in an attempt to detect signals sent from other intelligent civilizations.

One of the celebrities who visited Lilly's laboratory in Nazareth Bay was the astronomer Carl Sagan. Sagan and his colleague Frank Drake were working in the newly formed research field, SETI (Search for Extraterrestrial Intelligence). To his surprise, in 1961 Lilly was invited, together with a prominent flock of researchers, to a conference arranged by NASA's Space Science Board.[44] No official report of the conference was published as the subject (What are the conditions required for establishing contact with other worlds?)

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* Clarke discovered these sound pollution issues in the 1990s when he was one of the scientists who gained access to the U.S. Navy's underwater sound surveillance system (SOSUS) to study the migration and singing of whales. The sound pollution effects not only cetaceans but also fish, shrimp, and squid. Clark stresses that sound pollution can be mitigated. The noise of ship engines can be dampened, and there are alternatives to seismic blasting, but few are aware of the problem.

** As John Durham Peters writes, at this time "whales and dolphins became subjects of communication." In his book *The Marvelous Clouds* from 2015, Peters devotes a chapter to cetaceans and the ocean as (a species- and habitat-specific) medium, to consider how we might think about media, bodies, and beings in relation to the role of technology. Dolphins, we might note, have adapted their bodies to an aquatic milieu where humans must technologically extend and protect their bodies in order to survive. Peters gives an account of the entangled subjects I briefly cover in this section (even Lilly appears in his thought experiment), though he views them from a slightly different perspective and, at times, in more detail. His book was suggested to me in 2016, and I can recommend it to anyone interested in digging deeper into these subjects and reflections on what it might mean to have techniques but no technologies, to communicate non-simultaneously in an aquatic environment, and to engage in auditory transmission and storage where durability is non-existent. He also offers insight into gendered assumptions prevalent among scholars of technology.

was not yet considered scientifically legitimate. This was a problem Drake had worked on for several years and in 1960 he had initiated the first systematic search for extraterrestrial intelligence, "Project Ozma," at the National Radio Astronomy Observatory in Green Bank, West Virginia.* (The use of radio astronomy represented a shift from visual to auditory methods in the search for intelligent life.) It was here that the gathering took place and Lilly was invited to contribute to the discussion of how one might communicate with aliens, with the idea that engaging in communication with dolphins could prepare us for an encounter with non-human intelligence. Because, as Lilly pointed out: if we are unable to communicate with, or even recognize, another intelligent species on our own planet, how could we possibly communicate with an alien? This issue prompted NASA to contribute funds to CRI's research. Tipsy on champagne and inspired by Lilly, the conference participants dubbed themselves as belonging to "the Order of the Dolphin," and they were later sent tiepins imprinted with a dolphin emblem inspired by an ancient Greek coin.** It would be eleven more years before Pioneer 10 was sent out into space with a message from humanity, composed by Carl Sagan and Frank Drake in collaboration with artist Linda Salzman Sagan. Humanity's next message, sent into space in 1977 with the space probes Voyager 1 and 2, not only included visuals, but also a gold-plated record with sounds. One of the tracks contained songs of humpback whales. By then the songs had become smash hits. Roger S. Payne released *Songs of the Humpback Whale* as a popular album in 1970 at CRM Records, containing recordings made by Fred Watlington, as well as Kathy Payne and himself. The album would make the Billboard 200 charts in 1971 and stay there for eight weeks. The release was accompanied by the publication in *Science* of the scientific study co-authored with Scott McVay.[45] Furthermore, in 1979 National Geographic Society printed 10.5 million abridged copies of *Songs of the Humpback Whale* for insertion in the January issue of its magazine.

Cosmos, consciousness, and cetaceans come together here in the most unlikely ways. It is not difficult to see what triggered Ian Watson to write the novel *The Jonah Kit*, published in 1975 and winner of the British Science Fiction Award. Watson weaves an intriguing story around the three themes that captivated the imagination at the time: the vast unknown in the oceans, the vast unknown in outer space, and the vast unknown of our own minds. If military research, including Lilly's early work, brought the beasts of the ocean to the surface so to speak, Lilly would also play a major role in re-casting them as peaceful, spiritual, and ancient intelligences – at the same time revealing the monstrous treatment of the animals in the name of research. Lilly's hyperbolic speculations reached the general public through newspapers, interviews, his own popular science writing (especially the books *Man and Dolphin* from 1961 and *The Mind of the Dolphin* from 1967), and through science fiction literature and films inspired by his work. His ideas kindled the imagination of the environmental movement, anti-war activists, and New Age figures, among others. Lilly could be said to personify many of the modern myths and popular beliefs of the 1960s – which are not just a product of that decade alone, but emerged as a result of scientific, cultural, and conceptual transitions taking place in the West from the 1940s onwards.*** Following his trail it is often difficult to tell fact from fiction.****

I myself have certainly been colored by this rich cultural milieu – the compost, of those decades. Born in

* How does one begin to describe if one can't see who or what one is speaking to? If one does not share the same language, and no interpreter is available, if one cannot even assume that the other sees the world in a similar way, or – in fact – does not even see the same world? Can one communicate at all if no shared references exist? To appreciate the difficulties involved in deciphering extraterrestrial signals, Drake created a coded message that was sent to a group of scientists from different fields. Only one managed to decode it.

** During the conference, Melvin Calvin was awarded the Nobel Prize in Chemistry, an event anticipated by the organizer J. P. T. Pearman who had smuggled in three celebratory bottles of champagne. Calvin had the tiepins made and sent one to each participant. See Stuart Baur, "Kneedeep In the Cosmic Overwhelm with Carl Sagan," *New York Magazine*, September 1, 1975.

*** See, for example, N. Katherine Hayles' intriguing book *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: University of Chicago Press, 1999). Hayles traces how dominant cultural perceptions have developed and transformed since the 1940s, and shows how central concepts have been played out and explored in science, as well as in science fiction literature, thus revealing the vast influence of cybernetics and informatics. Lilly is not the focus in Hayles' book, but she beautifully orchestrates a multitude of seemingly disparate themes that relate to Lilly as well.

**** See, for example, scientist Leo Szilard's short story *The Voice of the Dolphins*, written in 1960, which departs from Lilly's work; the blockbuster film *Flipper* by director Ivan Tors from 1963 that gave Lilly a credit line as well as research support; the novel by Arthur C. Clarke, *Dolphin Island: A Story of the People of the Sea* from 1963; *The Listeners* by James E. Gunn from 1972; the American science-fiction thriller film *The Day of the Dolphin* from 1973 directed by Mike Nichols; the 1980 science-fiction horror film *Altered States*, directed by Ken Russel, where we meet a scientist who conducts experiments with hallucinatory drugs in an isolation chamber; and the Sega video game *Ecco the Dolphin* from 1992. In Ted Mooney's novel, *Easy Travel to Other Planets* from 1981, a woman named Melissa and a dolphin called Peter are the main characters.

1972 in Sweden, I am a child of television and socialism, New Age and National Geographic, Burroughs, punk and Hiroshima, animal rights and post colonialism, individualism and grassroots activism, cybernetics and magic mushrooms, identity politics and Monty Python, post structuralism and Sci-Fi, AI and Greenpeace, Batman, Wittgenstein, the Internet, drones, and feminism. Yet, the fascinating anecdotes that continue to burst forth from this milieu have a suspiciously familiar smell. The same old master narratives seem to be on repeat. What do I expect to find on the audio tapes through listening to the voices produced by Lilly's disciplining apparatuses in the wet lab, where motherly women are portrayed as having special abilities: being patient enough to communicate with children and other (noble) savages? Yet another circus trick in sea-land? A fascinating performance of domesticated natural wonders; or should I say domestic violence? A refreshing take on these matters is offered by Mette Bryld and Nina Lykke in *Cosmodolphins*, where they rewrite some of the master narratives of this time by looking at the interconnections between space flight, military use of dolphins, New Age spirituality, and dolphin mythology, while also telling the Soviet version of the Cold War story. Unfortunately, I was unaware of their book when browsing through the archive at Stanford.*

I estimate that there were 26–28 dolphins involved in the experiments. At least fifteen of them lost their lives between 1955–1968, probably more. The first eight animals were referred to simply as numbers (1–8). As for the others, it is possible to find traces of names in handwritten notes on the boxes that hold the magnetic tape reels: Lizzie, Baby, Elvar, Tolva, Chee-Chee, Crane, Stenella, Pam, Peter, Sissy, Baby Dee, Mother, Peanuts, Grandma, Typee, Cookie, Jobe, Lady, Notch, and Pequot. Were these last three dolphins the ones who were set free in the ocean?

Christopher Clarke was amazed at the jungle of sounds and singers he heard the first time he lowered a hydrophone below the ice at Point Barrow, the northern tip of Alaska. He also realized he was not alone in listening in on the world below; the local Inuits already knew of the sounds. "In their culture, they put the end of an oar up to their jaw and put the paddle into the water, and they listen."[46] Today, underwater listening stations are spread all over the globe. Originally installed for military use, some have been made available to civilian researchers such as Clarke. These sonic "telescopes" are used for monitoring whales and marine life, detecting volcanic activities and earthquakes, and observing the effects of sound pollution. Listening below the surface has created new possibilities for observation, but also new possibilities for surveillance.**

In a field where seeing used to be everything, the interest in animal communication has given rise to a culture of listening among scientists, especially biologists. Medical doctors encountered something similar in the early 1800s when the stethoscope made it possible to study the living, breathing body without cutting it open.[47] Technological extensions of the human ear and new recording technologies have been crucial for this auditory turn – in the sciences as well as the arts – where attention is brought to the acoustic environment and the act of listening, forming new interdisciplinary fields such as acoustic ecology. A forerunner in this field is composer and writer R. Murray Schafer who initiated ecoacoustic studies and the World Soundscape Project (WSP) in the late 1960s at Simon Fraser University in Burnaby, Canada.*** In his book *The Soundscape: Our Sonic Environment and the Tuning of the World* (first published in 1977) Schafer urges us to hear the acoustic environment as a musical composition, and claims that we hold responsibility for it: we can improve it or destroy it. He emphasizes the value of listening and stresses the need for a "sonological competence."[48] Instead of focusing on reduced listening as Pierre Schaeffer did, Murray Schafer's attention is contextual

* Their study, from 2000, came to my attention late in my research (2016) and it is unfortunately not mentioned in Burnett's encyclopedic book *The Sounding of the Whale* from 2012.

** Starting in 1949, the US Navy developed an underwater sound surveillance system (SOSUS). In 1962 their listening stations had a global reach and later they were supplemented by surface-based listening posts and integrated into the larger Integrated Undersea Surveillance System (IUSS). The program was declassified after the Cold War's end, in 1991, and made available to civilian scientists, such as Clarke, for whom the system serves as an acoustic observatory. But, the *Wall Street Journal* reported on October 24, 2014 that "in recent years, the U.S. and its allies have reactivated or upgraded elements of the system in Asia," the location of which remains classified. This is complimented by underwater drones in a mobile networked system. See Jeremy Page, "Underwater Drones Join Microphones to Listen for Chinese Nuclear Submarines" accessed January 3, 2016, http://www.wsj.com/articles/underwater-drones-join-microphones-to-listen-for-chinese-nuclear-submarines-1414166607

*** The World Soundscape Project (WSP) was established as an educational and research group at the University, and Shafer collaborated with a team of composers and students, including Barry Truax and Hildegard Westerkamp, to study the acoustic environment and the impact of technology on it. From this project, the interdisciplinary field of acoustic ecology grew, which is sometimes called ecoacoustics or soundscape studies. It is a discipline that studies the relationship between human beings and their environment as mediated by sound technologies.

and environmental. At a time when the acousmatic situation (the split between a sound and its source) was still a relatively novel experience, Pierre Schaeffer described its effects as having an initiatory potential. In turn, some decades later, Murray Schafer called this split "schizophonia,"* invoking a sense of living in a pathological and "nervous" condition.[49] Schizophonia signals changing relations between bodies, voices, and environments; and, for Schafer, the sensory alienation experienced by urbanized humans who suffer from an overabundance of acoustic information, from sound overload. In contrast to Pierre Schaeffer, the "initiatory" potential of listening resides in becoming aware of the existing soundscape as a living environment of which we are part. The term "soundscape" could be said to imply a specific mode of listening where one is not put at the center or addressed as audience with a performance delivered for you. Rather, one is asked to be attentive to a specific acoustic and relational field.

Reducing the Noise (Earth Coincidence Control Office)

In the archive, I follow Lilly's increasingly extreme attempts to eliminate noise and external influences in something that appears to be a process of liberation on several levels. There seemed to have been at least two reasons why Lilly left NIMH in 1958 to start his own institute. One was that he felt that the agency tried to take control of his research by classifying it. The other was the peculiar things he had experienced while studying sensory deprivation. Similar studies of monotonous stimulation, carried out in the name of exploring human behavior under extreme conditions, had often led to mental breakdown.** But the aim of Lilly's studies was partly different: he wanted to test two conflicting hypotheses that were dominant at the time about the mind and brain. Does the brain need stimulation from external reality for consciousness to remain active? Or, is the origin of consciousness to be found in the brain's cell circuitry itself? In short: would consciousness "shut down" if external physical stimuli were to be reduced to the lowest possible level? To investigate this, he invented a technique where the subject was suspended in water, and not merely physically isolated in a dark and silent cubicle as in earlier experiments. At NIMH Lilly found the perfect conditions, a sound proof building with a pool. In these early experiments Lilly developed a respiratory mask, which he tested together with different floatation devices. Lilly later developed a more sophisticated flotation environment which made use of Epsom salt (magnesium sulfate) in which one could float so easily on one's back that no mask was needed. These floatation tanks were developed for commercial use in the 1970s and used primarily by spas for relaxation.

Through the isolation tank research, Lilly's interest in the relationship between the mind and the brain intensified, ultimately leading to his work with dolphins. In an interview from 1983 Lilly recounts:

> One day while I was floating in the tank at NIMH, I thought, "Gee, wouldn't it be great to do this twenty-four hours a day!" When I mentioned it to a friend, he said, "Well, try the dolphins." So that's how I started to work with dolphins. … They're also more spiritual, since they have more time to meditate. Try the isolation tank and you'll see what it's like.[50]

In other words, Lilly equates what it is like to exist as a dolphin with his own experience of floating in water, and draws the conclusion that they are meditative beings. Additionally, in dolphins Lilly found a brain big enough to potentially accommodate intelligence, even consciousness – a brain possible to penetrate and map as he had done in his earlier research with cats and monkeys. Two different interests merge together here: exploration of the brain and exploration of consciousness.

* "Schizophonic" can be derived from Greek *skhizein*, "to split," and *phōnē*, "sound," "voice."

** Scientific research on this topic was initiated by a group led by psychologist D. O. Hebb at McGill University in Montreal in 1951, but it had been practiced long before that in prisons in the form of solitary confinement. The Eastern State Penitentiary in Philadelphia pioneered solitary confinement in the U.S. The first experiments were carried out in the 1800s in tiny, monastic cells. In the 1840s Charles Dickens described this long-term isolation as ghastly and torturous, not offering penitence or "healing" as the name of the facility implied. Despite extensive critique, the practice has seen a widespread revival in the United States following the construction of "Supermax correctional facilities" in the 1980s and 1990s. The research at McGill began with an exploration of brainwashing. The research subjects were subjected to a monotonous environment, much like an isolation cell (technically speaking complete sensory deprivation is not possible). Quite quickly unusual sensory effects began to occur. This caused anxiety, panic, and even psychosis. For more on the Eastern State Penitentiary, Charles Dickens, and Supermax facilities, see Brian Mann, "How Solitary Confinement Became Hardwired in U.S. Prisons," Isolating Inmates: Solitary Confinement in the U.S., on National Public Radio, Aug 23, 2015, accessed August 23, 2015, http://www.npr.org/2015/08/23/432622096/how-solitary-confinement-became-hardwired-in-u-s-prisons.

I look at a photo of the respiratory mask Lilly developed for the first floatation experiments. Funnily enough it reminds me of a dolphin's head. It occurs to me that parallel with the desire to cut open, map, break through, systematize, and to elucidate, also runs a desire to be radically transformed – to undergo metamorphosis.

Lilly used the pool himself regularly from 1954–1958, partly for self-analysis as he regarded the sessions in the tank to be a continuation of the psychoanalytic work he had done between 1949–53.* But, he also saw it as an opportunity to study the brain and the mind from within rather than probing it externally with electrodes. It was quite clear from his very first experiments that the brain certainly did not shut down, and that the isolation and sensory deprivation resulted in a rather frightening experience. After intense training to overcome his initial anxiety, Lilly was able to enter into altered states where he left his human body behind. For Lilly, this was transformative. Nevertheless, for many years he was careful about what he said publically regarding these personal experiences.

In the last scientific paper on the subject of isolation that Lilly wrote together with Jay T. Shurley in 1961, they describe the early experiments where research subjects floated nearly upright in a pool with their faces down in the water, connected to air hoses through a custom-made respiratory mask that covered one's entire head.[51] In this experimental installation a set of rigorous procedures was followed, which among other things included the use of a "safety man," a person who had himself experienced this special sort of isolation which can give rise to "projected imagery, projected sounds, doubling of body parts, emotional states of euphoria or anxiety, etc." The safety man's role was to "indoctrinate" the research subjects to allow them to experience whatever they might encounter, but to avoid coloring their expectations about what might or might not occur. They wrote:

> It is our conviction that the range of phenomena available to the normal human mind is much greater than "society" will apparently permit or accept; consequently, the safety man becomes the intercessor between the individual and the community. As such, he grants the subject permission to experience whatever he can experience.[52]

In the paper, Lilly and Shurley attempt to suggest that positive and therapeutic effects can be experienced which are relaxing and enjoyable in a situation that otherwise would typically be associated with torture. Lilly believed that much of the literature on sensory deprivation wrongly concluded that it caused stress and anxiety. It was not the isolation itself, but the external circumstances that led to these negative experiences. That is, Lilly implied, the many and exclusively negative results reported by other researchers were due to the research subjects being programmed with negative expectations, by, for example, presenting participants with a "panic button" while introducing the experiment. But, Lilly writes, with repeated exposure and practice one can learn to better control and be aware of the unusual effects of isolation. Hence, the importance of the safety man who can guide participants into the unknown. A role, it occurs to me, not entirely unlike that of a shaman during a drum journey.**

At this point, 1961, Lilly has trained intensively for many years and has learned how to control various states of consciousness. Eventually Lilly reaches what he calls the "absolute zero point"; the point at which he can leave his physical body behind. This is how he describes his experience:

> John went through his now more-or-less standard procedure of relaxing every muscle in his body while floating in the water. He then relaxed his mind and let go of the residues of the day's activities. Quite suddenly he was in a new space, a new domain. He left his human body behind. He left his human mind behind. He became a point of consciousness, of awareness, in an empty, infinite space filled with light.[53]

This solitary confinement offered the most profound relaxation and rest that Lilly had ever experienced. Lilly had the modernized version of the floatation tank installed near the indoor dolphin pool at CRI, a vessel-like container with a lid that was filled with salt water. He used it regularly. He simply stepped in – naked, and floated completely relaxed on his back in the dark and silent chamber. Later, around 1965, he would add LSD and Ketamine to the sessions as well.

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* Lilly's floatation sessions could be considered what Chion calls "deconditioning exercises," a phrase Chion uses in reference to Pierre Schaeffer's practice of reduced listening.

** These experiences helped to guide Lilly's first LSD-trip in the mid-1960s, where a therapist acted as a "safety man." He describes his own experience of using LSD in Lilly, *Center of the Cyclone*, 9. At this time LSD was not illegal and Lilly had access to it, as well as permission to use LSD in his research.

What does he encounter when he is finally freed from his body? Acousmatic voices. Lilly would later describe a transformative experience at NIHM in 1958 as the "Conference of Three Beings." The beings represented an organization that Lilly called "Earth Coincidence Control Office" (ECCO).* They strengthen his own conviction that it is time for him and his wife Mary, who he has worked and lived with since he was 21, to part ways. They encourage him in his plans to carry out dolphin research at his own independent institute, as well as the use of LSD. Afterwards, they ensure that chance encounters lead him in the right direction. Lilly simultaneously tries to articulate his experiences for himself without censorship and to rationalize them, searching for explanatory models that make sense within his scientific field. In the end, he states that no matter what model he uses to understand his experiences, all models are belief-systems and he formulates what will more or less become his slogan later in life: "In the province of the mind, what one believes to be true is true or becomes true." And, he says, these beliefs should be transcended.**

If at the outset of his career Lilly believed that the brain contained the mind, he was now in severe doubt. In Lilly's view the mind did not seem to need body or brain.

Sonospheric Communards

When I visited Stanford University in 2013, I was six-months pregnant which made me extremely aware of the fact that I was a body, well, actually two bodies. California's June heat and the long stretches of space in Palo Alto surely added to that sensation. I was slow and relied heavily on regular, hearty meals, as well as on public transport even for short distances. Entering the cool, spacious room of the Special Collections and University Archives was a delight, and I soon began to fall in love with the subtle rituals of archival life: present your ID at the front desk to confirm that you have been allowed to enter; bring only a pencil and a computer, all other belongings shall be placed in a locker; you may not talk, eat, or use your phone; you may only request five boxes per day; you shall use white gloves when handling the original documents. The face of an old clock overlooked the room. Every day at noon automatic sun blinds rolled down to shade the enormous windows, their descent marking the passage of time. I could feel the baby tumbling in my belly.

I'm a metronome, my body and bones function as an instrument and amplifier where a continuous pattern of strong and weak beats – heartbeats and breathing – is produced. This is womb music, vibrations transmitted by amniotic fluids to the ear and the skin of the fetus. The first waltz is created by a muscle:

LUB-dub-( ) LUB-dub-( ) LUB-dub-( ) LUB-dub-( )

The fetus literally floats in sound, touched by voices, rhythms, noise; the vibrations envelop not only its ears, but resonate through its bones and skin. My speech is heard in the womb as melodic patterns where consonants disappear, accompanied by gurgling from the intestines, swallowing, digestion, and the sound of blood flowing through the umbilical cord. The fetus, six months old, has already started to be able to distinguish my voice from others, speech from music, and it attunes itself to the prosody of the Swedish language. The uterus is all but silent. Its' acoustic environment creates a template for recognition, forming emotional patterns tied to pulse, variations of timbre, frequency range, and amplitude. The human mind is a musical mind, born in and from a tactile, acousmatic situation.[54] It is just recently that medical professionals and researchers have started to pay attention to the importance of the auditory environment that preterm infants encounter in neonatal intensive care units, and how it can be improved – both in terms of noise and voice.[55]

Etymology is playing tricks on me, the Greek word for womb and vagina is *delphys*, closely akin to the word *delphis* (dolphin). Delphi was the place where the oracle Pythia gave her body over to voices.

Chion speaks of the connecting and uniting power of the voice, and suggests that for the newborn child, the mother's voice serves as a new (acoustic) umbilical cord after the physical one has been cut; her voice spins what he calls an umbilical *web*.[56] Presence and

* This was a direct exchange of thoughts, feelings, and meaning that was communicated without words, which Lilly chose to represent in the form of a dialogue with the three "Beings." Lilly, Scientist, 109–115.

** The complete quote reads: "In the *province* of the *mind*, what *one believes to be true* is *true* or *becomes true*, within certain limits to be found experientially and experimentally. These limits are further beliefs to be transcended." This phrase appears in interviews, on websites, in books, and even in scientific publications: "The mind is the only province of science in which what one believes to be true is, or becomes true." Lilly and Shurley, "Experiments in Solitude."

continuity are maintained by the voice, even if the mother suddenly disappears out of the baby's range of sight or touch. The baby's own voice has the power to call her back. The child is enclosed in the maternal voice, as in a "sonorous envelope," an oceanic sense of union. Here, Chion draws on psychoanalysis and quotes Denis Vasse as well as Didier Anzieu, who introduced the notion of the sonorous envelope.[57] According to psychoanalytic film theory, a similar oceanic effect, where the border between one's body and the environment seems to dissolve, can be evoked by music or cinema. It has even been claimed that the spectator, immobile and in the darkness, enters a "state of artificial regression."[58]

Chion describes the sonorous envelope as both a no-place and the all-around: somewhere not yet localized or distinguished. This sense of oneness that sound and listening can trigger, could also be experienced negatively as if being contained or trapped. The sonorous envelope is thus at once fluid and enclosing – a second skin that either protects or suffocates. Drawing from his own idea of a sonorous envelope, Anzieu theorized the emergence of a psychic counterpart, the "skin-ego," a mental image and an important stage in the child's development where the skin emerges as a container for a psychic being.

The desire, as well as horror, evoked by these ideas of the maternal voice and of the mother, have been reinforced and exploited in cinema. Chion's "umbilical web" conjures the image of the mother as spider, as devourer. In Hitchcock's *Psycho* for example, the voice of the mother plays a crucial role. In Ridley Scott's *Alien*, "mother" (MU/TH/UR 6000) is the artificial intelligence that speaks and operates the interstellar ship where Ripley first encounters the alien being, which bursts forth (is "born") through the ribcage of one of the crew members. In contrast, art historian Kaja Silverman examines the sonorous envelope and the female voice in terms of a *fantasy*, and discusses different versions of this maternal voice fantasy as it is played out in cinema as well as psychoanalysis – especially in relation to a male subject.[59] In this essay I dwell neither on phenomenology nor psychoanalysis with its focus on the subject. Rather, like Serres, I am more interested in the body as a part of a greater ecology, or milieu. I will return to voice and cinema in chapter 4, but I leave the question open as to whether the umbilical voice-web spun around the infant is de facto a primal experience, or a fantasy that we reproduce. I find both possibilities intriguing. As both concepts are alive and active in our collective imagination, they can be made use of and exploited, and are therefore fruitful ground for exploration. In contrast to the image of being trapped inside, Silverman points out that the voice of the mother is also "the first voice-over, and the first voice-off,"[60] as it ruptures this close(d)ness and points beyond: a voice that names, and narrates. From this point of view the figure and the voice of the mother are not identical to the sonorous envelope, the very "skin" that contains you, but someone who walks alongside.

"In the wall-less house of sounds, humans became the animal that come together by listening. Whatever else they might be, they are sonospheric communards," Sloterdijk writes in *Bubbles*.[61] We become members of this sonic commune not necessarily through speaking, but through listening to the sounds of our environment as well as to the sounds we jointly make. Sound as shelter and dwelling. With his "spherology" Sloterdijk attempts to develop a spatial vocabulary of interpsychic space and a theory of relationality, or a "theory of the shared inside." Not surprisingly, he refers to the mother-child (and fetus) relationship as a prototype for his theory, arguing that the model of subjectivity emphasized in a Western philosophical tradition since the Enlightenment disregards a primary intimacy, instead prioritizing a "cerebral individualism" (the belief in a solitary, autonomous brain).[62] Though spatially oriented, it strikes me that Sloterdijk's theory is guided by a sonic sensibility. It is a sonic spatiality he brings forth, which serves to avert the gaze and its claims on the subject matter. He sees the imago-oriented perspective of psychoanalytic relationship theories as deeply problematic, and writes that it was "taken to its extreme by Jaques Lacan in his legendary theorem of the 'mirror stage as formative of the ego function' published in 1949,"[63] as if a sense of self only can be gained through seeing oneself as an image.* Instead Sloterdijk proposes that:

> Anyone seeking alternatives to an existence in stoical self-sufficiency or individual self-arrest in front of the

* Mladen Dolar seeks to highlight the role of voice and listening in Lacan's work, observing that, "Lacan was later to isolate the gaze and the voice as the two paramount embodients of *objet petit a*, but his early theory has given an unquestionable privilege to the gaze as the paradigmatic instance of the Imaginary." Dolar, *Voice and Nothing More*, 39. Since I have chosen a new materialist and performative approach, I will not venture into psychoanalysis here, but for those interested I can recommend Dolar's book.

> mirror would do well to recall an epoch in which all reflection on the *condition humana* was pervaded by the evidence that between humans, whether in familiar proximity or on the open market, a restless play of affective infections was in progress. Long before the axioms of individualistic abstraction established themselves, the psychologist-philosophers of the early Modern Age had made it clear that the interpersonal space was overcrowded with symbiotic, erotic and mimetic-competitive energies that fundamentally deny the illusion of subject autonomy.[64]

Was it this overcrowded, infectious, interpersonal space that Pythagoras (as he is depicted in the Schaefferian tradition) tried to eliminate through separating himself from his disciples? Or, was this acousmatic move intended to elevate his status to that of the more-than-human? To, even, stir desire?

Language and Its Consequences

Sloterdijk echoes what poet Anne Carson writes in *Eros the Bittersweet* concerning an awareness of edges and their dissolution, which Carson connects to the use of a new technology – the written alphabet – and with Eros. "Eros is an issue of boundaries," she writes. "He exists because certain boundaries do."[65] The experience of desiring love is a paradoxical condition of losing oneself and finding oneself at the same time. Eros is lack, a desire for that which we never knew we were missing, which triggers a tactics of triangulation, as Carson defines it:

> For, where eros is lack, its activation calls for three structural components – lover, beloved and that which comes between them. They are three points of transformation on a circuit of possible relationship, electrified by desire so that they touch not touching. Conjoined they are held apart. The third component plays a paradoxical role for it both connects and separates, marking that two are not one, irradiating the absence whose presence is demanded by eros.[66]

Writing too is an issue of boundaries. With writing comes an intensified awareness of the *self*, the bounded entity both appears and dissolves in writing. With writing, as with desire, arises a heightened awareness of that which separates. This awareness of edges can be seen in ancient Greek lyric poetry, and Carson asks: "Is it a matter of coincidence that the poets who invented Eros, making of him a divinity and a literary obsession, where also the first authors in our tradition to leave us their poems in written form?"[67] This is the beginning of Carson's inquiry into writing and its consequences. Like Walter Ong, who I've previously mentioned in relation to orality and literacy, she claims that, "reading and writing change people and change societies." Language, as well as the senses, are radically altered and reoriented in the process of alphabetization. As Carson says, "A written text separates words from one another, separates words from the environment, separates words from the reader (or writer) and separates the reader (or writer) from his environment. … written words project their user into isolation."[68] From this isolated position, the textual practice of separation could be said to be projected back onto reality.

In Greek lyric poetry Eros is described by metaphors such as melting, roasting, crushing, piercing, or bridling. In this writing Carson traces "a sensibility acutely tuned to the vulnerability of the physical body and of the emotions or spirit within it."[69] And, she says:

> As an individual reads and writes he gradually learns to close or inhibit the input of his senses. … Literate training encourages a heightened awareness of physical boundaries and a sense of those boundaries as the vessel of one's self. To control the boundaries is to possess oneself. … When an individual appreciates that he alone is responsible for the content and coherence of his person, an influx like eros becomes a concrete personal threat.[70]

Here, submerged in a highly literate culture, and while speaking of the effects of listening, I cannot help but think that sound recording technologies (this new form of writing) makes us re-live the ancient Greek experience, but in reverse. In listening we yet again become acutely aware of boundaries, edges, and their dissolution. Listening awakens Eros, that daemon of the in-between.* Infected and "overcrowded with symbiotic, erotic and mimetic-competitive energies," we are struck and alarmed by this acute vulnerability.

* In Plato's Symposium, the priestess Diotima situates love as metaxu, "in-between." Eros represents an intermediary, a connecting distance.

That which seems fixed, clear, and controlled turns to honey – sticky and viscous, when the "limb-loosener" Eros is at work.* My skin yearns to be touched.

Michel Serres proposes that thought begins and a sense of self forms when skin meets skin. And, in his attempts to understand the senses as fundamentally mingled, he suggests that the skin is the place where the "I" is decided – through contact, pressure, touch. Our senses do not operate on different frequencies, in separate channels; rather, they are discrete variations, knots, and sites of exchange.** Serres writes, "Each sense, originating in the skin, is a strong individual expression of it."[71] At the same time the skin receives all the senses together, as if the skin is a global sense, through which all the senses (in themselves mixed) flow together. In turning one's attention to one sense organ alone, certain aspects could be said to be amplified, yet still perceived in and through the global skin-sense. Contrary to Anzieu then, for Serres the skin is neither a container, nor a surface, it is a mingling of world and body, or a "mutual touching."[72] The sonorous involves touch and being touched; sound waves reverberate in space, in and through our bodies. Being-in sound is always already a being-outside. This is also the paradoxical condition of the skin, as well as the state of breathing and of voice.

Lilly's skin was immersed in water, and when floating in his vessel, in the salty, body temperature water, he felt his physical boundaries dissolve. Away from the maddening crowd. What was he doing in there, in the darkness of his floatation tank? Is this a simulation of the brain in a vat? Or, is it an American version of Heidegger's hut, a hyper-hut, where some real thinking can be done – not in the "provinces" as Heidegger phrased it, but at the very "frontier"? Or, do we yet again witness a staging of the age-old Cartesian quest of going inward and giving up all relationships in search for pure knowledge that can be brought back to society and presented to other human beings "out there"? Is Lilly's vessel a Pythagorean screen creating not only new phenomena to be studied, but also new conditions for observation? Although extremely monotonous, his set-up didn't delete sensorial input; the skin becomes utterly sensitive in this watery condition. Rather than sensory deprivation, we might call this sensory estrangement. In this acousmatic situation, the things heard (*akousma*) turned into an *ECCO*. In Lilly's artificial womb he became a vessel for extraterrestrial voices.

Serres is writing in reaction to the split between sensory bodily experience and cognition, where the body is separated from both knowledge and language. Serres speaks of the "dominant tongue," that is, the language of reason and analysis. But he also describes a second "tongue," one that is at home in both differentiation and blending and operates through confusion, not as in being lost but as a "pouring together."*** This is the art of fermentation and transformation: as in cooking, or metallurgy where alloys are forged. The mixture, the mingled, the knot (the entangled) marks the limits of analysis; the solutions which are the result of this confluence cannot be separated again – that would be to destroy them. He writes:

> We know how to build machines that talk, we do not know how to build robots that can drink and taste. A tongue can become artificial, intelligence frequently does, but sapience never does. It is in this sense that an automaton differs from *homo sapiens*: it has the first tongue but not the second.[73]

And, speaking of the consequences of language, Serres adds:

> Language is threefold dominant: administrations rule through the performative dimension of the word; the media dominate through its seductive dimension; the sciences enjoy mastery through its truth dimension. Trismegistic language produces an abstract dominant class, drunk on codes: legislative, computerized, rigorous, thrice efficient, and in this manner producing a whole world.[74]

This is a world of statues and "orthopedic" forms of discourse that disregards mingled bodies anywhere they are encountered. Statues act as mere administrators. They "suppress all objects in favor of words" and "suppress the word itself and its meaning in favor of codes and numbers."[75] All a statue can do is to quantify and catalogue. Its body is a black box; all that it knows is internal. It does not rely on others to produce its own knowledge. This is what philosophy has

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* Carson opens her book with her translation of Sappho: "Eros once again limb-loosener whirls me / sweetbitter, impossible to fight off, creature stealing up" (LP, fr. 130) in Carson, *Eros*, 3.

** In the vocabulary of the relatively new field of multisensory research referred to in chapter 1, this could be compared to "multisensory perception," not to be confused with synesthesia.

*** Confusion, from Latin *confundere* is "to pour together."

produced, Serres laments, when it has divorced experience from knowledge, and nullified our senses in the process. The former seaman Serres states that the map has replaced the physical sea – a sea read, experienced and embodied by the sailor and his extended anatomy, the boat.

Serres invites us to a table, a table where bodies frolic, eat and taste, as opposed to the polished surface of the dissection table meant for scalpels and analysis. It is here that he wants to ground philosophy and thought – in the kitchen, at the table, in soil characterized by processes of growth and decay. In *The Five Senses*, Serres seems to have lost hope that words can germinate without doing violence to the body and the sensory world. The consequences of language seem to be utterly devastating; nevertheless, he continues to write.

Regardless of if we point to tongue, ear, nose, eye, or skin, Serres as I digest him, speaks about reception, about the ability to receive, and how the receiver at the same time also acts as transmitter, which becomes tangible precisely in the act of listening. He writes, "To listen is to vibrate, but to vibrate is to emit."[76] Thus, the mouth is not the sole emitter, and the ear is not the only receiver. Like Nancy, Serres posits that "transmission trumps listening, we are no good at receiving" and he continues, "solipsism is taking on greater gravity in the world of so-called communication."[77] While sound many times, as Serres phrases it, puts sight in its place, and at times also undoes sight, it can also be said that sound imprisons. Here we encounter another version of the sonorous envelope: instead of the mother spinning her web, we are caught in the net of communication technology. The need for protection – for shielding oneself – increases to the same degree as the requirement to communicate and to keep oneself informed intensifies. Noise, schizophonic, becomes a numbing din.

An instruction suddenly jumps out from the page of Serres' book:

"Go visiting."[78]

Interlude: The Heroes of Absolute Zero

10

He had not found his place. He had doubts anyway, about it being truly real. Too much noise disturbed his clarity. This was a problem – all the disturbances that inhibited pure experience from emerging in all its force.

Dr. L. lay in his water tank. Neither sound nor light could seep in and the salinity was such that he could float without the slightest effort. Weightless, he drifted hour after hour. A feeling of utter relaxation – as his skin slowly saturated with water. The boundaries of his body literally began to dissolve.

His idea was that deprived of all external stimuli, all outer influence, one would eventually experience the world as it really is. Untarnished.

First stop (Maryland): free from gravity, still centered, still a body.

Second stop (Virgin Islands): Improved navigation and maneuvering. Heading out of the body.

Third stop (the point of absolute zero): I have found a thread of truth, of reality and hence, of meaning.

9

A shot in the dark.

Perspectives tend to change with small sideways jolts. Eventually, one might find one's self on the side of things. From here, things look awry.

70

McCandless saw civilization from this skewed angle. Cramped, he sought a place where it was possible to measure himself against reality and regain his true proportions. He wanted to get closer to his skin, to touch it from the inside with a throbbing heart, veins, bones, and muscles. To expand, to let go, to liberate himself from the oppressing feeling of irrelevance. It was time to vanquish the false creature inside. The pursuer.

Alaska is suitable. Alaska is big, empty, natural, and genuine – free from obligations and compromises. He spends his days on freight cars, hitchhiking, wandering farther and farther away from all traces of civilization and human life. He feels himself approaching a point where things can begin.

8

Action potential. The potential for action.

There is a tension in every cell and a membrane that upholds a state of difference (between the positive and the negative). There is a pump and channels that transport the charges from one side to the other. At a certain voltage, the system is at rest. We have, in other words, an outside and an inside, we have a difference in amplitude; we have a cell that is alive, not dead.

Now, sometimes a rapid inundation occurs. Charges build up. A reversal, of the positive and the negative, propagates like a shockwave along the nerve cell at a rate of up to 120 m/s (thick fibers are the best conductors). Finally, the wave reaches an endpoint, is flung over a gap and continues its journey along another fiber. The information transfer was successful.

It can also move slowly (breathe in): a dull, aching pain through the damaged tissues.

7

It is clearly visible.

The time that disappeared between two lost memories made him taller, as if the laws of geometrical perspective were no longer applicable. He stands behind a car, in front of a house, dressed in green jeans, and she thinks: you'll remember me as the one who still knows everything.

Nothing stays in him; his cerebral cortex is a mesh of sudden losses. He has a tie-dye t-shirt and three leather bands around his right wrist. She describes in detail everything she can recall of their shared experiences. Her story is not his, yet he has no choice but to accept it as truth.

A blow that comes, again and again.
Her power over him: to lie about the past.
His power over her: to forget once again.

Each day he makes detailed notes of what is to be done: daily duties that mustn't be forgotten, things that have been said, agreements he has made. Everything he is required to remember he writes down in his notebook, which he carries in a bag at his waist.

He puts pieces of his surroundings into his mouth. Chews threads from the sofa, bits of the stuffing, everything that sticks out. A habit that is impossible to halt. He connects to the world in ways other than memory, and she thinks: this is how I'll remember you.

6

The present is a pleasant oblivion, as empty of memories as of expectations. And thus, infinitely hopeful and comforting – before the oblivion, once again, is dispelled.

5

Dr. Phil, life strategist as he calls himself, was on TV again today. "Take control of your life!" he expounds like a southern preacher. And we feel that, yes, control is precisely what is lacking: life is rather chaotic right now and we are not quite ourselves. Sometimes we are beside ourselves.

71

His sermons incite the feeling that the time has come to regain our true selves, as if they had been caught or taken hostage. Now is the time to return to our true origins. “This is who I really am,” we say, drawing a boundary between the inner and outer worlds. An exceedingly pervious border.

On September 5, 2003 David Blaine was hoisted up in a Plexiglas box over the River Thames in London. He was to live there for 44 days without food. He calls himself an illusionist, but this was not an illusion or trick – it was for real.

Fans and curious onlookers gathered below. Some had written “We love you David” on signs and banners. Others threw hotdogs and hamburgers at him. Day after day the spectacle could be followed live on Channel 4’s website.

“I have learned more in that little box than I have learned in years,” David said to the assembled press when he, visibly haggard and exhausted, emerged from his self-imposed isolation.

Isolated and exposed. He seemed to have fed on the massive media attention and the social nourishment that streamed up to him from the crowd below. Perhaps that was the trick: to see to it that one is seen.

4

On March 2, 1972 Pioneer 10 was sent off on a journey from which it will never return. It has since been the first spacecraft to pass the asteroid belt and the first manmade object to leave our solar system. It sights are set on the star Aldebaran, 68 light years away – the eye of the constellation Taurus. It will take the capsule two million years to get there, at a speed of 44,063 km/h. Seven months before David Blaine isolated himself in his Plexiglas box we lost contact with the little pioneer.

There is a plaque mounted on the capsule, 152.5 x 228 mm and 12.7 mm thick, with a message from humanity. The plaque shows a man and woman: they are drawn in a stylized manner, naked. The man’s right hand is raised in greeting. Beside them is a map showing our position in the galaxy.

Minimum information for maximum communication. The ultimate summary of what humanity is and is capable of, etched in gold-plated aluminum:

“Hi, we are here.”

3

Zero-point fluctuations.

There is an ideal point where all movement ceases. Atoms stop vibrating and coldness spreads. Zero Kelvin.

At 100 nanokelvin individual atoms lose their identity, their particularity. They synchronize their movements and become impossible to distinguish from one another. In this new material condition the temperature sinks drastically to 2 nanokelvin. This is as close as one can get to the point of absolute zero.

At room temperature matter moves at 1,500 km/h. Your solid state is a staggering speed.

2

A man sets out into the wilderness.
Another isolates his body, reduces it to the point of absurdity.
Another loses his memory, misplaces it.

24-year old Chris McCandless set out to find himself in the Alaskan wilderness. He was found two years later, dead. At about the same time, a man of the same age loses his memory. The goal had been to wipe out his entire existence, but he was left with the parts that could no longer remember the reason for annihilation.

72

Dr. Lilly immerses his body in water in a soundproof, darkened container in search of reality; in search of a true self, the point of absolute zero that would make genuine communication – undisturbed by prejudice and context – possible. He prepares to communicate with other intelligent beings.

Five years after Pioneer 10 was released into space, Voyager 1 is sent off. This time human voices are sent along, recorded on a golden record. Unknown recipients are greeted: "Hello to everyone. We are happy here and you be happy there."

1
Meanwhile.

If you turn outwards, you will find you have already arrived. Thrown aside. Gravel under your hands, nose, everything that meets the ground (a most welcome resistance). You can still sense dust and dampness. Sharp imprints of stones in your palms. Lucidity.

Raise your head and let your shoulders sink. This is a place of gravity and time.
Recovering time, hollow time, time for futile efforts and echoing rifts.

Breathe, pulse.
The only just palpable tension.

Time
For one movement at a time.

Alone Together (Communication and Solitude)

I re-read this text while I'm sitting at the archive. It had served as a score, or a first sketch, for what would become a participatory performance, *Limit-Cruisers*, which was the first work created as part of this thesis. That performance had brought me here to Stanford in the summer of 2013, to participate in the Performance Studies International Conference, *PSi #19: Now Then: Performance & Temporality*, hosted that year by Stanford University.

The text was initially written for a different context, but had been inspired by Lilly.[79] He even appeared as a character in it, a "zero hero." This quasi-fictional figure had triggered two parallel movements in my work: firstly, a journey into the porous borderlands of listening; and secondly, a search for the sound recordings made in conjunction with the interspecies communication studies of the real John C. Lilly. The first movement had led me to further explore the use of acousmatic voices and the condition of being "alone together," through listening (issues that I will return to in chapter 4). The relations and positions implied in this score led me to structure the performance as a countdown, and gave me the impulse to isolate the listeners in big, inflatable plastic bubbles. I also wanted to use a format where three different perspectives on a shared experience were presented simultaneously. Hence, two new scores were composed – one sound composition for each of three bubbles which listeners could inhabit. In the movement from text to sound compositions, the written scores were greatly altered

and developed as situated narratives, i.e. narratives in which the surroundings of the listeners became a part of the story told. The first version of the work was called *Limit-Cruisers (#1 Sphere)*, staged in 2012 and 2013. The bubbles separated the three listeners from each other, but also made them look alike, as if they were a sort of cellular beings rolling around in space. (In reaction to this work, I was pointed to a trilogy of books on spherology, *Bubbles*, *Globes*, and *Foams* by Peter Sloterdijk, whose term "sonospheric communards" I used earlier.)[80] If the sound composition "The Heroes of Absolute Zero" focused on solitude, another sound composition "Decoy," formed itself into a communication theory – at least that is what it claimed to be.

Limit-Cruisers (#1 Sphere), performance at Weld, Stockholm, 2014, and at Inter Arts Center, 2012. Photos: Fredrik Wåhlstedt and Jörgen Dahlqvist

In the third bubble, where a composition called "New Individualism" was heard, the sonic space was permeated by intensive breathing which was so marked at times that it influenced the listeners' breathing. Initially, the various voices that addressed and instructed the listener were in accordance with one another, but they became increasingly contradictory.

In "The Heroes of Absolute Zero," Lilly was accompanied by other zero heroes. This included David Blaine, a contemporary Houdini, known for his amazing endurance tests carried out in total isolation, but in a symbiotic relationship with media; and Chris McCandless, a latter-day Thoreau who attempted to find himself in the wilderness, but instead of discovering origin he found extinction. Through Sean Penn's film *Into the Wild* (2007) McCandless as well could be said to have become a part of our modern mediated mythology. In his book *A Voice and Nothing More*, which I read after the first showing of this performance, Dolar writes:

> In isolation, in solitude, in complete loneliness, away from the maddening crowd, we are not simply free of the voice – it can be that this is when another kind of voice appears, more intrusive and compelling than the usual mumbo-jumbo: the internal voice, a voice which cannot be silenced. As if the voice were the very epitome of a society that we carry with us and cannot get away from. We are social beings by the voice and through the voice; it seems that the voice stands at the axis of our social bonds, and that voices are the very texture of the social, as well as the intimate kernel of subjectivity.[81]

In this way, he beautifully articulates the zone of conflict the zero heroes find themselves trapped in. It is hardly a coincidence that all the zero heroes turned out to be male. They all qualify as protagonists in various updated versions of the Robinsonade that we have become accustomed to through European and American literature and film, where the relationship (and distance) between man, civilization, and nature are central.* In this genre of survivalist fiction the lone astronaut and the lone ranger are other popular characters. My version of the Robinsonade could be said to be composed of a collection of cases. My characters included the zero heroes who, in their search for equilibrium, were accompanied by the figures of

* Edward Said has described these solitary withdrawals from civilization, which are a frequent theme in European literature in, for example, the books of Joseph Conrad and Gustave Flaubert, as taking the same form as "the colonizer at the center of an empire he rules." Said continues: "Yet unlike Robinson Crusoe on his island, these modern versions of the imperialist who attempts self-redemption are doomed ironically to suffer interruption and distraction, as what they had tried to exclude from their island worlds penetrates anyway. … Within the codes of European fiction, these interruptions of an imperial project are realistic reminders that no one can in fact withdraw from the world into a private version of reality." Edward W. Said, *Culture and Imperialism* (New York: Vintage Books, 1994), 163.

"Zero Kelvin" (-273.15 °C) and the "Cell," as well as the space probes Pioneer 10 and Voyager 1, which even today continue to travel through space carrying their messages from humanity – the first with hope for peaceful coexistence (1972): "Hi, we are here," and the second with a somewhat more ambivalent message (1977): "We are happy here, and you be happy there."

These heroes try, as I do, to navigate a world defined by borders where the "natural" self is seen as something strictly separate from the environment. This is simultaneously considered to be our normal state and the desired (humanist) ideal. At the same time, the importance of communication is emphasized to the extent that today's so-called information society is seen as being driven not only by digital information, but also by communication technologies. There is an inherent paradox here. On the one hand, our vision of the autonomous individual generates communications models where separate, isolated entities transmit information to one another with the help of signals and channels. This is a model that, as a result of influences from early cybernetics and information theory, focuses on communication as control. On the other hand, the networked information and communication society has also, since the 1950s, brought about the dissolution of both the individual and autonomy in what sociologist Zygmunt Baumann has called a "liquid modernity." But, alternative models of subjectivity – such as posthumanism's distributed and emergent relational subjectivities, where we are always already beside ourselves, and in a fundamental sense formed in and through interaction (intra-action) – seem far too uncontrollable, threatening, or schizophrenic. A more intermeshed understanding thus threatens to blow the individual to bits, or to dissolve her borders. The information society and its technologies has, in other words, a tendency to both reinforce and to dissolve the autonomous individual that we hold in such high regard. And, I think, this double bind, combined with mass media's ubiquitous fixation on messaging, where the differences between influence, participation, and manipulation are paper thin, implies that it is the individual's responsibility – if she wishes to remain autonomous – to take control of the act of communication and not to let herself be formed or manipulated by it.* The information society becomes then a monological rather than a dialogical society. Monologue is your only means of defense (media messaging's number one rule: don't answer the question, stick to your message). Listening, in this setting, is reduced to attention and comprehension. "Transmission trumps listening, we are no good at receiving," as Serres put it.

Besides the pleasure of being part of five madly intense days of interesting performances and talks, *PSi #19* finally gave me the opportunity to pursue my other quest: to find the original sound recordings of the communication experiments. Following Lilly's death in 2001, the Special Collections and University Archives at Stanford University Libraries had acquired his private archive, and I had quite recently learned that this was where the recordings were to be found, thanks to the newly released book *The Sounding of the Whale*, by D. Graham Burnett (2012). At *PSi #19*, I presented a paper and a praxis session; Lilly was present in both.

The praxis session was a low-tech D.I.Y-version of *Limit-Cruisers (#1 Sphere)*, called *Limit-Cruisers (#2 Crowd)*. No bubbles were used, no fancy technology, only bodies. The participants brought their own audio players and headphones. The listening session took place in darkness, and the observers were given headlamps.**

Limit-Cruisers (#2 Crowd), praxis session at *Psi #19*, Stanford University, California, 2013

I'm here with you
My air in your lungs
My voice in your ear
Breathe

We listened and moved alone together, enclosed in sonic spheres. Images and noise merged and mingled with physical bodies in space.

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* Lilly's efforts to isolate the meaningful components of language from the surrounding noise, as well as to isolate the scientific observer from all external social and psychological disturbances, can be said to be extreme examples of this.

** More on the performance and the praxis session can be found in chapter 3, "Going Visiting: Traces from an Artistic Practice."

Any minute now, any moment
– you cannot resist me

In his book *Animism*, Anselm Franke writes, "One battlefield of the future will be the boundaries of the self in search for the tools to resist the interiorization of the structures of power implicated in the flow of relationality."[82] And, he states:

> It is now most common again to talk about souls and communicative, collaborative practices; government papers speak of the embodied mind and the unity between body and soul. Mimetic and passionate engagement has become a quotidian request, through which conformity is being produced. … What had been achieved by feminist theoreticians and practitioners, among those whose attacks on the notorious modern dualisms have shown significant effects, became increasingly incorporated standards in the mantras of a capitalist mode of immaterial production, now centering on the production of social relationality.[83]

The relational turn, which attempted to confront the individualistic, dualistic and atomistic points of view, has, in short, already been exploited and turned in on itself. In the "society of control," relationality has become one commodity among others and no longer offers an alternative as it has been incorporated in post-Fordist modes of immaterial production where social relationships themselves are what creates value. Power operates through implicit forms of self-management and internalized surveillance that result from a fear of exclusion, of not having social capital or social intelligence. Control and self-control have become one. Is it really that bad?*

Working with *Limit-Cruisers* and transforming the original text into a sonic and situated narrative became a way for me to yet again examine notions of solitude, communication, individuality, and collectivity, but this time from a perspective where relationality has become exploited and commodified. Phrases from books and articles I read (by Bruno Latour, Gilles Deleuze, Anselm Franke, and others) while editing sound, slid in as assertive and contradictory schizophonic voices. Everyone is right, no one can be trusted, Anne Carson plays her tricks. I am serious when I let the voices say: *This is a communication theory*. When they say: *This is a study,* or: *Body language*, *voice*, *all these things matter*. The voices are sincere when they say: *You are in full control of your actions*, but it doesn't mean that this is true.

here

here

here here

here

hear me

out

here

you

hear me

out

* It is not easy to grapple with complexity; relationality and process-oriented thinking are difficult to incorporate into many contexts and organizations. What I myself have experienced is that although the concept "relationality" might be embraced on a theoretical level, it is often too challenging (or even impossible) to act according to within existing institutional frameworks. The rhetoric is, quite simply, unable to produce the required scope of action, and points to our lack of ability to put relationality into practice. Since the rhetoric becomes empty, it drains vital concepts of meaningful content. Relationally-inspired phrases are no longer taken seriously because they have been exploited as programmatic key words which are supposed to "permeate" organizations. That is how I interpret Franke when he writes that the relational turn has been appropriated and exploited. Relationality is as important as ever, but the concept has been considerably worn out. Is it possible to reclaim?

there

here

a part *of me*

there

apart

you

there

tear

me

apart

Individuals are never alone, because they always incorporate the Other into themselves. This is also how Dolar positions the voice, or rather the ethics of the voice, as a shared inside. "The ethical voice is not the subject's own, it is not for the subject to master or control it, although the subject's autonomy is entirely dependent on it."[84]

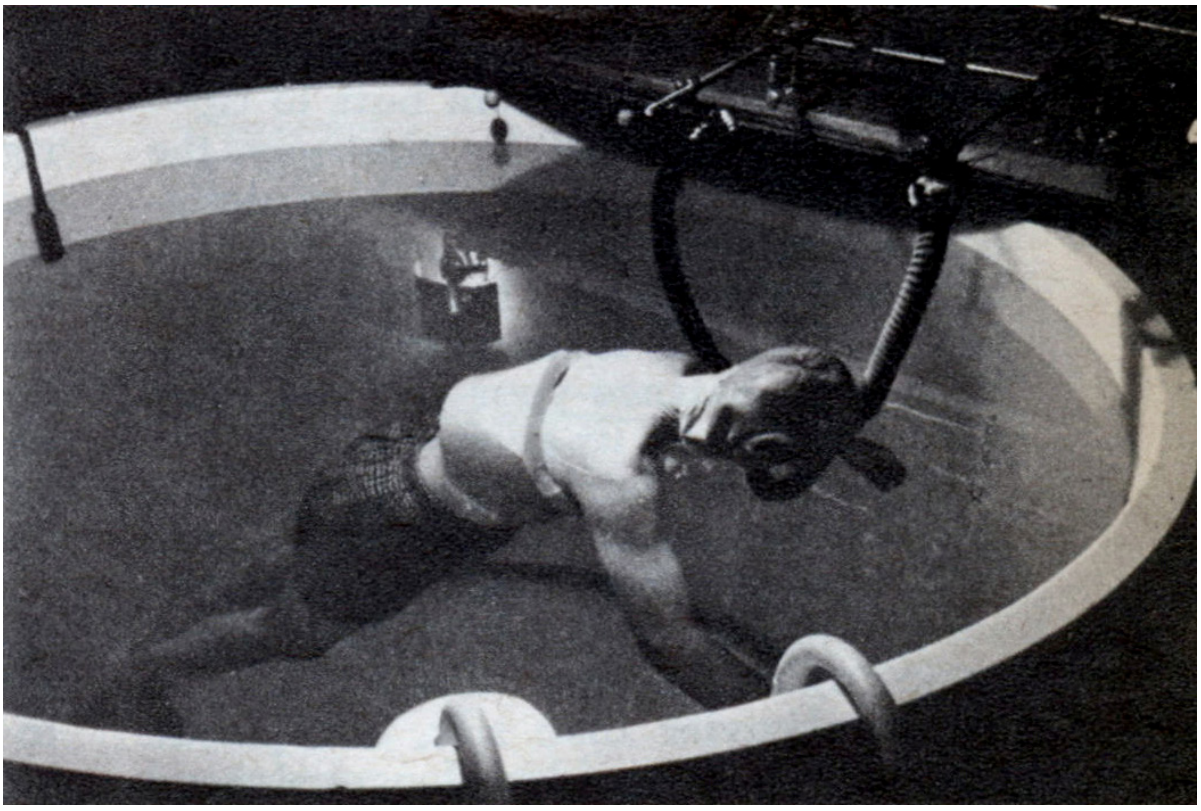
If for Lilly the traditional distance and barriers between the scientific observer and the research object began to crumble around 1958 following his encounter with *Someone* and the *Conference of Three Beings* (ECCO), the defining lines between science, ethics, politics, metaphysics, and mysticism began to blur as well. Everything mixed. Lilly became increasingly convinced that cetaceans are sensitive, compassionate, ethical, philosophical beings, and are keepers of a long-held oral tradition. As early as in *Man and Dolphin* Lilly predicted that, "The day when communication is established, the particular other species becomes a legal, ethical, moral, and social problem," and he adds: "They have reached the threshold of humanness, as it were."[85] Lilly continues to ponder the implications of this and concludes:

> For a long time presumably they will be in the position of the Negro races in Africa who are attempting to become Westernized. They will be a dramatic but definite minority, initially with extremely good publicity and then with less good publicity unless they can prove their usefulness in those things which the human race in general attempts to achieve.[86]

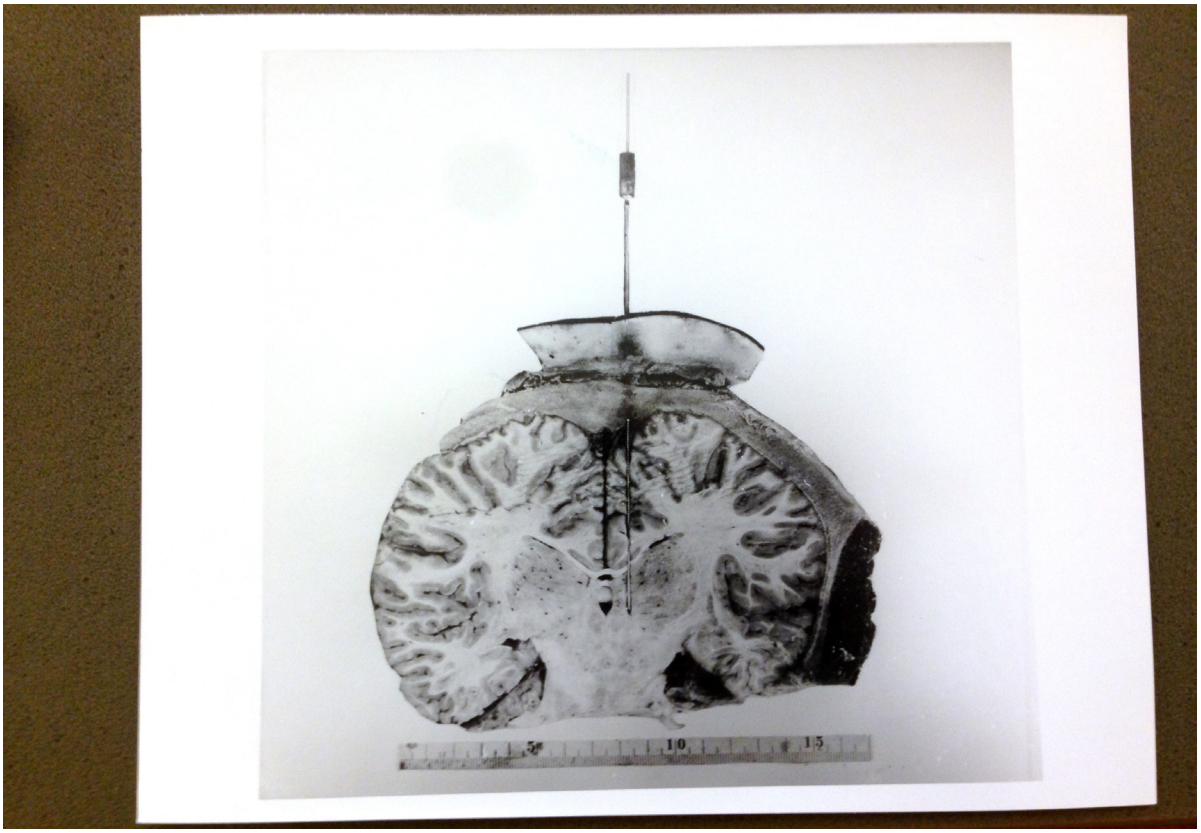
Here, his musings on the implications of dolphin intelligence leaves an unpleasant aftertaste as the animals (like the "Negro races") will earn respect at the point when they can prove their usefulness to the white man (here referred to as "the human race"), as if it is first then and there that an ethical problem arises.

Lilly would eventually come to see dolphins as superior to humans in intelligence. From the 1970s onwards he opposed the exploitation of animals when he was struck by the realization that at CRI he himself had operated a concentration camp for his friends (Lilly's own words).[87] He became politically engaged in protecting animals and their natural habitats, and re-emerged as a media celebrity – now in the guise of a New Age guru. Here, the floatation tank would continue to serve as his Delphi, as well as *delphys* (womb). He stated that dolphins, like humans, have the ability to learn how to learn. "When one learns to learn, one is making models, using symbols, analogizing, making metaphors, in short, inventing and using language, mathematics, art, politics, business, etc. At the critical brain (cortex) size, language and its consequences appear."[88]

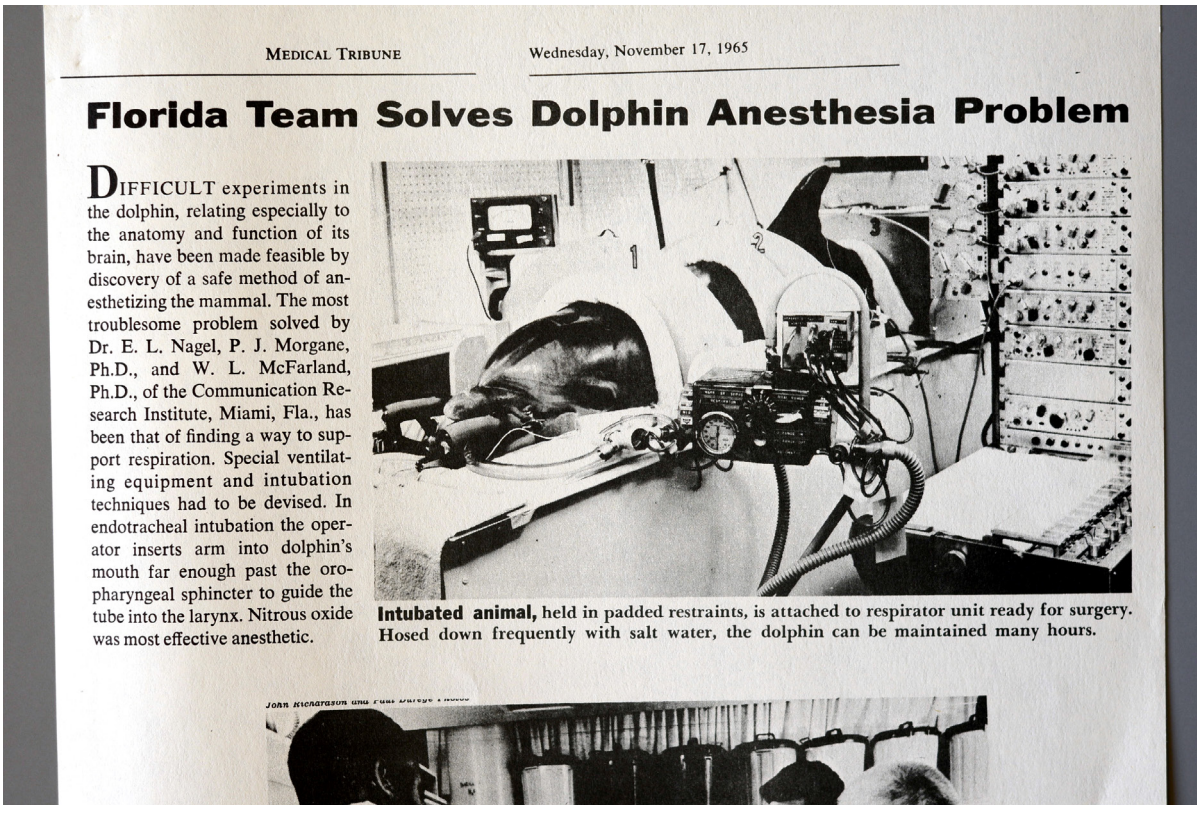
From the Archive: A Pure 'Mind in the Waters'
Lantern slide of unknown dolphin. Lilly Papers, flat-box 59A. Courtesy of the John C. Lilly Estate and the Department of Special Collections and University Archives, Stanford University Libraries



From the Archive: A Pure 'Mind in the Waters'
Sensory deprivation, early version of floatation tank developed by John C. Lilly. Photo: Ben Ross, in "Experiment in Loneliness," *Mechanix Illustrated* (May 1962), 56-57, posted May 24, 2006 on Modern Mechanix website, accessed May 12, 2015, http://blog.modernmechanix.com/



From the Archive: Models of Communication
Electrode inserted into the brain of a monkey (1950s). Lilly Papers, box 29, folder 20: Start-Stop Systems. Courtesy of the John C. Lilly Estate and the Department of Special Collections and University Archives, Stanford University Libraries



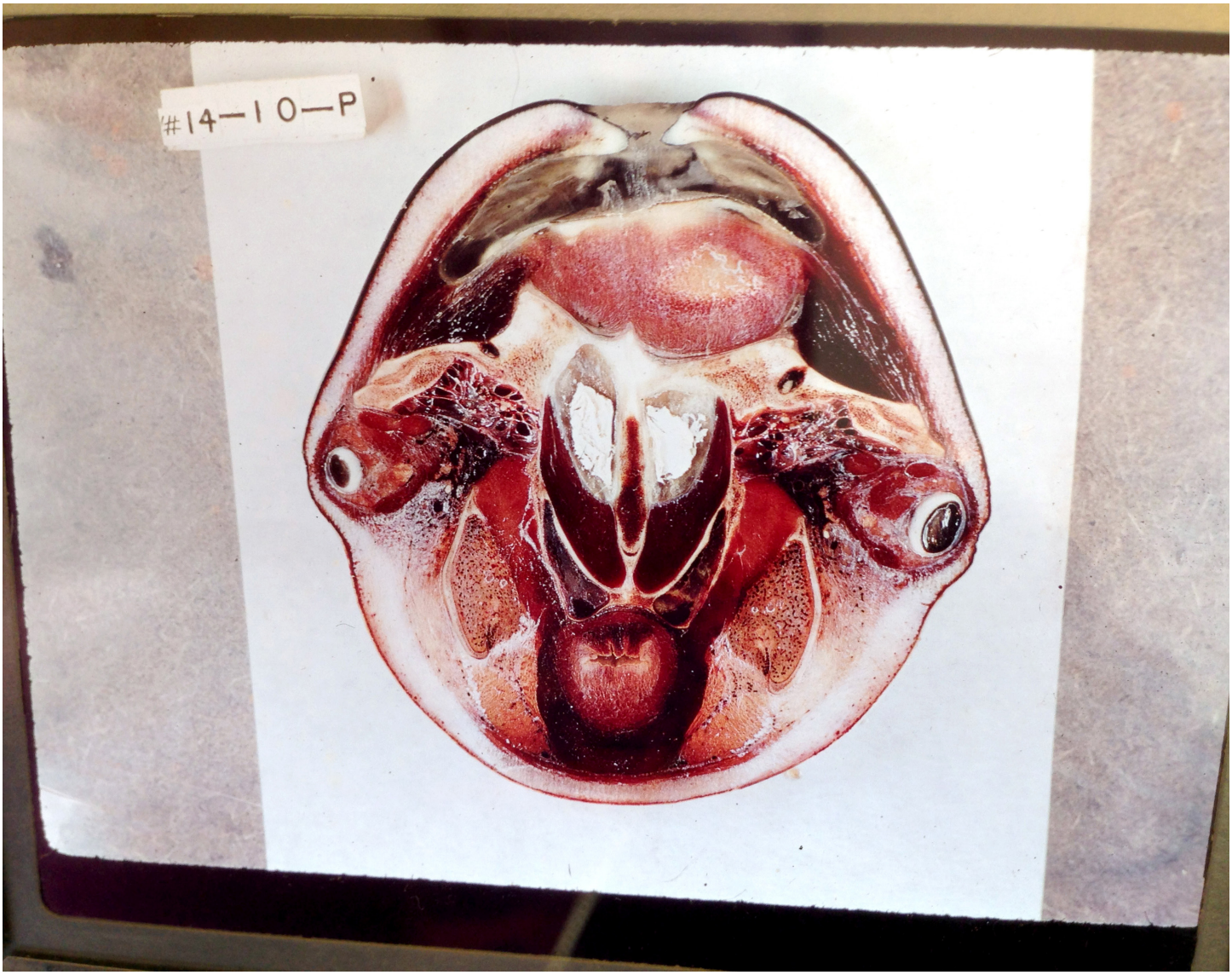
MEDICAL TRIBUNE Wednesday, November 17, 1965

Florida Team Solves Dolphin Anesthesia Problem

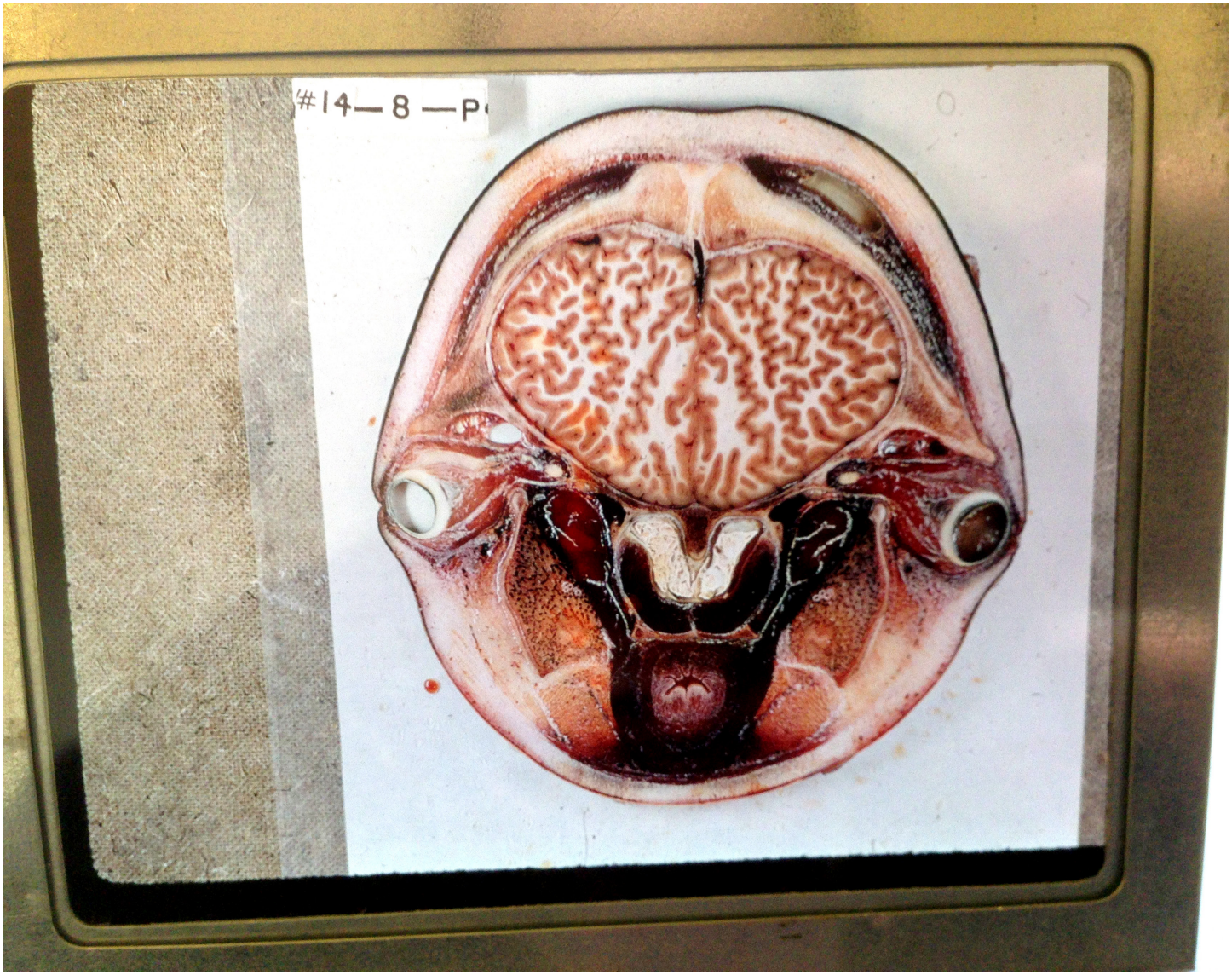
DIFFICULT experiments in the dolphin, relating especially to the anatomy and function of its brain, have been made feasible by discovery of a safe method of anesthetizing the mammal. The most troublesome problem solved by Dr. E. L. Nagel, P. J. Morgane, Ph.D., and W. L. McFarland, Ph.D., of the Communication Research Institute, Miami, Fla., has been that of finding a way to support respiration. Special ventilating equipment and intubation techniques had to be devised. In endotracheal intubation the operator inserts arm into dolphin's mouth far enough past the oropharyngeal sphincter to guide the tube into the larynx. Nitrous oxide was most effective anesthetic.

Intubated animal, held in padded restraints, is attached to respirator unit ready for surgery. Hosed down frequently with salt water, the dolphin can be maintained many hours.

From the Archive: Dolphins in Media
Medical Tribune, November 17, 1965. Lilly Papers. Courtesy of John C. Lilly Estate and the Department of Special Collections and University Archives, Stanford University Libraries



From the Archive: Unknown Dolphin
Cross section of a dolphin head, lantern slide, Lilly Papers, flat-box 59A. Courtesy of the John C. Lilly Estate and the Department of Special Collections and University Archives, Stanford University Libraries



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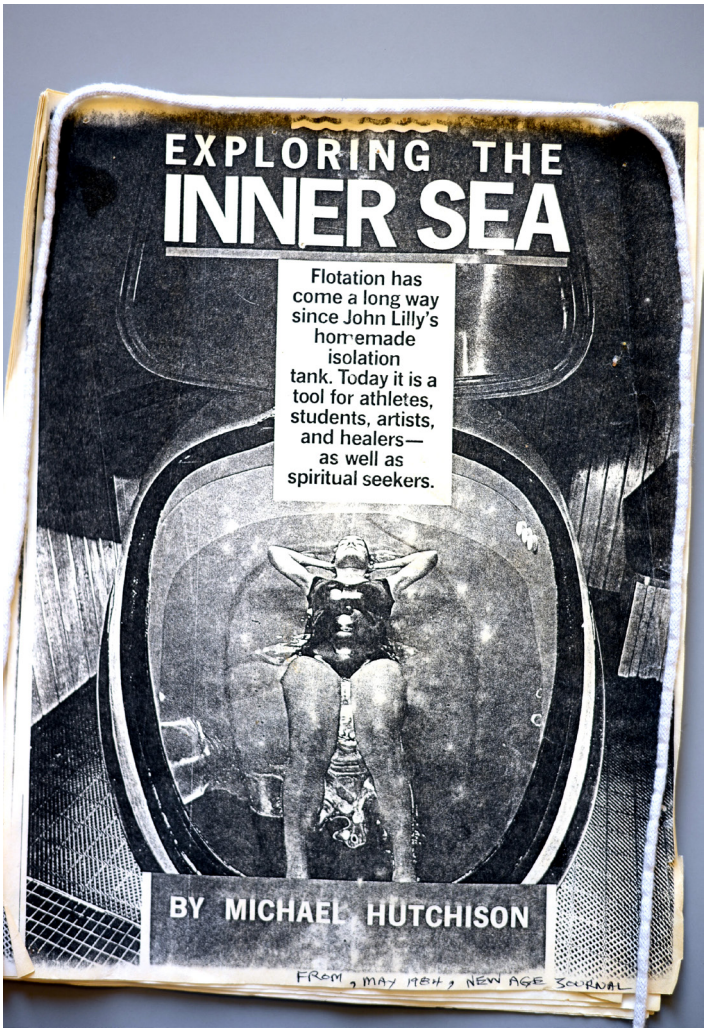
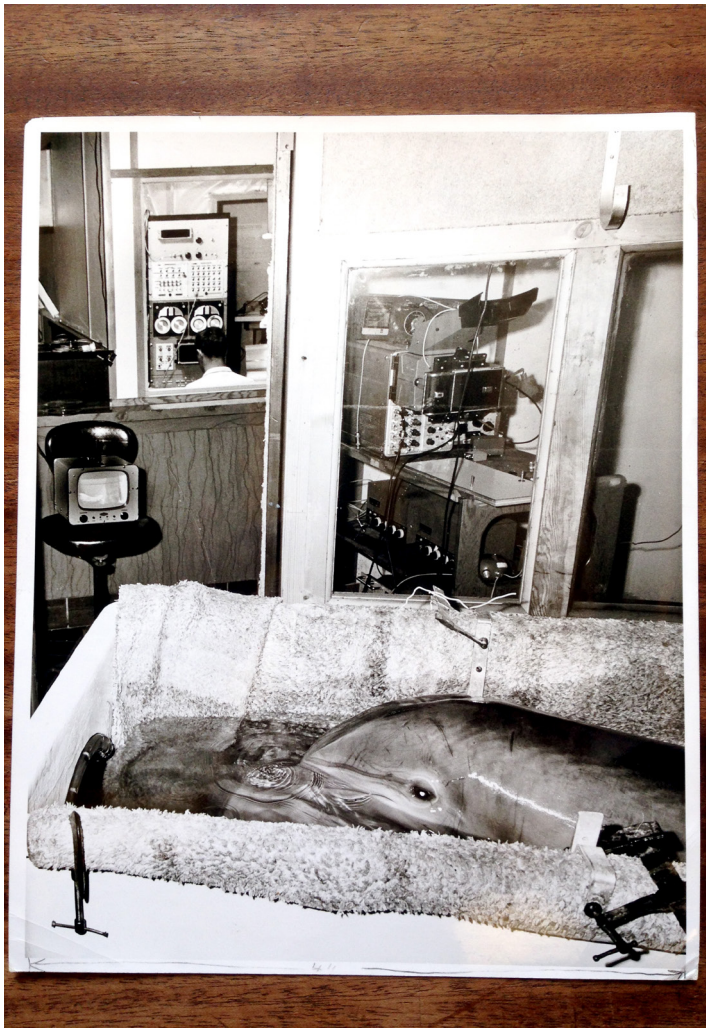
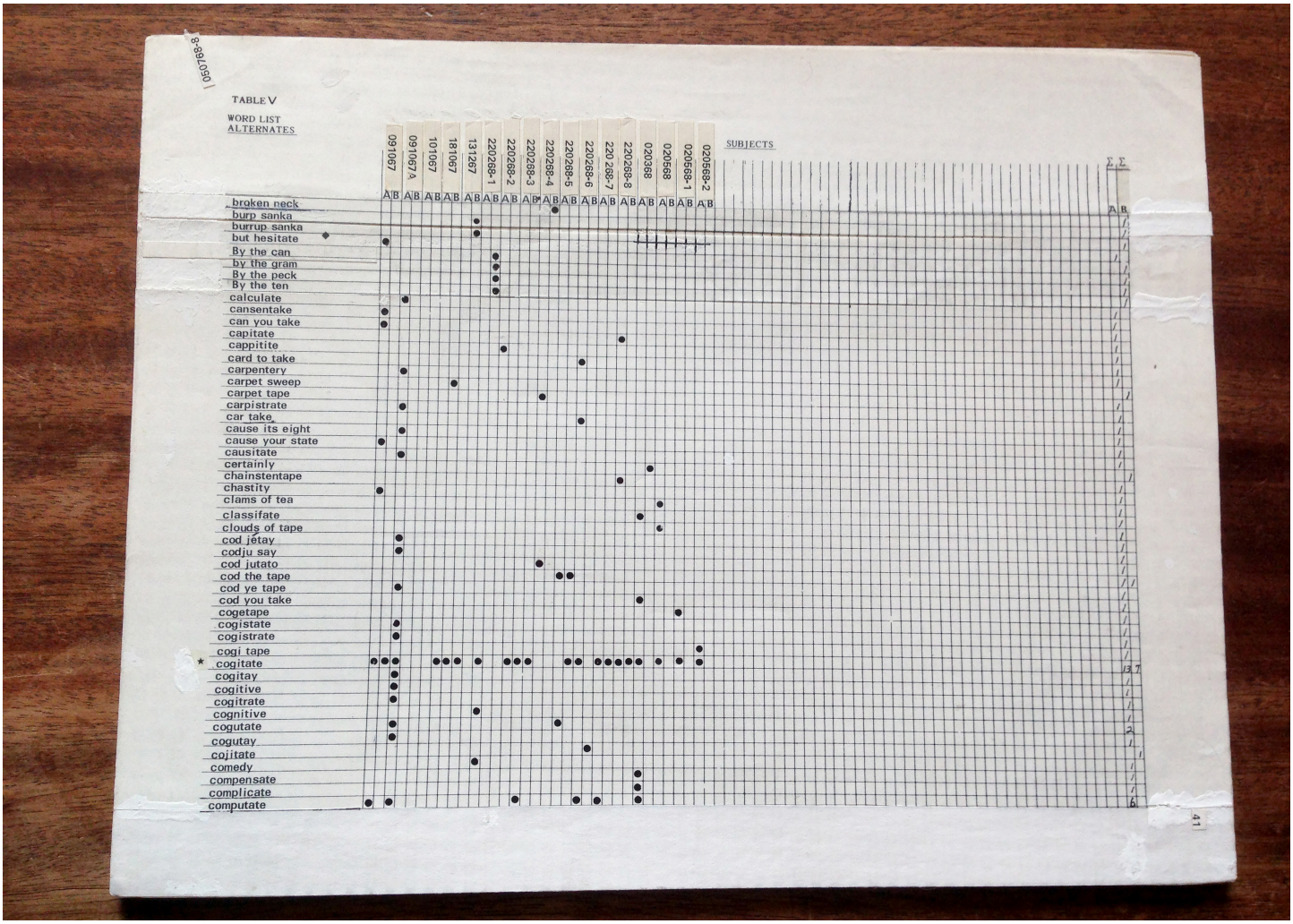

EXPLORING THE
INNER SEA
Flotation has come a long way since John Lilly's homemade isolation tank. Today it is a tool for athletes, students, artists, and healers— as well as spiritual seekers.
BY MICHAEL HUTCHISON
FROM "MAY MEH" NEW AGE JOURNAL

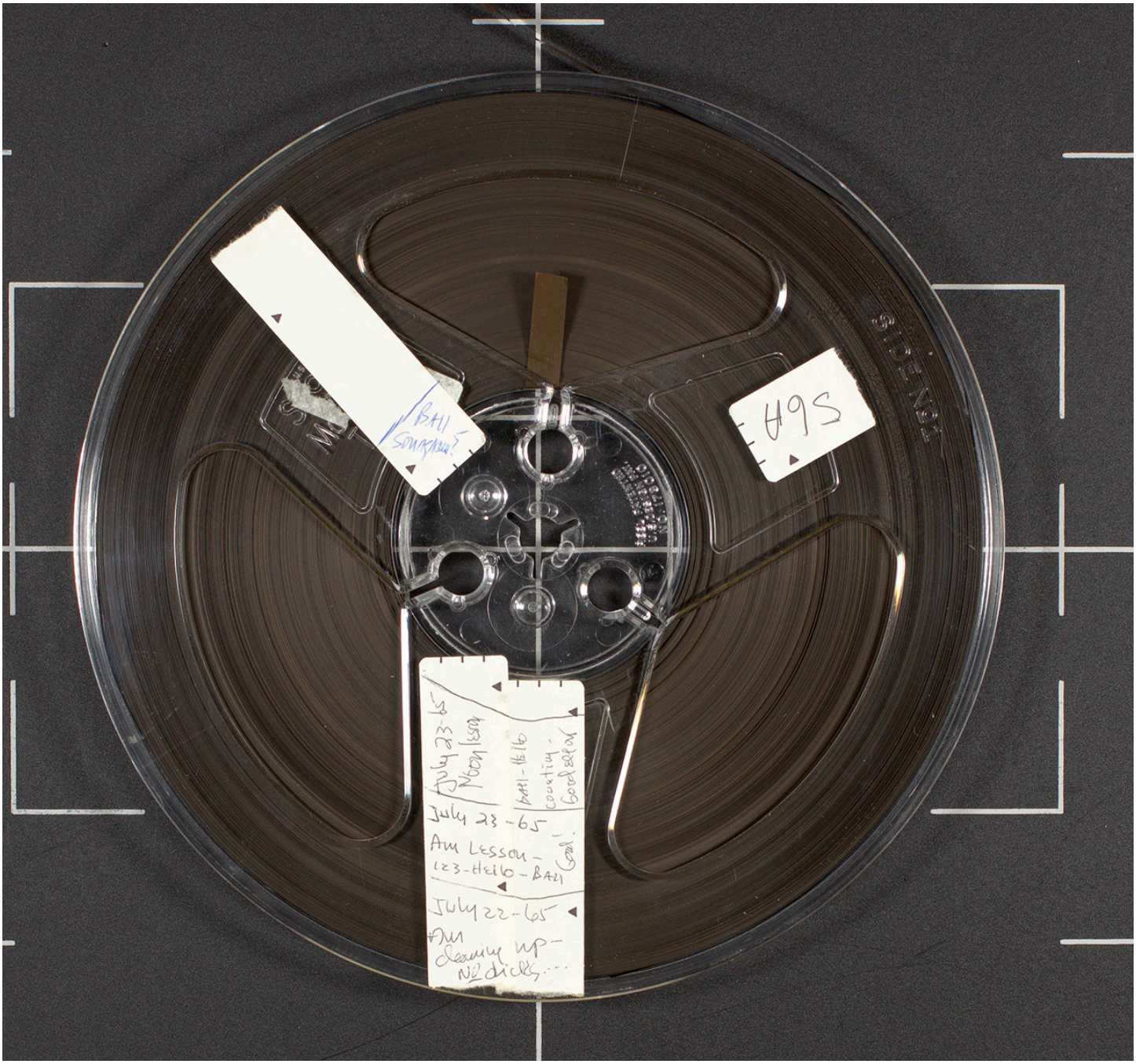
From the Archive: A Pure 'Mind in the Waters'
Xerox of article in *New Age Journal*, May, 1984. Lilly Papers. Courtesy of the John C. Lilly Estate and the Department of Special Collections and University Archives, Stanford University Libraries



From the Archive: Models of Communication
Elvar(?) in the recording studio, CRI, Coconut Grove, Miami (early 1960s). Lilly Papers, box 36, folder 16. Courtesy of the John C. Lilly Estate and the Department of Special Collections and University Archives, Stanford University Libraries



From the Archive: Models of Communication
Diagram from sound experiment with human voice, "Repeated Word-Sentence Experiment." Lilly Papers, box 27, folder 1: Test #20 Stim: "Cogitate" Table V. Courtesy of the John C. Lilly Estate and the Department of Special Collections and University Archives, Stanford University Libraries



From the Archive: Models of Communication
Recordings of language lessons with Peter, 1965. Lilly Papers, cartoon 108, reel 56A. Courtesy of the John C. Lilly Estate and the Department of Special Collections and University Archives, Stanford University Libraries

Explorations into Language and Speech (A/Orality)

The first dolphins that were flown over to St. Thomas in 1960 were called Lizzie and Baby. They died tragically enough in the course of just a few weeks. But, prior to that the researchers once again heard the dolphins making humanoid sounds, this time without implanted electrodes, and recorded on tape.* Lilly writes about an occurrence in March of that year:

> The night before she died, Lizzie … said something underwater which sounded suspiciously like, "It's six o'clock," which I had just shouted over the water of the tank. Miss Miller and I reviewed that tape many times and each time the uncanny feeling of 1957 was evoked.[89]

But it also sounded as if the dolphin said, "This is a trick," as though it had imitated Miller and at the same time made a meta-commentary on the phenomenon of the voice itself.

I ask myself, how does voice influence space? And, Chion answers: "*The presence of a human voice structures the sonic space that contains it.*"** He compares voice to sight and refers to how the presence of a person structures what we see: space is given meaning and perspective as our attention is inexorably drawn to the human figure's face and body, and the surroundings are interpreted in relation to this figure. He explains that, in a similar way, the human voice (and speech) structures the auditory field as the listener attempts to localize and, if possible, identify the voice. Localization is the auditory equivalent of perspective. In the introduction to *Close Listening. Poetry and the Performed Word*, Charles Bernstein asks, "What is the relation of sound to meaning?"[90] This question could even be formulated as: what is the relationship of hearing to listening?*** Bernstein refers to Roland Barthes' distinction where hearing is something physiological (what the ear hears) and listening psychological (to listen for the meaning).[91] Bernstein approaches listening from a different angle than Pierre Schaeffer: here, it is the voice that is in focus. Bernstein enters into a discussion of the perception of sound in relationship to language, which I think is interesting to follow as it causes me to think of the dolphin Elvar as a concrete poet, or a devotee of Language poetry.**** Elvar's way of playing with sounds resonates with the view of language promoted by the Brazilian educator Paulo Freire who wrote in 1965 that: "Acquiring literacy does not involve memorizing sentences, words, or syllables – lifeless objects unconnected to an existential universe – but rather an attitude of creation and recreation, a self-transformation producing a stance of intervention in one's context."***** Language learning then becomes not a question of memorizing and then applying abstract concepts, but a question of playing with sound, context, and relationships. For Freire the play and creation of new sounds was central to pedagogic process, which suggests a view of language where poetry is not a side effect or an aesthetic extra, but the basis of that which we call language.

So, let us listen to Bernstein for a moment. He proposes that the perception of speech, generally speaking, is different from the perception of material sounds (such as the clink of porcelain, footsteps, and the wind rustling in the trees). Or, as Reuven Tsur – also cited by Bernstein – puts it: "Speech triggers a specific cognitive mode of interpretation in a way that a material sound does not."[92] We try to *listen for the meaning* of what is said. Material sounds on the other hand activate a "nonspeech mode" of listening, i.e. a *physiological hearing*.****** If we follow that line of reasoning we could say that for Lilly and his colleagues the dolphin sounds suddenly shifted from being material sound (nonspeech), to being perceived as human language (speech), which prompted the researchers to listen

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* As far as I could tell, these early recordings were not available in the Stanford archives.

** Here Chion paraphrases Christiane Sacco who writes, "The presence of a body structures the space that contains it." Chion, *Voice in Cinema*, 5 (emphasis in original).

*** Or as Dolar writes (quoted in the "Prelude"), "The word as a signifier, the word as a sound object: how do we think them together?" Dolar, *Voice and Nothing More*, 143.

**** The Poetry Foundation website describes Language poetry as "an avant garde poetry movement that emerged in the late 1960's and early 1970's as a response to mainstream American poetry." It took its name from the magazine L=A=N=G=U=A=G=E, edited by Charles Bernstein and Bruce Andrews. Accessed October 11, 2016, https://www.poetryfoundation.org/resources/learning/glossary-terms/detail/language-poetry

***** Freire continues: "Thus the educator's role is fundamentally to enter into dialogue with the illiterate about concrete situations and simply to offer him the instruments with which he can teach himself to read and write. This teaching cannot be done from top down." Paulo Freire, "Education as the Practice of Freedom," *Education for Critical Consciousness* (London: Bloomsbury Academic, 2013), 45.

****** Everything that is written about cognition here is characterized by a "neurotypical" orientation where human forms and voices take center stage. In comparison one could consider, for example, how perception works for those on the autistic spectrum, where this orientation is not a given.

rather than hear. Conversely, in Lilly's language experiments in which people listened to recordings of a human voice incessantly repeating the same word over and over again, the research subjects' perception shifted from listening to the words to hearing the sound. What Lilly's experiments triggered was, in keeping with Bernstein and Tsur, a third aspect of language: its poetic function. Bernstein writes that the poetic function of language "synthesizes the speech mode of perception and the nonspeech mode of perception," causing rhythmic oscillations between the opaque soundings of an utterance and its transparent references.[93] We suddenly *hear* what we are *listening* to, language is rematerialized and new resonances form. This creates an opening for a production of meaning that cannot be captured by linguistics. "That is, poetry creates something of the condition of hearing (and not just listening to) a foreign language – we hear it as language, not music or noise; yet we cannot immediately process its meaning."[94] Does this imply that we should listen in a phenomenological way instead of a semiotic one? We, in fact, constantly listen in both ways. Meaning emerges in the meeting of and difference between the two – if we can resist the temptation to exclude one listening mode for the benefit of the second (and third, and fourth). Complicating things further, it is a mingled body that listens.

Sound patterns are expressive; their cadence is significant. Sounds as well as words produce clusters of more or less uncontrollable associations that are influenced by patterning, timbre, intonation, source, context, and use. The words we hear explode into meaning. Every meaning is always already *sliding*. To capture language's ability to *present*, rather than to represent or designate its meaning, Bernstein uses the term "sound iconicity." For those who seek to decode meaning, iconicity is mostly a bother – disturbances to be eliminated. The listener might then choose to shut these out and focus on only one aspect of the sound by, for example, transcribing the sound to text. But, the performative aspects of language don't disappear even if it is "silenced" by being presented as writing on paper. The text, or rather the audiotext as Bernstein calls it, continues to perform on the page, emitting sounds even when we read it silently for ourselves: we hear it inside of us. And, presented visually, the various iconic features of language continue to make the audiotext dance and slide, for example through the typography and how the text is arranged and presented.

There is pleasure in the play of making and transforming sounds. Language is hyper-referential and sedimentary, but we learn to discipline its jerks, evasions, and diversions in various ways depending on context (here I must confess I identify with Elvar). The poetic function offers sound another sort of liberation from language, which Schaeffer tried to achieve in music, not by reduction but through proliferation – through a/orality. It is a form of linguistic *concreteness* that is promiscuous, as practiced for example by artist Öyvind Fahlström, a "dirty" rather than a reduced listening.* The material of language can be "kneaded," says Fahlström in his manifesto of concrete poetry,** titled "Hätila ragulpr på fåtskliaben."[95] His poetry, as well as his text-sound compositions mix, cross-fertilize, sample, and dislocate different speech genres. Language is infectious, quotidian, banal and Fahlström makes use of sociocultural ballast rather than trying to write the timeless verses or the psychological ruminations prescribed by the zeitgeist of 1953. He does not strive for originality, but for new combinations and permutations. He calls his Swedish poems *bord* ("tables") – a combination of *bokstäver* ("letters") and *ord* ("words"), which could be translated as "lords" or maybe "wetters," but then we miss out on his poetic piece of furniture where a rather strange and carnivalesque meal of mutating bodies is served. He talks about squeezing, amputating, and larding with foreign words; the similarities to cooking and slaughter are striking. He digests language in search of new material (nutrients). The reader is thrown between verbal-vocal-visual cues. Cows mutate, fins slap, sharks pant. Fahlström doesn't write about animals, he writes about words as though they were animals, and of the resonating "tables" he can build with their word-bodies. He writes, "One could describe the sound *svan* [swan] with the word *hajklatschar* [shark slaps]."[96] Lilly might have thought that he wrote with words, but the way I see it he wrote with flesh and brains. It is not words but bodies that deform, transform, splash, sigh, and scream in his experiments, on his table.

For Fahlström, language is "a stockroom of conceptions tied to 'arbitrary' phonetic signs of recog-

* Brandon LaBelle uses the wonderful phrase "dirty listening." This phrase is a good example of sound iconicity and productive disturbance as it stirs up a cloud of references from the banal to the obscene, with a touch of *Dirty Dancing*, see LaBelle, *Background Noise*.

** The title of the manifesto, "Hätila ragulpr på fåtskliaben, derives from a Winnie the Pooh story by A. A. Milne where the Owl tries to write "Happy Birthday," resulting in the phrase "Hipy papy bthuthdthhtuhda bthuthdy."

nition."[97] In other words, it is not just sound material that is "kneaded" in Fahlström's concrete poetry but our notions of the world as well as linguistic patterns. Kneadable material for Fahlström is not limited to the flow of words, but includes the world of images as well, and he switches seemingly freely between text, sound, painting, sculpture, installation, theater, and film. The speculative linguisticality of his creations, his specific parole, is dependent upon one's participation in digesting them, and they produce resonance rather than understanding. Words, like images and sound fragments, always point in several directions at once. They could in a sense be said to be readymades. They vibrate with relationships and meanings that lie outside of our control, meanings that are generated not just semantically, but also visually and aurally. It is a way of working that encourages (demands) an embodied, situated listening. Fahlström writes in his manifesto of concrete poetry:

> Having used the word concrete in these contexts, I have related it more to concrete music than to art concretism in its narrow meaning. In addition the concrete working poet is, of course, related to formalists and language-kneaders of all times, the Greeks, Rabelais, Gertrude Stein, Schwitters, Artaud and many others.[98]

To hear what we listen to – to be attentive to a poem's total sound and sound's relationship to semantics – is what Bernstein calls "close listening." This is an additive approach to listening (rather than a reductive where one "frame" alone is allowed to dominate).

five o'clock
guard your tape
god you're straight
habitate
indicate
levitate
Margaret break

We now find ourselves quite far from the linguistic sign and Ferdinand de Saussure's distinction between "the signifier" and "the signified." In the Saussurean linguistic model it is as though we need to get rid of the voice in order to understand language: the voice is noise, that which needs to be erased to make language – the signal – comprehendible and usable (the non-individualized "acoustic image" as Lilly called it in his experiments with the human voice, described in the "Prelude"). But if the fluidity, timbre, and the grain of the voice is deleted, only a dry notation will be left. And, how could one give voice to the sign without causing noise? "There is no linguistics of the voice," Dolar writes, "merely the linguistics of the signifier."[99]

odd you think
off a click
on the split
orca swift
over pitch

It is both striking and telling that the French word for noise, or static, is the same as the word for parasite (*parasite*), as noted in chapter 1. Serres refers to the parasite/noise as the excluded third, that which makes communication possible.[100] The so-called channel by which we communicate also carries in it the disturbances and interruptions we try to expel or reduce – the "hiccups" of the body, or the medium. Without noise, there would be no signal. The parasite is an intermediary, or to put it differently: the intermediary (the medium and the go-between) is a network of parasitic relations. This is another aspect of the between-ness and intermediacy of the voice that Dolar describes, which Serres, in turn, portrays as chains and networks of parasitic relations. In the information network it is not always clear who is the parasite and who is the host. My data might be your noise; your message disturbs my signal. "Noise is a sign of the increase in complexity," writes Serres.[101] Furthermore, there is not just one system, but many that are simultaneously interfering: there is never just one parasite.

package tape
Pakistan
pragitate
project ape

No Hands

I am inclined to believe Lilly when he writes that Elvar analyzed the humanoid sounds as if to taste them, break them down, vary them, and put them back together. But, despite the fact that it is here, in the very way in which the dolphin plays with sound that

Lilly begins to imagine the existence of possible linguistic intelligence (as I interpret it), he nevertheless insists on language lessons where the dolphins are to solely focus on imitating English words. It is as if he believes that so long as the creature's brain is big enough, imitation will automatically kick-start its language machine into motion:

> Slowly but surely, your phoneme system masters the sounds. … It doesn't make any difference whether it makes sense or not. Then the next thing you have to do is hook the phonemes up and make words. And then you have to hook the words up to make sentences. And then the meaning, the semantic system in your brain, starts working. So we have to go through all these steps and if you're at all smart you'll realize that you have to have intensive contact with the other language, with someone who speaks it very well. I learned Swedish that way and that's what we did with the dolphins.[102]

I doubt that this is how Lilly actually learned Swedish.

Lilly's laboratory director in Nazareth Bay, the respected ethnologist and anthropologist Gregory Bateson, was not especially interested in teaching the dolphins to speak English. Lilly had succeeded in recruiting Bateson to the CRI laboratory on the U.S. Virgin Islands, and together with his wife Lois Bateson and stepson Eric, he moved to St. Thomas in 1963. The three dolphins on the island at the time were called Sissy, Pam, and Peter.* Several months later, in early 1964, a 22-year old named Margaret Howe appeared who had heard that there was a dolphin laboratory on the island. Noticing her talent for observing and describing the animal's interactions and behavior, Bateson offered her the possibility of spending time at CRI when she pleased. ("You think well on your feet," as he expressed it.)[103]

Howe joined the Communication Research Institute staff on St. Thomas on February 7 of that year and she would come to be central to Lilly's research on the island. At this point, Lilly himself had moved back to the mainland, as he was traveling frequently to present the many research projects underway at the two laboratories and seek further funding. Miami is closer to the supply of new dolphins and it is here that they are tamed and habituated to human contact by being isolated from contact with other dolphins for lengthy periods of time. The lab has relatively recently moved into the former bank building in Coconut Grove. They have a portable Linc-computer, freshly developed at MIT at their disposal, and they use it to search recordings of dolphin vocalizations for patterns. According to coverage in the *Miami Herald Sunday Magazine*, published on February 16, 1964, there are 19 people working in Miami with eight dolphins, as well as six people on St. Thomas. Lilly explains:

> We are pursuing an investigative path in a new science which one might call "anthropo-delphinology," involving the pair, man and bottlenose dolphin. We are also pursuing studies in the classical sciences such as neurophysiology, animal psychology, anatomy, biophysics, basic medical sciences and zoology.[104]

In the full-page photo that opens the Miami Herald article we see Scott McVay recording sound from a dolphin in an indoor pool. It is the same McVay who, together with Roger S. Payne, later published the scientific article "Songs of Humpback Whales" that drew on Kathy and Roger Payne's mutual work.

At this time, Lilly appears to be at the height of his career. Yet, he does not publish any scientific articles to back up the extravagant speculations – which he continues to present – that were made about dolphins in his popular science book published in 1961. As a result, many of his colleagues become increasingly critical of his work, and see Lilly as spreading myths that threaten serious dolphin research. Simultaneously, Lilly's interest for the dolphin studies seems to wane, as he becomes increasingly interested in the experiments he carries out with LSD in his updated water tank between 1964–66.

Howe is instructed to work on vocalizations using close human contact with the three dolphins on St. Thomas. The language training consists of single words and phrases such as numbers (1–5), personal names (Peter, Margaret, me, you), greetings (hello, bye-bye), objects (ball, toy fish, bucket), actions (speak, listen, come, go, give me). Howe becomes increasingly engaged in the work and notes that at the end of the workday everyone goes home, leaving the dolphins alone. She desires to live around the clock with a dolphin so that it can be immersed in language, as a human child would be. Lilly and Howe discuss

* The dolphins had come from Marineland and had even taken part in the filming of "Flipper" (the first Flipper film was released in 1963). Pam had been traumatized by the experience and initially avoided human contact as she had been harpooned several times during the making of the film.

the construction of a flooded house for "permanent" dolphin-human living. They decide on a preliminary experiment, 2.5 months in duration, which was to take place between June 15–August 18, 1965. Prior to this, from March 20–27, Howe undertakes a seven-day experiment in a tank with Pam. Between May 12–June 14 Howe makes changes to the facility in preparation for the 2.5-month experiment. The facility consists of two stories: a lower part with a deep dolphin pool which is naturally cleaned by the tidewater, and an upper laboratory with a balcony. There is also an elevator, which can transport the dolphins between the dolphin pool and the lab. Howe rebuilds the upper part of this structure and seals it so that it can be filled with water.

Bateson was not engaged in "anthropo-delphinology"; he wanted to study how dolphins communicated with each other. He did not believe that dolphins had a "language" in the sense that Lilly spoke about or that they thought in terms of objects as we hand-equipped mammals do. Rather, he speculated that dolphins communicate about and in terms of *relationships*. In his book, *Steps to an Ecology of Mind* Bateson writes, "I personally do not believe that the dolphins have anything that a human linguist would call a 'language'. I do not think that any animal without hands would be stupid enough to arrive at so outlandish a mode of communication."[105] Bateson expected that, for humans, dolphin communication would be completely unfamiliar. "We do not even know what a primitive digital system for the discussion of patterns of relationship might look like, but we can guess that it would not look like a 'thing' language. (It might, more probably, resemble music)." Might such a "musical" sort of communication teach people how to express something important about relationships, something that our own object-oriented language doesn't allow?*

LSD aids scientists in application of computer theory to human mind

If you heard a distinct clicking while studying, it just could be the relays of your human computer functioning.

The human mind has been likened to a very complex computer many times, but it is with hallucigenic drugs like LSD-25 that scientists are currently able to obtain an inside view of the human mind and thus apply computer theory.

John C. Lilly, director of the Communication Research Institute in Miami, Fla., described the application of computer theory to the human mind in a speech before 60 persons yesterday.

LILLY DESCRIBED the human computer as encompassing not only the brain but also certain vital organisms intimately connected with its existence (such as the heart).

The human computer, like any computer, has to be programmed to function. Some programs are obtained through the genetic transfer. The majority of programming is formulated through the senses in the early years of a man's life. This is by trial and error until language comprehension is gained.

Language eventually takes over and functions as an intermediary between the outside world and the human computer's circuitry just as FORTRAN language functions for electronic computers.

THE HUMAN computer is much more compact and versatile than any man-made computer today. But it has limitations; for example, the amount of material the human computer circuitry can handle.

Lilly said that man, during his waking hours, ties up most of the computer circuitry in keeping in touch with the world around him.

Because of limitations in what even the human mind can do, most persons have difficulty concentrating on something while still

John C. Lilly

Applied commuter theory to human mind

sorbing what is going on around them and keeping their bodies functioning.

LILLY, WHOSE national fame is based on studies of the communication processes in dolphins, described an experiment in which the human computer is relieved of most of its duties.

In this way scientists can get subjects to really look at themselves comprehensively from the inside instead of from the outside from the standard analyst's view.

To overcome normal barriers the subconscious mind (as one part of the human computer) throws up in the path of any serious introspection, Lilly said that the study utilizes LSD-25, a hallucinatory drug used in psychiatric studies.

LILLY SAID the drug works on the human mind as white noise

acts on the circuitry of a regular computer.

With the right amount of LSD, the subject's human computer noise level (thinking level) becomes the only thing he can comprehend. His mind is forced to look at itself.

Thus, by having the mind study itself, a knowledge of how this computer functions is also gained, along with psychiatric data.

LSD, ACCORDING to Lilly, has been criticized in professional circles as being dangerous (he agrees it is), and brain damaging.

Lilly feels the LSD technique is a large step forward in the search for comprehension of the human computer's inner processes.

He said he thought the apprehensiveness was more a rationalization than a barrier and will hopefully be overcome.

From the Archive: Lilly in Media
Article in unknown newspaper, February 11, 1966. Lilly Papers. Courtesy of John C. Lilly Estate and the Department of Special Collections and University Archives, Stanford University Libraries

From the Archive: A Pure 'Mind in the Waters'
Lilly and the modernized version of his floatation tank, called the Samadhi Tank, Malibu, 1990s. Photo: Philip Hansen Bailey. Courtesy of the John C. Lilly Estate

* "Can a study of the 'courteous' dolphin provide clues on how to help the human who suffers from schizophrenia?" Bateson expressed this idea in a presentation at CRI in Miami given in concert with the institute's five-year anniversary, which was reported in several newspapers. For example, see John Connors, "Dolphins Teach Us to Love? Sounds Fishy but It's True," *Miami Herald*, February 14, 1964. Lilly Papers, box 19, folder 2. Sloterdijk picks up a similar thread in his critique of the psychoanalytic fixation on thinking in object relationships, which he writes "is responsible for the almost grotesque misunderstanding of fetal and infantile modes of reality in early psychoanalytical orthodoxy." He claims that psychoanalysis still lacks a language of closeness and that "all psychological disturbances are distortions of participation." Sloterdijk, *Bubbles*, 291–299. In addition, John Durham Peters and Yolande Harris reflect on Bateson's suggestion that human language relies on "hands" in their respective works *The Marvelous Clouds* and *Scorescapes*.

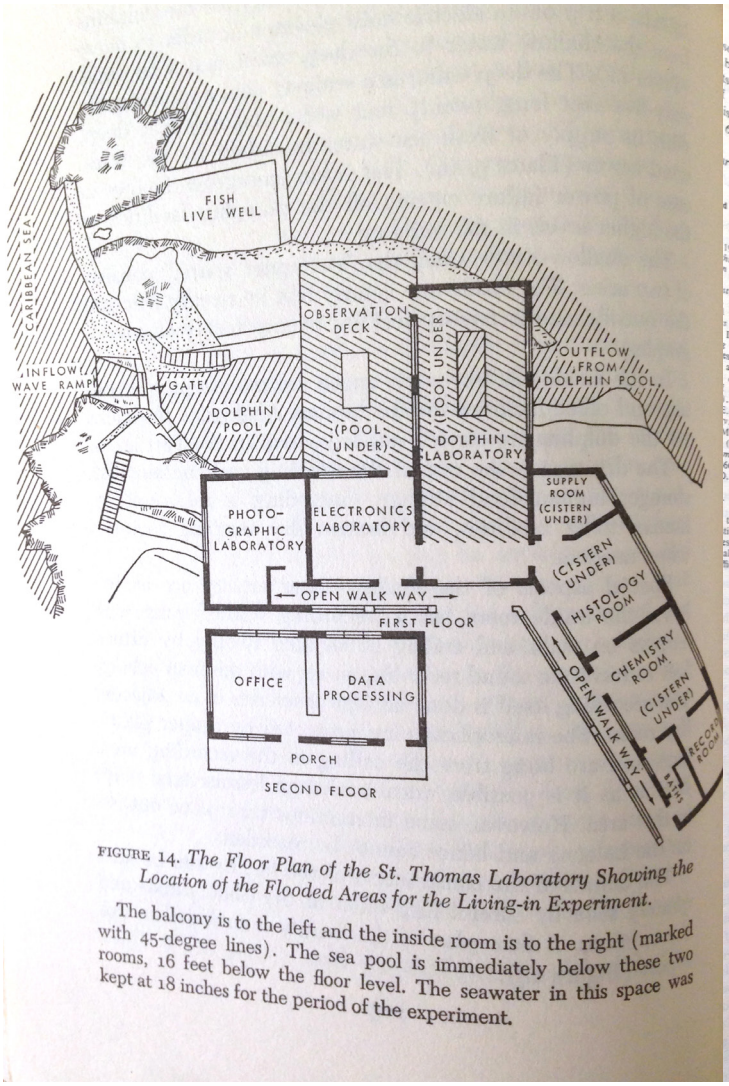
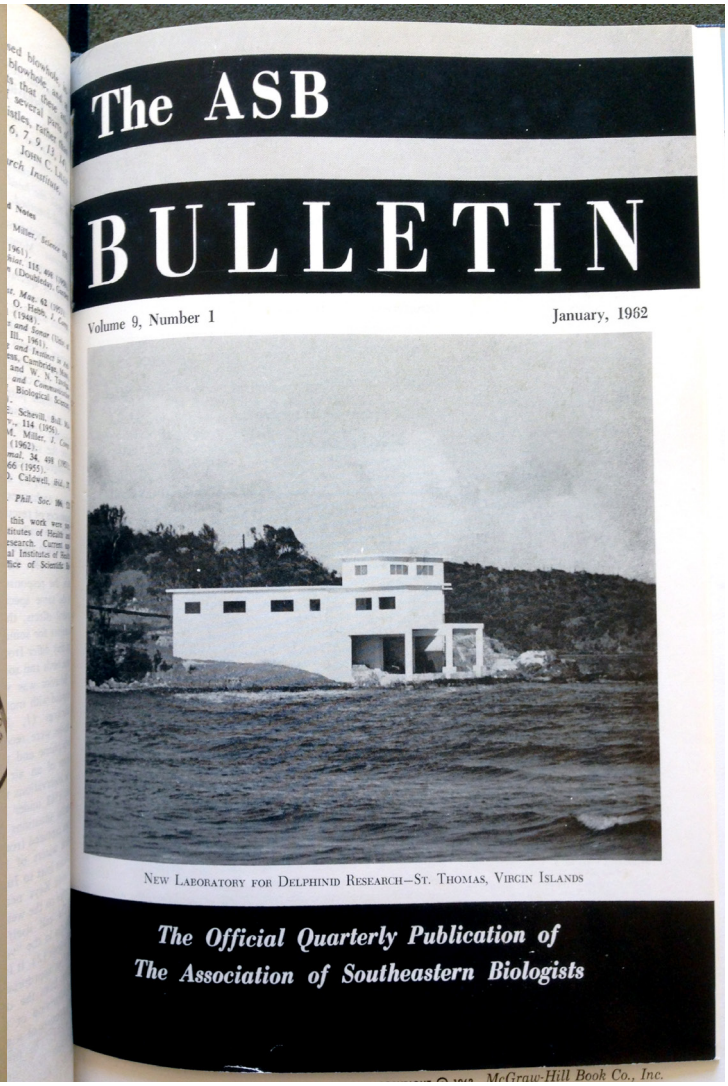


FIGURE 14. *The Floor Plan of the St. Thomas Laboratory Showing the Location of the Flooded Areas for the Living-in Experiment.*

The balcony is to the left and the inside room is to the right (marked with 45-degree lines). The sea pool is immediately below these two rooms, 16 feet below the floor level. The seawater in this space was kept at 18 inches for the period of the experiment.



From the Archive: The Dolphin Point Laboratory
Floor plan of the laboratory on St. Thomas, U.S. Virgin Islands. In John C. Lilly, *The Mind of the Dolphin: A Nonhuman Intelligence* (Garden City, New York: Doubleday, 1967), 226, fig. 14. Courtesy of the John C. Lilly Estate

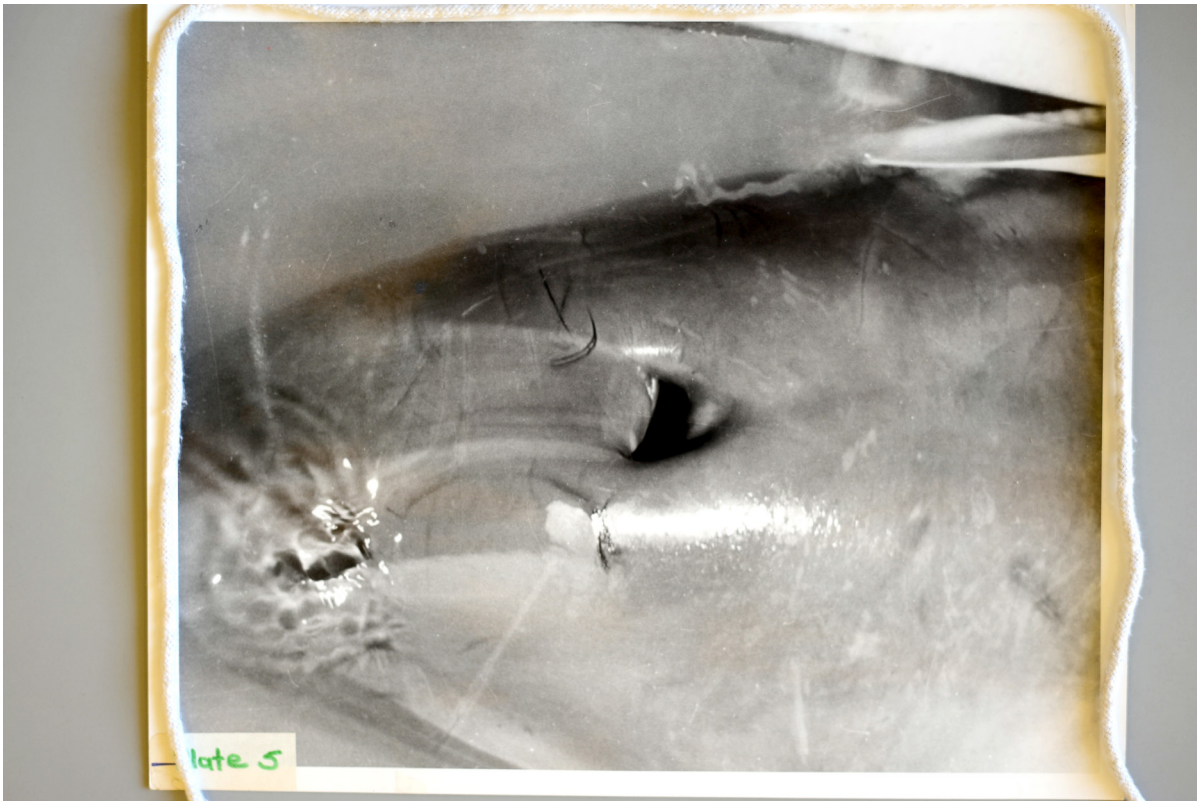
From the Archive: The Dolphin Point Laboratory
The Communication Research Institute (CRI) on St. Thomas, on the cover of the *ASB Bulletine* vol. 9, no. 1 (January 1962). Lilly Papers, box 21, folder 2. Courtesy of the Association of Southeastern Biologists and the Department of Special Collections and University Archives, Stanford University Libraries

From the Archive: Models of Communication
The "Wet Live-In," Margaret Howe and the dolphin Peter, CRI, St. Thomas, 1965. Lilly Papers, box 36, folder 14: Photo #21. Courtesy of the John C. Lilly Estate and the Department of Special Collections and University Archives, Stanford University Libraries

From the Archive: The Dolphin Point Laboratory
Sea pool, balcony, and the "wet room," CRI, St. Thomas. Lilly Papers. Courtesy of John C. Lilly Estate and the Department of Special Collections and University Archives, Stanford University Libraries

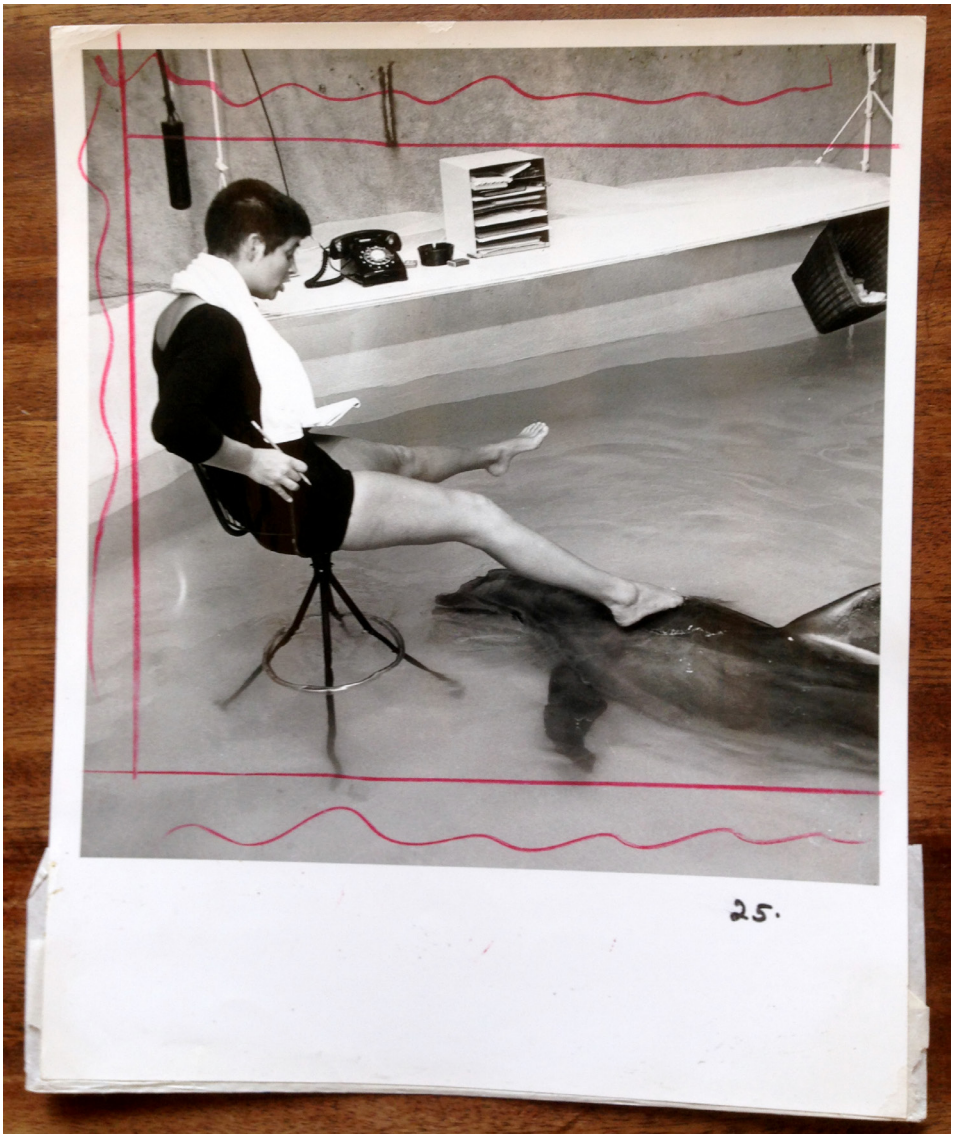
From the Archive: The Dolphin Point Laboratory
Margaret Howe and the dolphin Peter on the balcony, the dolphin Sissy in the sea pool below, CRI, St. Thomas, 1965. Lilly Papers. Courtesy of the John C. Lilly Estate and the Department of Special Collections and University Archives, Stanford University Libraries

From the Archive: The Dolphin Point Laboratory
Margaret Howe and the dolphin Peter diving, CRI, St. Thomas.
Lilly Papers. Courtesy of the John C. Lilly Estate and the Department of Special Collections and University Archives, Stanford University Libraries

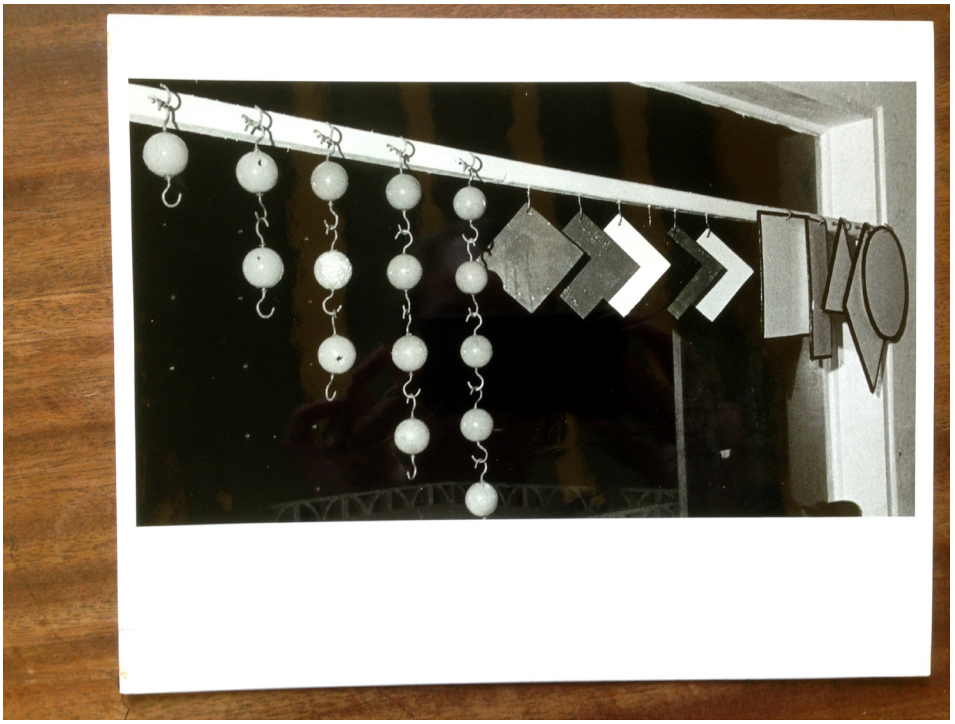


From the Archive: Orifice
The open blowhole of a dolphin. Lilly Papers. Courtesy of the John C. Lilly Estate and the Department of Special Collections and University Archives, Stanford University Libraries

From the Archive: The Dolphin Point Laboratory
Margaret Howe and the dolphin Sissy, CRI, St. Thomas. Lilly Papers. Courtesy of the John C. Lilly Estate and the Department of Special Collections and University Archives, Stanford University Libraries



From the Archive:
Models of Communication
The "Wet Live-In," Margaret Howe and the dolphin Peter, CRI, St. Thomas, 1965. Lilly Papers, box 36, folder 17: Photo 25. Courtesy of the John C. Lilly Estate and the Department of Special Collections and University Archives, Stanford University Libraries



From the Archive:
Models of Communication
Some of the apparatuses used to teach the dolphin Peter numbers, colors, and shapes. Lilly Papers, box 39, folder 7. Courtesy of the John C. Lilly Estate and the Department of Special Collections and University Archives, Stanford University Libraries

The Wet Live-In

The "Wet Live-In" is a 2.5-month preliminary experiment in the co-habitation of a woman (Margaret Howe) and a dolphin (Peter). The set-up includes a desk and chair, TV, telephone, a mirror, a gas cooking stove and a food cupboard, shower, toilet, a sound proof recording area with educational material for vocal lessons, an elevated bed surrounded by shower curtains, personal belongings, and access to food and fresh water. This is their common home, i.e. a zone of encounter, mutual adaptation, and coexistence. The home is filled with sea water, shallow enough for the human to walk comfortably, and yet deep enough for the dolphin to swim comfortably, with a temperature of 80–84 degrees Fahrenheit. A satisfactory air temperature is estimated to be 80–90 degrees Fahrenheit. It is important that human and dolphin can at any time leave this shallow-water area and enter the other zones in the facility: a deep-water area for the dolphin to be a dolphin in, and a dry area for human relaxation. Contact with members of one's own species should however be avoided to accelerate adaptation to and relationship building in dyadic isolation.

*Week one**
Settling in, various preparations and adjustments, fixing leaks. The first nights are terrible, but Howe adapts quite soon. Peter sleeps next to her elevated bed. Vocal lessons begin using counting and shapes. Peter seems to have lost his sense of conversation. Previously, he clearly listened and responded without constantly interrupting. Howe writes, "He has said, for the tape one clear word, 'BALL.' This came in the middle of one of his ramblings by himself and it could contain no meaning. But it is good pronunciation.... A good deal of the talk that Peter does when he is 'alone' is now in humanoid. Interesting and encouraging."

Week two
Speaking is going slowly. Peter is more inclined to play games. Howe is losing patience and tries to bring order to the lessons. "One time I let him ramble on and on, but I tried to copy all of his sounds. ... he seemed to test me with new combinations of sounds. ... We are getting much friendlier ... and I feel more comfortable with him. ... He has been practicing with the pronunciation of the letter 'M' from 'Margaret,' no doubt ... and is discovering that rolling slightly so that his blowhole is just under the water gives a satisfactory effect. ... I think incidentally that Peter is quite happy."

Week three
Peter begins to whine in a monotonous and persistent way, he seldom stops to listen. Howe loses her temper and yells at him on several occasions. Her legs from the knees down are numb and she can hardly stand because of the water. She has a strong urge to interact with other people. "I felt the physically depressing effects of the situation to the point where I found myself actually crying. ... And I would find myself in a fit of self-pity, depression. It was Peter himself who brought me out of it every time without exception."

Week four
Peter now uses humanoid sounds instead of dolphinese to catch Howe's attention. The recording sessions have improved, and Peter finally seems to listen again. He is very interested in games and often starts them himself. Howe notes that, "Peter has become sexually aroused several times during the week."

Week five
"Peter begins having erections and has them frequently when I play with him. ... I can feel his mounting frustration, and he is impossible to work with following this." Peter jams himself against Howe's legs, and is so excited he cannot control his behavior. She decides that Peter should leave the apartment and spend a day in the dolphin pool below with Sissy and Pam. Peter's attitude during lessons improves. He is most attentive, listens, and tries hard. His pronunciation is lacking, but inflection and pitch improves daily. When Howe listens to the recordings she thinks Peter's articulations have the "feel" of English, though they are not yet comprehensible. A month has passed: "I now am no longer thinking in terms of three months ... I think in terms of forever!"

Week six and seven
When looking back, Howe traces a development. It started as a game of "catch," bopping a ball to each other. Peter slowly and subtly would toss the ball shorter and shorter distances, making her come closer. Eventually he would lure Howe into gently rubbing his gums with the ball. Usually she would never allow him to open

* The following section closely follows the weekly reports that Margaret Howe herself wrote during the experiment, June 15 to August 18, 1965, as they appear in Lilly, *Mind of the Dolphin*, 254–284. All citations are from this chapter.

his mouth and show his teeth during a game, but now he is so still and gentle, almost entranced, that she allows it. Since the ball is in his mouth he cannot bite. Once this is allowed, Peter's next move is to sink down in the water, still with the ball in his mouth, and slide his open mouth up and down Howe's leg. She holds her breath and keeps an eagle eye on the ball, but allows the game. This being permitted, Peter opens his mouth further and uses his full set of teeth, running his mouth up and down Howe's leg. He is completely relaxed and his eyes are fully or partially closed, "obviously having a marvelous time." Then Peter "accidentally" drops the ball; Howe's safety factor is suddenly gone. "All of the above happened over several weeks; it has been a slow, gradual buildup. … Peter continues pressing this game … and slowly I gain confidence. I no longer demand that the ball be there in the beginning of the game to make me feel better." At this point it occurs to her what is going on; he is courting her. "Peter has worked long for this. … I had many fears … Peter obviously realized them and found ways, and props (the ball after all was a very convenient tool) to reassure me."

Week eight
Howe says, "Work, work, work." Peter says, "Play, play, play."

Weeks nine and ten
The effects of isolation and solitude over the ten-week period have been distressing. When Howe looks back she finds that she has left things out from the report, probably because she did not consider them important. E.g., to counter her feelings of depression and loneliness she turns to Peter to overcome them.

Peter has modified his sexual, unruly behavior to a more "humanized" level: "Now when his penis becomes erect, he no longer tries to run me down and knock me off my feet, rather he slides very smoothly along my legs, and I can very easily rub his penis with either my hand or my foot." She does not consider this to be a private thing, but it is a very precious thing. "I involve myself to the extent of putting as much love into the tone, touch, and mood as possible." It is a matter of respect, but also of not having to interrupt their co-habitation by sending Peter down on the elevator to the dolphin pool below. She writes, "I started out afraid of Peter's mouth, and afraid of Peter's sex." Howe realizes that it had taken the dolphin about two months to teach her that he could be trusted: "He is putting complete trust in me by letting me handle his most delicate parts. … Peter has established mutual trust. Could I have devised such a plan?"

Playing the Fool

I look at Margaret Howe in her flooded house, and her attempt to live on equal terms with a dolphin for 75 days. Howe's life in the water-filled home is frustrating. Peter is frustrated. Howe is following a daily routine of maintenance, language training, play and relaxation, cooking and cleaning; she is writing reports and diaries, recording and filing sound, caring for the dolphin's needs and her own.

For more than half a year (starting in October 1964) Howe has run the lab on her own; Lilly is there just five days a month. I see how Lilly, at a distance, follows the work of his "assistant," how he quantifies, analyzes, and transforms it into words in his books, reports, and articles. I see the traditional hierarchy that establishes the difference between Man, Woman, and Animal. I look at the larger system she operates within, the experimental situation at hand, the individuals co-existing within it, and the crucial question that emerges: Who is teaching whom? Intense communication is going on, but it seems to occur despite the language training rather than because of it, since the dolphin resists any attempts at discipline. Both Lilly and Howe initially have their minds set on teaching the dolphin humanoid sound, and "progress" is made when Peter gets the pronunciation right, when he listens and repeats, when he obeys. Meanwhile, Peter slowly teaches Margaret how to interact through play. When she realizes this, she allows Peter to lead the way, and their bodies communicate intensely. "When we had nothing to do was when we did the most," she later commented. Peter devotes much time to, among other things, investigating the space between Howe's fingers and toes.[106] Through play Howe and Peter are drawn into a dance where stimulus and response give one another meaning in a communicative situation where rules are constantly created, discarded, and transcended in and through action. Peter and Howe appear to have been engaged in meaning-making together that seemingly could have continued endlessly. The language lessons, however, only lasted for short periods, continually broken off by the "disobedient" dolphin starting to play.

The interaction between Howe and Peter reminds me of an experience that, I realize, has influenced me strongly. I think of it as a listening experience. On several occasions between 1999–2005 I invited friends and acquaintances to play a "game." The game was played by two players at a time and was prompted by the question: "Shall we play a game without rules?" That statement is of course contradictory, as games by their nature have rules. At the same time, it suggests a game plan and that the players will take turns making moves. Since there are no pre-set rules, the question of who wins, how, and when, is left open. The prompt to play a game without rules breaks open what a game can be and creates space for improvisation.* The place where the players find themselves becomes the playing field (which can gradually be expanded or moved). Everything that is interpreted as a move becomes part of the game. One of the games I played took place in a kitchen with a table and two chairs (empty cabinets and boxes) in a sublet apartment and it lasted four hours. It was not an endurance test, just endlessly interesting (If I do this, what will you do?). It began hesitantly, but became increasingly charged over time.

Although each game, depending on the place and the players, allowed for many different sorts of interactions there were some characteristics common to what unfolded. Everything was permitted within the framework of what the other person allowed. Yet, this (what might be permissible) was not a given, but was tested and re-tested again and again in each situation that arose. The situation was both pre-determined and constantly in creation. The game that emerged was a play of tensions. Each move became a way to test the limits of the other person's power of association (Are you following?). It created a competition where players tried to trump each other (What can I get away with?). At the same time, it created the possibility of order, structure, pattern. No one had the authority to decide for the other (for example, a ban could be immediately lifted simply by announcing its termination), and the limits of how far one was willing to go or let oneself be led could not be known in advance. One person declined to play when he quickly realized that he would engage in the game intensively, and knew he tended to go too far.

In the game played in the kitchen we constantly searched for new ways to see the room (situation, question) as it presented itself to us anew through each action and addition (I did that, you did this, I make the tap drip). Without the intention to "play the game" and the charge that this created, this interaction would have been utterly boring. The game would no longer have been engaging if we hadn't constantly challenged each other's way of seeing and acting. Each move was like passing a ball (lobbing, smashing, twisting it), but the "ball" was a shape-shifter as each move drew in a new object as the active component of the game. (Your move!) What does the object make you attend to? What does each move make possible? Did the move throw you off kilter, or even reveal a parable?** What has been passed on?

As a part of these games a certain parole, or a kind of speculative linguisticality not dependent on words, emerged that was specific to each situation and created anew each time.*** Despite that (or because of it) each particular parole was still possible to understand, and the interactions were experienced as deeply meaningful. But without candid communication the game stopped (Does this feel embarrassing or ridiculous? Is one too engaged in the game, at the expense of being considerate of the other? Or, is one being too polite for the game to work well?). Afterwards both players often felt as though they had been "unmasked." Reflecting on the field of play, looking back at what one had done, and how meaning had been created, it became clear that the experience was significant.

I recorded sound from the games and transcribed what was said. Afterwards, the dialogue, if any, was absurd and incomprehensible. It occurs to me now that in these experiments I played the role of both Howe and Peter, and even Lilly in the process of transcription. As

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* This can be compared to the situationist "game" as described by Guy Debord: "The situationist game is distinguished from the classic notion of games by its radical negation of the element of competition and of separation from everyday life." Quoted from "Report on the Construction of Situations and on the International Situationist Tendency's Conditions of Organization and Action," June 1957, in *Situationist International Archive*, trans. Ken Knabb, accessed June 23, 2016, http://www.cddc.vt.edu/sionline/si/report.html. The Situationist International was a collective of artists and writers in Europe, active in the 1950-60s, where Debord was a central figure.

** "Parable" denotes a story or saying in which something is expressed in terms of something else, as in an allegory (from Greek *parabole*, "comparison," literally "a throwing aside").

*** As suggested by linguist Ferdinand de Saussure, "parole" denotes the individual use of language by a person, as compared to "langue," the systematic, structured language in use in a particular society. Etymologically *parole* ("word," or "speech") is related to "parable." In English, "to be on parole" means permission to leave prison before the end of a sentence, originating from the French expression *parole d'honneur*, "word of honor." *To leave before the end of a sentence*. This sentence alone signals that one might be locked in both through and by language. Parole then (as well as the telling of a parable) can only be exercised if there is trust and one is allowed to wander freely, on temporary release from langue-as-prison.

participants and co-creators we had practiced a mode of listening that could be described as an intra-action of voice, sound, body, and matter. An a/oral sensibility was activated, but the oscillations that occurred were not only confined to sonic and semantic reverberations, they also involved physical objects, bodies, and our immediate environs. In relation to the parasitic, Serres writes of games as well and the act of passing on. He calls that which is passed on a "quasi-object." It is the very handing over of the quasi-object that "weaves the 'we,' the collective" in the game.[107] The quasi-object is both transitory and constitutive. It is not only the ball (the quasi-object) which is put into play in a game, but also the "we" and the "I." "This quasi-object that is a marker of the subject is an astonishing constructer of intersubjectivity," he writes.[108] And, Serres asks: is the parasite being or relation? It seems to be both, much like the quasi-object.

Lilly holds Howe in high respect for her ability to handle, play, observe, and communicate with the dolphins. But, it is as though Howe's *how* eludes him. When Lilly, with Shurley, writes about the early experiments on extreme isolation he is highly sensitive to how the experimental set-up and design influences the results, as well as the importance of the safety man in creating *trust* (though Lilly calls this indoctrination). But, that same contextual, relational, and performative awareness does not seem to apply to Lilly's analysis of the wet live-in. In this case, Lilly speaks of human-dolphin communication in terms of control, which paradoxically enough rests on the fact that a "particularly motherly type of woman" has the patience to give loving care, something Lilly admits that he himself lacks.[109] He uses phrasing such as "corrections" in the feedback and "reward-punishment interactions."[110] It seems that in Lilly's analysis there simply is not space for the sort of open-ended interplay that Peter and Howe engage in. Nor for trust.

When Lilly states that dolphins are an acoustically oriented species and that we humans are visually oriented, he is referring to how well-developed the brain is in various mammals in terms of processing aural versus visual impressions. But, at the same time, he touches on something much bigger than that. I'm tempted to say that what Howe is revealing, and living, is the complex nature of oral communication, which is embodied, multimodal, performative, impossible to quantify or reduce to basic components, and not possible to capture and codify as text. Yet Lilly tries to study and structure it according to a textual and reductive logic. When this fails he refers to "motherhood" and the "female," "patience," and "care." Yet, these "loving" qualities are deployed hand in hand with harsh treatment used to tame the wild animals.* With this focus on communication-as-control, it is revealing that Lilly, in the ultimate freedom he experiences while floating in his water tank, chooses to call the voices he encounters there as coming from a *Control Office*.

I am reminded of another listening experience, a workshop I attended on a specific style of performance work called ***bouffon***, with roots in the street theater of medieval Europe. Experiencing bouffon radically changed my perceptions; it attuned me to the violence of language, and what it means to be conditioned by discourse. It was as if the air we breathe suddenly had become visible and viscous. The workshop instructions were quite simple: take on a bouffon personality, roam around in a gang of five, imitate, distort, be obscene and rude, mock everything and everyone – especially politics, morality, religion, gender, economy, science, and other institutions of power. As bouffons you are outcasts, crippled, poor, grotesque, ugly. As director Giovanni Fusetti explains, you represent elements of your society "in an amplified, distorted, exaggerated way, therefore provoking laughter – or outrage."[111] But, an obstacle was inserted in the exercise: we were required to perform in the presence of a "King." Thus, we were licensed fools, like the court jester, not "natural fools" that could be excused because of simply not knowing better (idiots). The jester is licensed to speak truth to power, but only to a certain degree. When the King snapped his fingers, the mockery had gone too far and we had to brown-nose and bootlick. But, too much flattery can become boring, or even threatening – especially if you are clever at adopting the language of the elite – thus the King would soon snap his fingers again. Ideally, snapping shouldn't even be necessary, as a bouffon you are an antenna and a shape-shifter. Bouffons seek out the borders; they trespass and then quickly change direction again before the situation gets completely out of hand. They are parasites, but the host

* The wild dolphins, once captured, are first tamed in order to then become "children" in the hands of a new "mother," through isolation, constant contact with people, as well as starvation, which forced the dolphins to approach the humans for food. According to Lilly, food and physical contact resulted in feelings of pleasure, which made the animals willing to cooperate. This is the basis of the so-called pleasure-contact method of learning and interaction. Lilly, *Mind of the Dolphin*.

is also a parasite; the King needs the jester to legitimize his position in the system. A parasite may disturb, but it also strengthens. "Systems have been immunized by becoming more complex. They become stronger by becoming more tolerant. They were acclimated to the revolutionary, the madman, the deviant, the dissident: an organism lives very well with its microbes; it lives better and is hardened by them."[112]

Performed in the streets, the audience becomes the King, who is entertained, mocked, flattered and provoked, and thus acts as both the butt of jokes and the border patrol at the same time. A skilled bouffon quickly reveals the limits of what can be said and done, where and when, and in what way. Bouffons enact a kind of "stupidity" that demands street smarts, an instant power analysis, and a contextual and relational understanding – as well as a refusal to understand that which is considered to be common sense. Acting as a bouffon is, in fact, a very efficient way to map the lay of the land, but it demands a considerable amount of playfulness and spontaneity.

The exercise revealed several things for me, for example: the unstated power inherent in any given situation; the shrinking space of the carnevalesque in modern society; as well as the liminal space between institutional critique and the institutionalization of critique.* Furthermore, the hypersensitivity and constant readiness of the bouffon to shift (snap!) between personalities and speech-genres felt hypnotic. I did not feel hypnotized in the sense of being manipulated, rather I developed a stereoscopic view where two different mindsets where active at the same time. As a bouffon one was immersed yet distanced; stupid yet sharp; acutely aware of what the power system demanded of you, and at the same time ruthlessly abusing it. One was a slave, yet completely free. One became a limit-cruiser. For me, 20-years-old at the time, it was a transformative experience, and it ignited a process of unlearning – one which is still unfolding.

The experience of playing the bouffon can best be grasped as a totality, where timing, rhythm, and rupture are core features.** Judgement, effectiveness, control, skill, pulse, pattern, progression, disagreement, and estrangement are involved. Bouffons sabotage monological speech; they fart in the face of power, and create rupture through laughter and obscenity. They have a way of saying and doing things that makes the performative aspects of a particular situation visible, in contrast to what the official narrative might assert, and the body is here an important tool.*** Intense listening is required.

Though Lilly speaks of participatory observation and criticizes models of human-nonhuman communication "based on purely logical, linguistic, and computer grounds," the conclusions he drew from Howe's experiment were that extensive contact is required over a long period of time for an experience of interconnection ("interlock") to occur. But, the kind of interconnection Lilly is referring to is of minds ("biocomputers") only.[113]

The year 1965 seems to be the beginning of the end. There is a continued lack of scientifically acceptable research results, funders start to question the value of the work, as does Bateson. Lilly even uses LSD on the dolphins to see if that will lead to a breakthrough, something Howe and Bateson object to.**** Bateson leaves CRI, but Howe continues the vocalization exercises with Pam, Sissy, and Peter. Money quickly dries up and Lilly is forced to close the laboratory on the island.***** In October 1966 the dolphins are flown to

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* It is not uncommon for artists to be employed as licensed fools – even though their tools are not necessarily laughter or obscenity. Equally often they can be dismissed as "natural fools." In the bouffon exercise, the "carnival" was limited to a timespan defined by the snapping of fingers, but this "exceptional" space-time could also manifest itself as an exhibition, intervention, happening, or performance. The King (i.e. institution, corporation, commissioning entity, or the like) cannot control the fool (silence the critique), but by inviting the fool and allowing her to speak freely he can institutionalize the critique and use the fool to strengthen his "brand" – to speak in corporate terms. This engagement is risky for both parties, but without this element of risk both King and fool lose face and credibility. Artistic freedom could thus be interpreted in terms of the carnivalesque, i.e. a temporary reversal and rethinking. For artists who are tired of the "exceptional," this framing is both a burden and a possibility.

** Bouffon can be transferred as a practice, but it does not generate the same effects every time it is practiced (it is not reproducible in a scientific sense).

*** The body of the performer, as well as the body of the audience are important. To be part of an audience is not a passive position; it is something we do, sometimes even a role we play. Furthermore, it is something we choose to do. We can turn the concept around, and rather than the performer giving the audience something, we can say that as a performer we have been "given an audience," i.e. permission to meet the King. Power is in play at every level. How is the network of parasitic relations played out?

**** For Lilly this was not a spur-of-the-moment whim. As Burnett makes clear: "As a federal researcher Lilly secured the product (which was a controlled substance) from Sandoz Pharmaceuticals under an NIMH contract, and was explicit about his intentions to give it to the dolphins." Burnett, "Mind in the Water."

***** "By the end of 1965 … Lilly faced devastating evaluations from a visiting board of grant examiners – an assessment of his work that effectively torpedoed his research program and shuttered the Nazareth Bay laboratory. Incensed, Lilly fell back to Miami, writing furious letters to old allies and accusing the Navy scientists of staging a military coup in Tursiops research." Ibid.

the lab in Miami, where five other dolphins are still being held. The lab and the dolphins are not well taken care of; the limited interaction of daily upkeep and the small, dark indoor pools are a nightmare compared to the former lab on St. Thomas. Howe is unaware of these conditions. She receives word of Peter's death by telephone.

Close Encounters

For decades Lilly held on to his conviction that sensory deprivation is comparable to what it is like to live in water, as if the dolphins were not constantly bombarded by sensory input as we are on land. Lilly sought to radically question established belief systems, but always overlooked the body. I marvel at this blind spot and that – despite all the criticism that was otherwise directed towards him – others seem to have failed to challenge him on this particular point. That is why Lilly continues to haunt me, I realize, because he represents many of the dominant cultural perceptions that shape our thinking and doing – our voice – and which continue the long tradition of erasing the body, no matter how radical or alternative the ideas otherwise might be.

The photo of Lilly's respiratory mask with all of its openings blocked flutters suddenly past my inner eye when I, by chance, read that: "The Dogon people of Africa, in their mask rituals, have a deaf-mute mask that is kept physically apart from the others, apparently its only function is to signify nothingness."[114]

The dyadic isolation of human and dolphin that was staged in the wet live-in is in many ways similar to a prison. It makes me think of Simone Weil who wrote: "Two prisoners whose cells adjoin communicate with each other by knocking on the wall. The wall is the thing which separates them but it is also their means of communication. … Every separation is a link."[115] That which separates connects. In this case, it is the bodies that separate the prisoners in their shared home. Peter is incessantly interested in Howe's anatomy; besides the space between her fingers and toes he devotes a great deal of time to studying her knee, as if he wants to understand how it works. And, they have all the time in the world.

Time – and bodies – shouldn't be underestimated. What about gender and Margaret Howe's "motherly" qualities that Lilly repeatedly pointed out? Let's drift off into the field of primatology for a moment, at a time when many researchers left the confines of the lab to study animals in their natural habitats. Is it a coincidence that it was mainly women who through extensive field studies in the 1960s and 1970s would change how animals are observed and interacted with, hence challenging notions about what it is to be human?

Howe had no formal education when she first approached Bateson at the St. Thomas lab and offered to help with the dolphins. He gave her permission to do so when he saw that she was a skilled and committed observer ("you think well on your feet"). Likewise, the now famous primatologist Jane Goodall didn't have a university education when she, 22 years-old, approached and impressed the prominent paleoanthropologist Louis Leakey in Kenya in 1957, who subsequently offered her a job. In 1960, Goodall was sent by Leakey on her first mission to study a community of wild chimpanzees in Tanzania. One of Goodall's first major discoveries was that chimps, contrary to expectations, used tools. This discovery would force scientists to redefine what was distinctly "human" about humans. Goodall noted that the chimpanzees she studied kissed and embraced each other, and had a complex social organization. When she gave them names rather than numbers and described their individual personalities, she was ridiculed and accused of anthropomorphism, sentimentality, and being anecdotal.

A prominent figure, Louis Leakey acted as a powerful male mentor who made it possible for women to penetrate a male dominated field.* He also regarded women to be "more patient and perceptive observers than men."[116] Hence, he entrusted Diane Fossey with an assignment to work with mountain gorillas in Congo and Rwanda, and Biruté Galikas with an assignment to study orangutans in Indonesia. Instead of emphasizing theory and observation at a distance, or only studying animals in captivity, these three women (who have been called the "trimates"), ventured out into the field, and lived for decades amongst the apes. Their methods and findings would revolutionize the field of primatology, which in turn gave rise to a suggestion

* Linda M. Fedigan gives six possible and synergistic explanations as to why there are a relatively large number of women in the field of primatology, as compared to similar disciplines (though not compared to the three "parental disciplines" that gave rise to primatology: anthropology, psychology, and animal behavior), one of them being the importance of powerful male mentors. See Linda M. Fedigan, "Science and the Successful Female: Why There Are So Many Women Primatologists," *American Anthropologist* 96, no. 3 (September 1994), 529–540.

that perhaps women were better observers not only due to their patience, but also their "natural emotional connection" with animals and "closeness" to nature.[117] Primatologist Linda M. Fedigan has delved into the myth "that primatology is a type of mothering activity," simultaneously debunking the ridiculous suggestion that women are willing to endure years of sustained effort and extremely difficult conditions in the jungle because they want to work with "cute, furry little animals."[118] Fedigan refers to this as the "big brown eyes hypothesis," and it says something about how female primatologists have been portrayed in popular media, often shown cuddling ape infants. To do what the "trimates" did – to sit with and observe animals up close in the wild and be accepted enough into primate groups to follow them for years, was hardly considered possible at the time. Is this why their accomplishments were referred to as stemming from the attributes of the "natural" female disposition?

"He wanted someone with a mind uncluttered by and unbiased by theory, who would make the study for no other reason than a real desire for knowledge," Goodall writes about Leakey in her book *In the Shadow of Man*.[119] Leaky apparently disapproved of both the theories and the methods in fashion at the time in the very young field of primatology. Since the 1920s a hallmark of Western primatology had been a theory of dominance-hierarchy as the most important principle of primate organization, based primarily on studies of baboons.[120] Female baboons were not regarded as having a social role beyond acting as dedicated mothers and being sexually available to the dominant male. This view also influenced models of early human culture, a "baboonization" as Fedigan calls it of evolutionary reconstructions giving rise to the savanna theory of protohominid society and the male hunter.[121] An array of female scientists, not only the famous "trimates," would come to question and change these stereotypes during the 1970s. With them, the field of primatology would shift substantially due to alternative methods and approaches. For example, if each individual in a social group is studied for an equal amount of *time*, not just the dominant ones that draw the attention of the researcher, different results emerge.

As scientists simply started to pay more attention to what female primates did, both sexes as well as the relationship between the sexes came into view. For example, Thelma Rowell, who studied both wild baboons and those living in captivity extensively, overthrew the concept of male dominance and argued that many characteristics that had been considered to be part of the normal baboon repertoire might, in fact, have been related to artificial feeding practices in previous studies. Where others saw aggressive and dominant males, she saw the distribution of peanuts and other tidbits.[122] She brought attention to the influence that a research setting could have on the results. Donna Haraway suggests that: "The unifying theme in the primatology done by women has been their high likelihood of being skeptical of generalizations and their strong preference for explanations full of specificity, diversity, complexity, and contextuality."[123] These new approaches came to legitimatize empathy as a prerequisite for objectivity, as is emphasized in the work of researcher Barbara Smuts who travelled to Kenya in the mid-1970s to study baboons. Based on Smuts' humorous accounts of what it takes to be an objective researcher in the field, Haraway writes:

> Trained in the conventions of objective science, Smuts had been advised to be as neutral as possible, to be like a rock, to be unavailable, so that eventually the baboons would go on about their business in nature as if data-collecting humankind were not present. … Smuts recognized that the baboons were unimpressed by her rock act. They frequently looked at her, and the more she ignored their looks, the less satisfied they seemed. … Ignoring social cues is far from neutral social behavior.[124]

Smuts began to respond to the baboons and to adhere to their cues, which signaled emotions and intentions. She changed the way she moved, sat, and the postures of her body, and instead of avoiding her, the baboons started to exchange looks with her; this marked a significant change in their relationship. Haraway concludes:

> The result was that the baboons treated her more and more as a reliable social being who would move away when told to do so and around whom it might be safe to carry on monkey life without a lot of fuss over her presence. … Only through mutual acknowledgment could the human being and baboons go on about their business.[125]

When Smuts stopped acting so strangely, as if she was a "rock," the baboons could relax. Being objective implied being responsive, and only then could she continue to collect her data.

Haraway emphasizes the importance of time rather than gender. And, fittingly, Japanese (male) primatologists came to similar conclusions as the female primatologists after spending a long time in the field, becoming aware of other sorts of relationships and social structures when they worked together to study the same group of monkeys in great detail over a ten-year period. (In contrast to this collective practice, the trimates clearly followed a Western norm of the lone hero venturing into unknown terrain, formerly untouched by man.) Haraway describes another similarity that can be expressed by the Japanese concept *kyokan* which designates "the particular method and attitude resulting from feelings of mutual relations, personal attachment, and shared life with the animals *as the foundation of reliable scientific knowledge.*"[126] Again, empathy stands out as a crucial prerequisite for "objectivity," which should not be confused with the idea that these entangled situations are in any way equal in terms of human-animal interaction, or devoid of power dynamics.

Bodily presence and interaction, time, empathy. I dare say that these are to a large extent still considered to be "womanly" abilities, or duties. Linguist Louise Banks plays a key role in the science fiction film *Arrival*, released in 2016.[127] She is the only woman whose expertise is called upon by the U.S. Army when twelve alien spaceships suddenly land on earth, positioning themselves on different spots around the globe. In the company of male soldiers and scientists she attempts to break through the communication barrier to understand why the aliens have come. And, time is (of course) running out with humanity on the brink of global war. When entering the enormous alien space ship the American team encounters a glass wall that separates their atmosphere from that of the aliens. It shines white, as if there is some sort of fog behind it. This is their interface, a partition that comes to serve as a touch screen when the use of sound and visual signs alone greatly frustrates the female protagonist. "They have to see me," Banks mumbles as she tears off the clumsy, protective gear that encapsulates her body, and heads out to touch the screen. Her gesture is responded to as a tentacle-like "hand" presses against the surface from the other side. The wall separates and connects. In the film, the affective, emotional body of the female researcher is depicted as that which makes a difference in this environment. Here too, "motherly" qualities as well as the mother-child relationship are central. Her courage to stand up to authority, as well as the stubbornness with which she does what she perceives as right is portrayed as being more instinctual than based on conviction. Pivotal moments in the story are linked to sudden hunches, depicted as flashbacks to memories of her own child as she discovers the world and acquires language. In one of these flashes, Banks snaps at her then teenage daughter, "If you want science, ask your father."

Language both connects and divides. Language also influences everything we think and see, Banks says. The film refers to this idea as linguistic relativity, or the Sapir-Whorf hypothesis – and language will prove to be the very gift (tool) the aliens wish to offer humanity. If one learns their language, one will perceive time differently. Hence future, past, and present mix. Immersing herself in the language of the other species, Banks is literally re-wiring her brain. The writing of the semi-aquatic aliens, the "heptapods," turns out not to be based on representations of sounds, as in the Latin alphabet. Instead, they convey meaning in the form of circular logograms with neither beginning nor end, composed in three-dimensional space. This is referred to as non-linear orthography, which implies that heptapod thinking is non-linear as well. The circular logograms emerge from squid-like ink that floats and takes form in their semi-liquid environment, before it dissolves into nothingness.

Incidentally, in 2016 it was suggested that dolphins communicate with a sono-visual language, projecting holograms with their echolocation beam. These were made perceptible to the human eye by researchers through imaging techniques and depicted as circular images.*

The fictive Dr. Banks is the "dolphin" in this encounter – the one who learns an alien language and is radically changed as a result. Her body is the medium, but she is allowed to talk back, not only expected to prove that she can mimic. Furthermore, she has technology

* The pictorial information was extracted and translated into images in several steps in a process of visualization (from digital audio recordings of the echolocating "click train" bursts of the dolphins to digital images). The somewhat tentative claim was made that this is how dolphins "see." (In the 1970s Lilly similarly speculated that dolphins communicated through sending, or beaming, acoustic pictures to each other.) The research project, Speak Dolphin, was conducted in the framework of the non-profit organization Global Heart, Inc. The first peer reviewed paper appeared on July 15, 2016. See Jack Kassewitz, Michael T Hyson, John S Reid and Regina L Barrera, "A Phenomenon Discovered While Imaging Dolphin Echolocation Sounds," *Journal of Marine Science: Research & Development* 6, no. 202 (2016), http://dx.doi.org/10.4172/2155-9910.1000202

at her disposal. Writing, audiovisual recordings, and computer programs serve as tools (bodily extensions) that help her decode, learn, and immerse herself in the language of the other species. As a linguist, she searches for patterns: are the sounds and ink-formations random or do they reveal complex structures?

If statistically analyzed in accordance with information theory, dolphin sounds appear to be highly complex and share many features with human language, even if we don't know what the sounds mean. They could potentially have a language even if this kind of analysis can't prove it. Thus, dolphins continue to play a role in the search for extraterrestrial intelligence (SETI).[128]

"It is conceivable that real-time contact and interaction with a social intelligence may occur in the future. A serious look at the development of relationship, and deciphering of communication signals within and between a non-terrestrial, non-primate sentient species is relevant."[129] Though this might sound familiar, it was not written by Lilly in the 1960s, but in 2009 by Denise Herzing, a psychologist who has been called the Jane Goodall of the sea. Herzing and her team have been working with the same pod of Atlantic spotted dolphins in their own natural habitat in the Bahamas since 1985, spanning three generations. One of their research aims is to identify reoccurring sounds and structures that could be the basis for language, and to set up a system for two-way communication through co-creating an artificial language with the dolphins, which features sounds the dolphins already use. The prototype device and system under development, called CHAT (Cetacean Hearing and Telemetry),* could be said to serve as an extension of human sensory perception in the sense that with the use of light signals it helps the human to detect the direction from which a sound has been emitted. Through audification the device scales vibratory signals into human hearing range (though the full range of frequencies is still not perceptible) and enables the human to respond with prerecorded sounds while interacting underwater through the use of playthings such as scarf, rope, and sargassum (a type of seaweed). The interaction is voluntary and based on mutual interest, and through it behaviors and objects can potentially be associated with specific sounds. Herzing's version of a wet live-in is almost the reverse of Howe's, here it is the human who must adapt the most. It also resembles the OOZ-sites, the reversed zoos, designed by Natalie Jeremijenko (mentioned in chapter 1) in that the animals are voluntarily present. Additionally, the CHAT-device potentially enables the dolphins to request things or behaviors from the human by making a certain sound which is then instantaneously translated into the human equivalent – "sargassum," for example. Herzing has deep ethical concerns and stresses the importance of establishing trust, long-term relationships, and the use of non-invasive techniques, while "strictly adhering to etiquette and respectful relationship at all times." Like primatologist Barbara Smuts, Herzing acknowledges that dolphins have cultural and social codes which must be learned and respected by humans.[130]

Earlier studies have shown that dolphins can learn to understand artificial languages. Louis Herman of the Kewalo Basin Marine Mammal Laboratory in Honolulu worked with captive dolphins from 1970 to 2004. The dolphins were schooled in two different artificial languages, one based on bodily gestures and another on electronic sounds. On request they could not only perform routines in the water (such as placing a ball in a hoop) but also invent new routines when asked to "create," and even perform these invented routines in sync if asked to "create, tandem." They could also read visual signs, i.e. conduct tasks after having been shown symbols. They grasped word meaning (semantics), grammar, and word order (syntax).[131] Yet, while developing these abilities, the dolphins were not provided with any means to use the system to request things from humans. It was a one-way communication.

Though dolphins have, to a limited degree, learned to understand, respond, and use human-created languages, no human has yet learned "dolphinese," if it exists. When it comes to the potential existence of an acoustic natural language among dolphins, Herzing reminds us that we don't even know if dolphin use "words" at all, except for the individual signature whistles that seem to have the function of "names." Do they even think in terms of objects, an assumption that Bateson questioned? Then again, what qualifies as

* This system, introduced 2011 and based on work initiated in 1997, uses pattern recognition algorithms and has been developed in collaboration with artificial intelligence researcher Thad Starner, as well as marine cognitive scientists Adam Pack and Fabienne Delfour. For an explanation of the system, see "CHAT Research," on the Wild Dolphin Project website, accessed April 10, 2017, http://www.wilddolphinproject.org/our-research/chat-research/. To learn about previous versions of the two-way interface, see Denise L. Herzing, F. Delfour, and A. A. Pack, "Responses of Human-Habituated Wild Atlantic Spotted Dolphins to Play Behaviors Using a Two-Way Interface," *International Journal of Comparative Psychology*, 25 (2012): 137–165.

"language" is not undisputed territory.* Herzing's approach to communication is multimodal, and includes behavioral context. Language can only be understood in a larger context, as part of a communicative system. Beyond sound, dolphins use body postures, touch, mimicry, synchrony, and possibly chemical signals to communicate.[132] Herzing writes, "Past studies have focused on their acoustic communication, but even in the analysis of complex human language, context and information are distributed and interactive and the interplay of multi-modal signals and social dynamics is the essence of complex information."[133]

The last few years have seen a steady increase in scientific reports as well as articles in the popular press of animal intelligence, especially amongst social animals – from bees to wolves, to parrots, magpies, pigs, elephants, and orcas. The dividing line between humans and animals is in constant renegotiation as it becomes apparent that animals too have abilities that were previously thought to be exclusively human. This includes, for example: the ability to create and make use of tools; self-awareness and the ability to understand another individual's perspective; episodic memory; as well as the existence of culture, empathy, altruism, language, lies, and art.[134] The subject remains controversial, but this border has become all the more blurred and difficult to draw. If the claim that dolphins are intelligent was a bold one in the 1960s, today we are challenged by the assertion that plants are intelligent.[135] Are we ready to accept that plants are sentient and intelligent beings?

There is, still, no universally agreed-upon concept or theory of intelligence and its definition varies with the field in question. When it comes to artificial intelligence, for example, it is now not only logical thinking that is in focus (Deep Blue, a computer, finally defeated Garry Kasparov – a grandmaster and World Chess Champion – in 1997). Rather, contemporary AI research is guided by a situated and embodied approach. In the field of robotics it is not chess but the team sport of soccer that stands as a preeminent model for intelligent behavior and interaction (could a robot team become world champions in soccer?). Lilly measured dolphin intelligence on a human, logical, and linguistic scale. Brain size relative to body size (the so-called encephalization quotient, or EQ) and a human-like language were, for him, core components in this measure. He speculated on the possibility of having conversations with dolphins and what humans could learn from this "ancient" society. But, it seems as though that which can be learned is on a different scale altogether. Lilly held dolphins in high regard, but his approach was anthropocentric. Generally speaking we are still in the habit of comparing and rating animals according to a human-centered notion of both language and intelligence.

The cetacean and primate ancestral lines departed some 95 million years ago, and since then we have been on two different evolutionary trajectories. In terms of brain to body ratio (EQ), dolphins are second to humans, which Lilly pointed out early in his career. In terms of the most convoluted brain surface though, which we often pride ourselves on possessing as an indicator of complex processing abilities, humans are, as biopsychologist Lori Marino has shown, surpassed by orcas (the so-called killer whales, the largest among the dolphins). Since the 1980s Marino has studied living cetaceans as well as their brains. Dolphins and humans share some sensory systems, but dolphins possess other sensory abilities that stretch beyond the human realm of perception. In dolphins, the auditory system is located next to the visual in a different part of the neocortex, allowing their brains to translate sounds into images and images into sounds. In fact, dolphins have two primary auditory systems located in different parts of the brain. In short, the intelligence, cognition, and physical form of dolphins has co-evolved with their environment in a way that makes them remarkably different from both humans and other mammals. Yet, as social, playful beings we resemble each other. Some parts of the orca brain are more elaborate than the human brain: orcas have an "extra" lobe that seems to be related to the processing of emotions and social cognition.[136] Marino suggests that this lobe "may be essential to the intimate social and emotional bonds that exist within dolphin communities."[137] She

* Where some, such as Laurance R. Doyle at SETI Institute who finds dolphin exchanges to be highly complex if studied with the use of information theory, would call the use of names and referential signaling a language, others, such as Justin Gregg at the Dolphin Communication Project, do not. Gregg demands that a language have the breadth and scope to be used for "limitless expression" of concepts and ideas and he is skeptical that this characteristic is to be found in any animal communication system besides the human one. See Justin Gregg, "Dolphinese," in *Are Dolphins Really Smart? The Mammal Behind the Myth* (Oxford: Oxford University Press, 2015), e-book. Denise Herzing and Lori Marino are more optimistic despite the many obstacles that exist in conducting related research. These include the difficulties of working in an aquatic environment, challenges related to finding the motivational key for dolphins to create and use an object-oriented language with humans in the wild, and the different auditory and sensory capacity of humans as compared to dolphins. In this alien environment, what the human lacks in biology, she must replace with technology, as John Durham Peters points out in *The Marvelous Clouds*.

offers the speculation that orcas and other cetaceans might have a distributed sense of self. Cetaceans are descendants of herding animals; they were once ungulates, hoofed animals, and could be thought of as "super-herds." The strong social cohesion among cetaceans (which may in some cases explain mass strandings, as they will not leave an injured member behind) could potentially indicate a sense of self that is strongly tied to their social group.[138] Marino chooses to speak of various types of intelligence that have developed in the context of different environments, as does Herzing.[139] There is neither an evolutionary tree, nor a scale where humans are at the top, rather we are dealing with a field of intelligences where human-primate intelligence is but one. Here I find a quote from Sloterdijk relevant, though he is neither writing about nonhuman animals, nor human-animal relations. In his effort to move away from what he called a cerebral individualism, he chose to write in terms of a *milieu*: "Like language and emotion, intelligence is not a subject, but a milieu or resonance circle."[140]

Put into Play in Sonorous Time

I think I have managed to locate the tape reels that document the 75 days with Peter. I file my request for digital copies of select reels and travel home. Then, nothing happens. It is as though contact has been cut, no one answers my emails. I write again and again. Finally, I receive a short message saying that the whole collection is undergoing an extensive move, and it is not accessible.

Lacking a response from Stanford I google Howe again in an attempt to locate an old link I have lost. Suddenly things shift and totally new search results pop up. After avoiding all contact with the media for 40 years, since she was exoticized and exploited as an attractive bathing suit clad tomboy who had "sex" with dolphins,* Howe is now ready to speak about her unique experiences in a documentary *The Girl Who Talked to Dolphins*, directed by Christopher Riley. Both film and sound recordings from CRI are made use of in the documentary and I become aware that some of the material I requested in 2013 has been digitized on BBC's behalf. But, when I read newspaper articles about the documentary, despite the director's carefully woven story, I see a reprise of the 1960s. Headlines like, "The woman who lived in sin with a dolphin," or "Margaret Howe Lovatt opens up about her love life and nautical naughtiness" reflect the way many newspapers continue to present Howe's story in a titillating way. The same old patterns are at play.

I give birth to my second child, and yet again I experience the strange effect of my gravitational center being located not in my pelvis, but in another person's body. My bodymind is completely attuned to that point in space, our nose-ear-mouth-eye-skins are wide open and porous. The little one is glued to me day and night, during work and leisure.

Limit-Cruisers is performed for the fourth time at Weld in Stockholm, but this time I can no longer act as host. The entire performance is handed over to others. I observe the performances from above, from a balcony overlooking the space. I feel like a spy. Each performance is different from the previous one, but there is a continuity in the sense that in each performance behaviors and reactions "infect" one another. Playfulness sparks activity, withdrawal produces stillness, an outstretched hand instigates touch. Afterwards, the participants have a need to talk: not with me, the artist, but with each other. This spontaneous debriefing has therefore become a part of the performance and I provide time and space for it to happen. A temporary community is formed during the 60–90 minutes that the performance lasts.

One question is repeatedly addressed to me though, half-jokingly, as people crawl out of slits in their plastic sacs: is the work related to the fact that I've been pregnant, twice, in the making of it? In terms of metaphoric expression or "image"? No. In concrete terms as an embodied sonic sensibility? Yes.

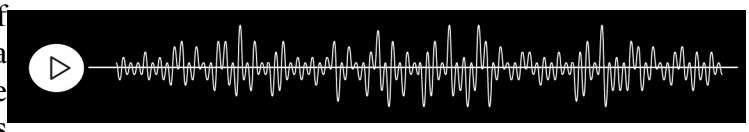
During pregnancy when I can no longer carry, or run around with my older boy as I used to, we become storytellers and players. Anything and everything can be animated, through movement, voices, and sound. We take turns in an open game without rules; strong bonds are formed and surprising relations revealed. We are joined through listening. Unrelated material objects are knitted into a web of actions and relations. Our hands become crabs. His tiny crab affectionately cuddles up inside mine when we go to sleep. My mind is right here; this is what is important. For the moment, I have given up waiting for Lilly's sound files.

* Even the porn magazine *Hustler* used her name in a story about animal sex in the late 1970s.

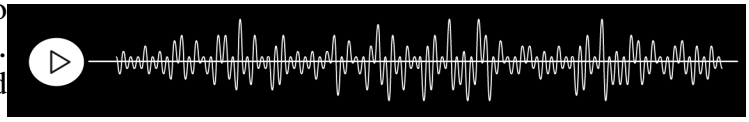
I write, record, and edit three new works instead: fragmented narratives that revolve around loss and transformation. Loss of words, loss of sight, loss of vital relationships. Figures appear: a plant, an eye, a blindfolded woman, a man with a camera, someone writing, a mnemonist, a heavy rain, as well as bodies that have transformed into trees. The plant captures and transforms light, while an eye is slowly evolving from a light-sensitive spot on the skin. The man uses the camera as an extension of his body in attempts to capture moments his mind is not capable of retaining. The woman has lost the ability to see movement and instead seeks continuity through sound.

The listeners to these sonic fictions are exposed to voices, sound, light, and vibrations. They are asked to sit, walk, or lie down. Language falls apart into discrete, unrelated words. The listeners are treated with care, but it is unclear what the treatment is. The space resembles a cinema, a spa, a fitness center. I ask myself: what patterns are reproduced through these installations, and what can I learn from them? I try to reboot. Is a revaluation of ingrained values possible? I write and rewrite (I'm Peter, I'm Howe, I'm Lilly). I'm asked to get to the point. I try to listen really hard: am I getting somewhere, or am I merely dragging an aquatic animal up onto dry land?

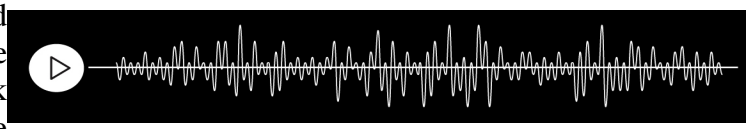
Sound excerpt, 2 min. 24 sec. [headphones]
'Then, ere the bark above their shoulders grew,' 2016



Sound excerpt, 1 min. 31 sec. [headphones]
Fluorescent You, 2016



Sound excerpt, 1 min. 2 sec. [headphones]
Therapy in Junkspace, 2016



I buy a rubber dolphin mask for no specific reason. It smells horrible, but the kids don't seem to mind. They wear it even if it is almost impossible to see through, and they jump around as strange hybrid dolphin-boys making odd sounds. We have encountered another intelligence in our apartment, not language based. But, the boys have definitely entered into the realm of language. The oldest decodes the mystery of letters and learns to read and write on his own accord just before he turns five (no rewards needed).

I started this artistic research project a few months before my oldest boy was born; it has now, at the time of writing, been with me for six years, though put on hold twice. Established boundaries have been redrawn. This essay writes itself backwards and forwards. Past, future, and present are mixed.

From the Archive: Models of Communication
Fluorescent You,
Inter Arts Center,
Malmö, 2016.
Photo: Mikael Lindahl

From the Archive: Models of Communication
'Then, ere the bark above their shoulders grew,' Inter Arts Center, Malmö, 2016.
Photo: Mikael Lindahl

From the Archive: Models of Communication
Therapy in Junkspace, Inter Arts Center, Malmö, 2016.
Photo: Mikael Lindahl

From the Archive: Models of Communication *Limit-Cruisers (#1 Sphere)*, Weld, Stockholm, 2014

From the Archive: Models of Communication *Limit-Cruisers (#2 Crowd)*, Stanford University, California, 2013

Schaeffer's acousmatic listening could be said to be a reduction *to* the auditory, echoing but in reverse what Don Ihde (cited in chapter 1) wrote about a visualist tradition that elevated sight at the expense of the other senses. Schaeffer made a distinction between ordinary listening in which one listens for the cause (sound as sign or index) and a specific form of specialist listening which he called reduced. He tuned his ears to this latter and concrete mode of attending to sound. Thus, in this there is also a reduction *of* the auditory. From this reduction *to* and *of* the auditory, he derived knowledge of as well as a language for sound. Schaeffer's action could be seen as a composer's reaction to a habitual and much more common reduction of the auditory: the reduction of what is heard to its meaning and the audible to the intelligible. This same habitual reduction of sound provoked philosopher Jean-Luc Nancy to ask if the Western philosophical tradition has exchanged the ability to listen for the ability to understand and explain. For Nancy, hearing is associated with understanding and with establishing meaning, while the act of listening "is to be striving toward a possible meaning, and consequently one that is not immediately accessible."[141] In turn, and as described earlier in this chapter, poet Charles Bernstein reverses this concept – he describes the act of listening as something psychological where we look for meaning, and hearing as something physiological and material. He then turns his attention to a/orality and the site where listening and hearing intermingle – where the one is constantly fed back into the other.* Bernstein's close listening could be understood as a mode of engagement: to be in a process of creation, to stay in listening instead of fixing meaning – to hold the space open. That is what I understand Schaeffer, Nancy, and Bernstein to have in common. Regardless of whether they are dealing with concrete sound, music, or poetry they all view listening as an intention, an action, and a mode of engagement. To me, this is neither the opposite of visuality (or the values connected with this concept), nor "blind" listening (as in blind trust, or mere belief). It is a deepening of seeing, a turn towards the auditory – a re-tuning, and hence at the same time partially an unlearning – but without any escape to splendid isolation, or a primal sense of oneness. There are also many important differences between them. For example, while Nancy critiques phenomenology, Schaeffer makes use of this approach. In his theoretical work Schaeffer tends towards representationalism, with a strong emphasis on the subject. Meanwhile, Nancy seeks out resonance and co-creation, where self, sound, and meaning are structurally similar – not subject-object-relations, but resonant space-time. Here, I am closer to Nancy. I have chosen to navigate away from phenomenology and psychoanalysis, towards Bernstein's materialism and Öyvind Falhström's concretism in order to concentrate on the *acousmatic* understood as (in keeping with Brian Kane and as cited earlier) "a set of cultural practices concerning the relationship of seeing and hearing." Hence, it is Schaffer's artistic practice as composer that interests me here, not primarily his phenomenology. To approach what happens in the space held open in and through listening, if we refrain from deducing fixed meaning, I've turned to Bernstein's concept of a/orality, but also to Serres' parasite and Carson's eros. The parasite is to the bouffon, as eros is to the lover, or the ball to the player – a quasi-object that establishes a difference: a necessary tension and distance that can be *played*. In chapter 4, I will dig deeper into acousmatic practices and the condition of *para-* while drawing from cinema, contemporary art, and the performing arts.

In the beginning of the previous chapter I asked: what might it mean for a mingled body to be acoustically oriented? In this chapter, I've attempted to explore this in multiple ways, examining the practice of the bouffon, Margaret and Peter's wet live-in, and the experience of playing a "game without rules." One last listening experience comes to mind. As I write this paragraph, I'm in London for a short visit. While trying to navigate the Underground, an unfamiliar and intense visual and auditory environment, I follow a blind woman getting off the tube. I literally follow in her footsteps and attune myself to her body, imagining what it might be like to be blind. Suddenly, I become aware of the surface beneath the soles of my feet as we pass over the rough area that marks the platform's edge. The field of sound shrinks radically as we approach and are funneled up the stairs. The sound of her cane, which taps rhythmically on the wall, becomes quiet when the staircase ends and we round a corner; the tapping resumes when the stairs continue. I have difficulty keeping up with her as she moves skillfully through the sea of people. The sight of her back serves as a sound amplifier. When I

* Dolar writes that there is an abundance of meaning in sound, and his approach to listening seems to be in line with Bernstein's poetic modus. But, somewhat differently, Dolar discusses this in relation to psychoanalysis and Lacan's term *lalangue*. See Dolar, *Voice and Nothing More*, 143–148.

narrow my gaze it is as though I have suddenly turned up the volume or pressed a "high definition" button. I am surprised by the impact of this impromptu act on the field of perception and how clear and immediate sounds become. The woman's cane is not just an extended arm, it even produces echolocation clicks where the place's architectural space, material, and character emerge around the body in motion.* Although I focus my gaze on her back in front of me it feels like I have the omnidirectional vision of a fly. It is as if I, for a moment, saw and heard with my skin.

Nancy describes how sonorous time, in contrast to the linear instants of "philosophico-scientific time," opens a resonant space-time:

> Sonorous time takes place immediately according to a completely different dimension, which is not that of simple succession. It is a present in waves on a swell, not in a point on a line; it is a time that opens up, that is hollowed out, that is enlarged or ramified. … The sonorous present is the result of space-time; it spreads through space, or rather it opens a space that is its own, the very spreading out of its resonance, its expansion and its reverberation. This space is immediately omni-dimensional and transversate through all spaces.[142]

I understand this in relation to my experience with the blind woman, as if at that moment I entered sonorous time. For me this is something different than the immersive sonorous envelope. Here, relations emerge and reveal themselves as a fluctuating whole, as a milieu or resonance circle. This, I propose, is also the space-time of Peter and Howe, and of the bouffons, as they are engaged in their "games." In this kind of open-ended interplay the players exist both inside and outside of the dominant speech-genres, inside and outside of language. The language we inhabit (in contrast to language we use instrumentally) is not "orthopedic," it is a porous skin: breathable, tactile.

The personal listening experiences that have been recounted here are just a few concrete and subjective examples of the experience of being a mingled, acoustically oriented body. In these instances, the sonorous envelope does not contain me, I am environment, i.e. part of a milieu, but this does not imply a primal sense of oneness. The initiatory potential of the acousmatic shift that occurred, for instance, in my experience with the blind woman resides, I believe, in the strangely familiar and the familiar made strange – in being slightly displaced through the re-negotiation of the relationship of seeing and hearing. Here, the very amplification of the auditory provided an estrangement effect. When I'm asked (encouraged by the situation) to listen, I become more open, and thus I become aware of my vulnerability. I play and am played. I care and am careful. This is not necessarily a benign or harmonious place.

More than two years after my visit to Stanford, the first sound files finally arrive. I can hear the voices at last. Deprived of body and context they float in the air as sounds and I strain my ears trying to listen to *what it is that is said*. Then, I begin to experiment with the recordings.

you play it calm
you play it cod
you tape god

---

* Daniel Kish has been called "the human bat," as he sees his surroundings through sound, using clicks from his tongue. Kish is the founder of the organization "World Access for the Blind," which since 2000 has taught blind individuals to use what he calls perceptual navigation. The strategy of echolocation has been shown to activate the same parts of the brain as those that process visual information. See Lore Thaler, Stephen R. Arnott, and Melvyn A. Goodale, "Neural Correlates of Natural Human Echolocation in Early and Late Blind Echolocation Experts," *PLOS ONE* 6, no. 5, e20162 (May 25, 2011), https://doi.org/10.1371/journal.pone.0020162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CHAPTER

3. GOING VISITING: TRACES FROM AN ARTISTIC PRACTICE

116

body language

voice

all these things matter

you are in full control of your actions

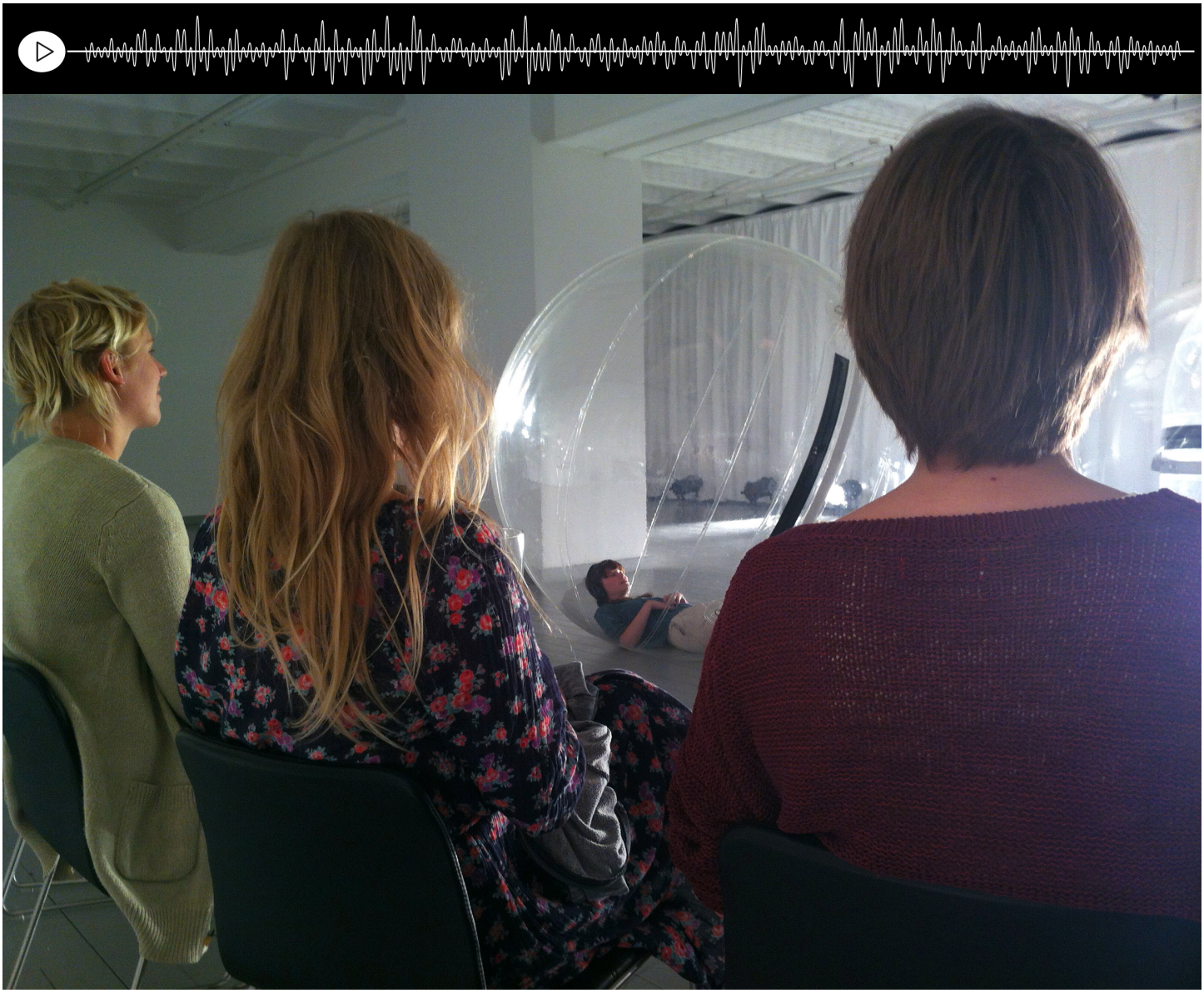
stand straight

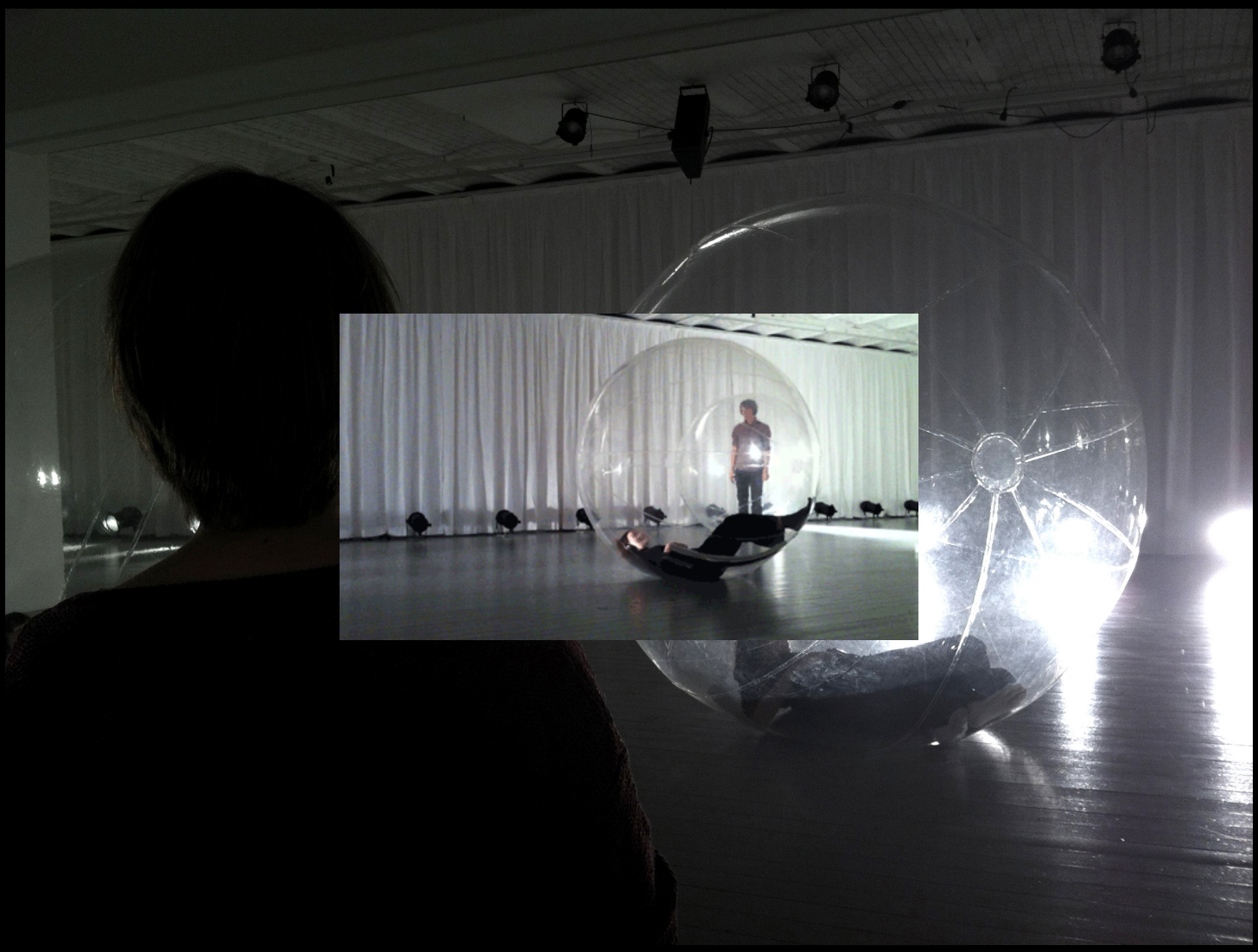
and await my instructions

Sound excerpt, 27 sec. [headphones]
"Decoy," from *Limit-Cruisers*, Inter Arts Center, Malmö, 2012

Sound excerpt, 22 sec. [headphones]
"New Individualism," from *Limit-Cruisers*, Inter Arts Center, Malmö, 2012

Sound excerpt, 57 sec. [loudspeakers]
“Countdown,” from *Limit-Cruisers*, Inter Arts Center, Malmö, 2012



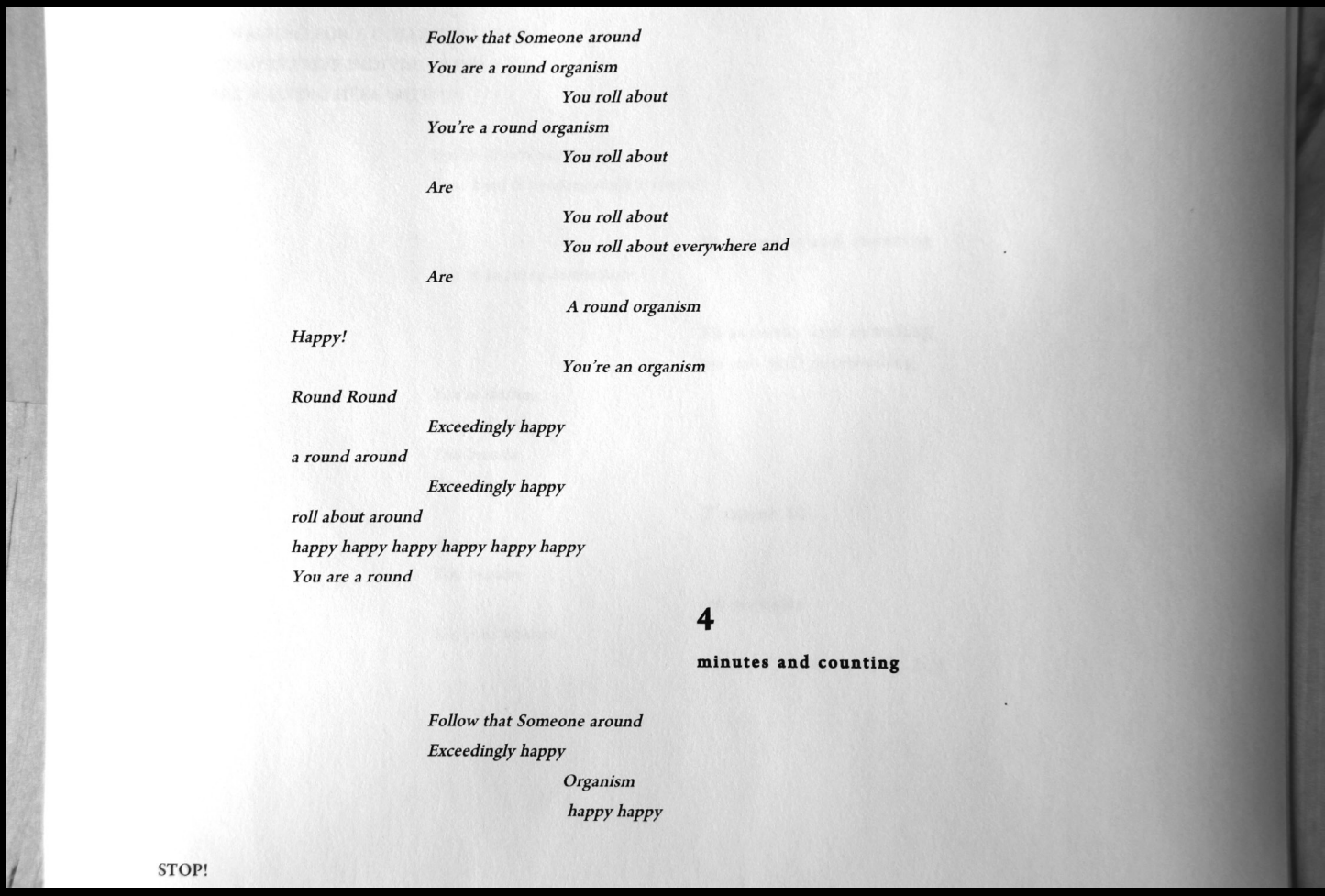


120

Sound excerpt, 1 min. 7 sec. [headphones]
“The Heroes of Absolute Zero,” from *Limit-Cruisers*, Inter Arts Center, Malmö, 2012

Localities: the performance space, the air-filled sphere, your body, your skin, this voice, your breath, your ear, my ear, your lungs, my lungs, a water tank, a Plexiglas box in London, Alaska, absolute zero, outer space, a spherical reflecting eye.

Sound excerpt, 23 sec. [headphones]
"New Individualism," from *Limit-Cruisers*, Inter Arts Center, Malmö, 2012



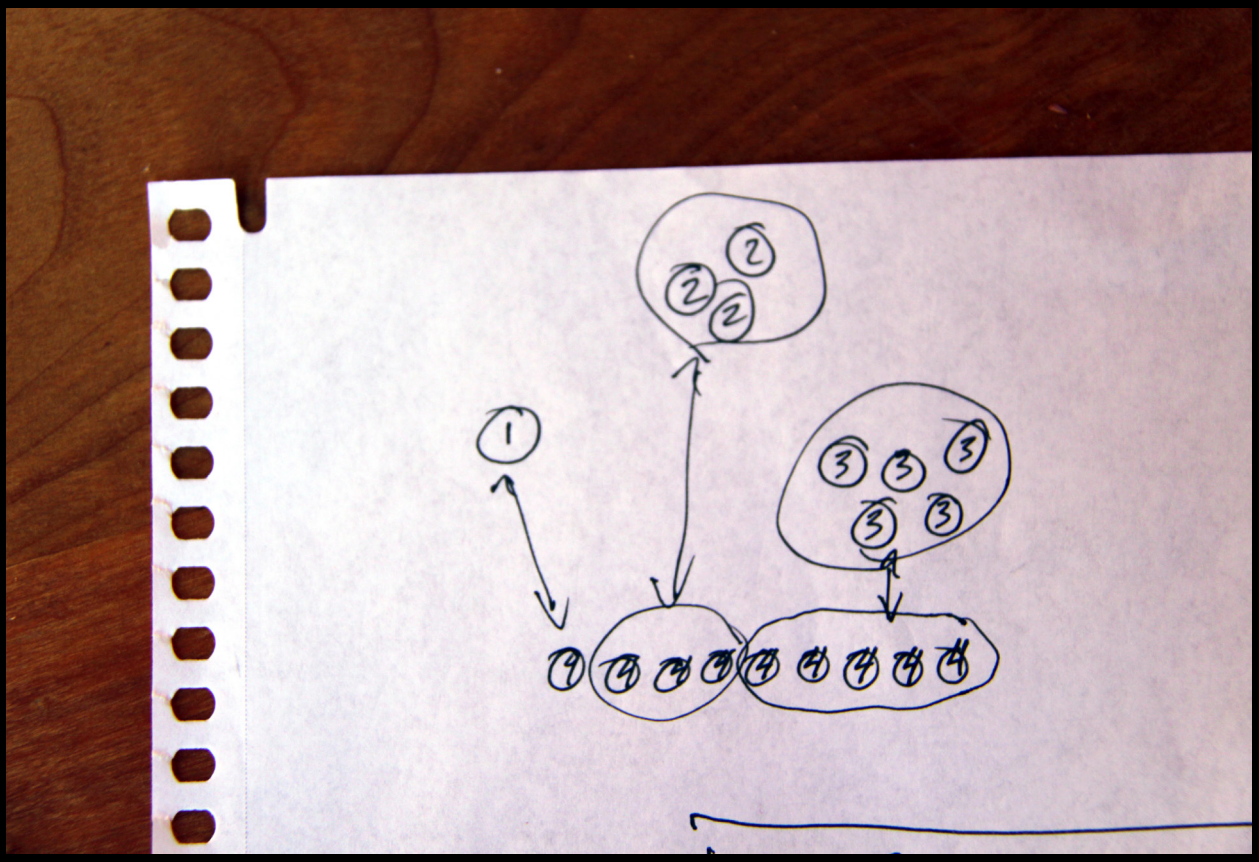
Follow that Someone around
You are a round organism
You roll about
You're a round organism
You roll about
Are
You roll about
You roll about everywhere and
Are
A round organism
Happy!
You're an organism
Round Round
Exceedingly happy
a round around
Exceedingly happy
roll about around
happy happy happy happy happy happy
You are a round

4

minutes and counting

Follow that Someone around
Exceedingly happy
Organism
happy happy

STOP!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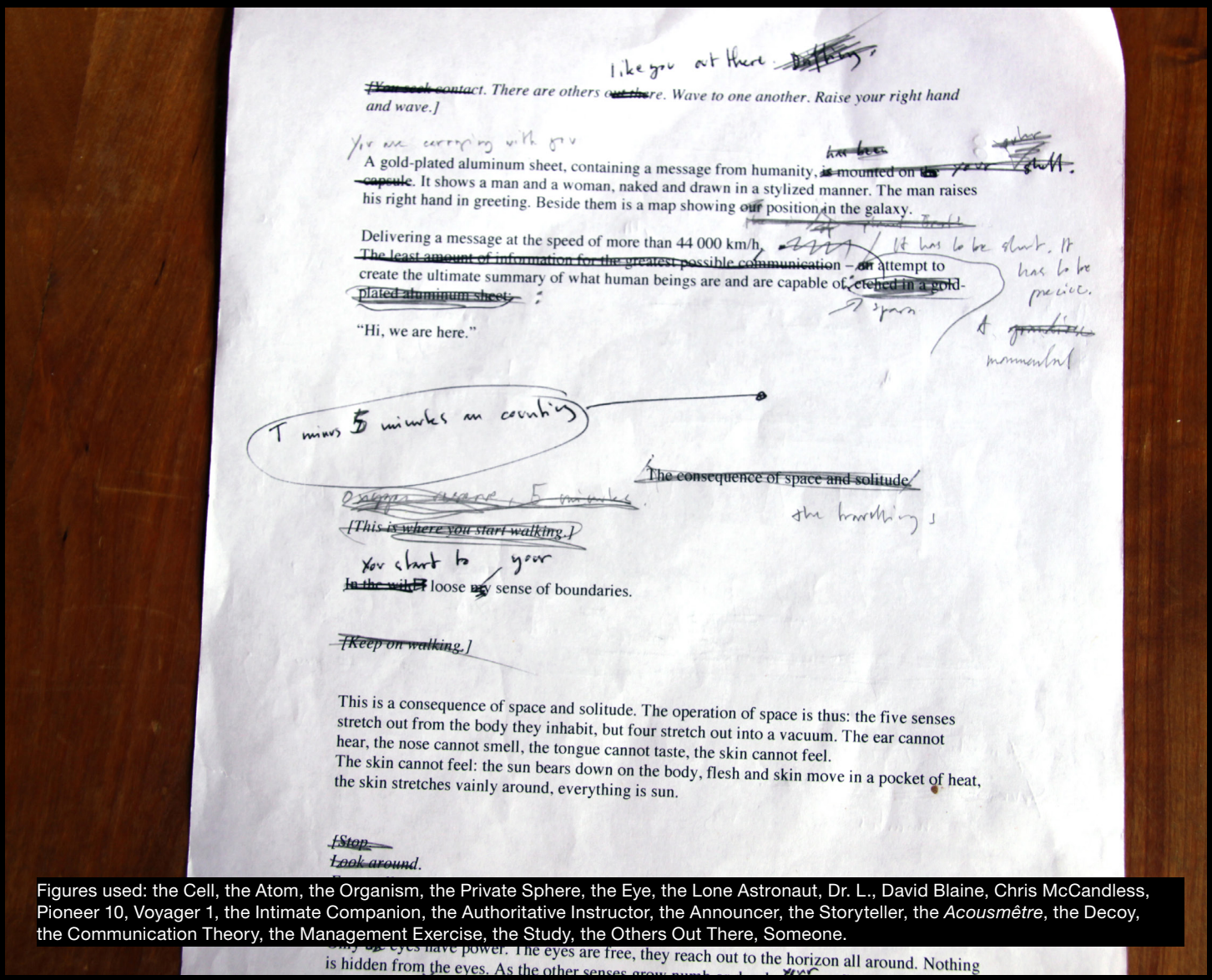

[Wave, seek contact. There are others out there. Wave to one another. Raise your right hand and wave.]

A gold-plated aluminum sheet, containing a message from humanity, is mounted on the capsule. It shows a man and a woman, naked and drawn in a stylized manner. The man raises his right hand in greeting. Beside them is a map showing our position in the galaxy.

Delivering a message at the speed of more than 44 000 km/h.

~~The least amount of information for the greatest possible communication – an attempt to create the ultimate summary of what human beings are and are capable of, etched in a gold-plated aluminum sheet.~~

"Hi, we are here."

~~*[This is where you start walking.]*~~

In the wild, loose any sense of boundaries.

~~*[Keep on walking.]*~~

This is a consequence of space and solitude. The operation of space is thus: the five senses stretch out from the body they inhabit, but four stretch out into a vacuum. The ear cannot hear, the nose cannot smell, the tongue cannot taste, the skin cannot feel. The skin cannot feel: the sun bears down on the body, flesh and skin move in a pocket of heat, the skin stretches vainly around, everything is sun.

~~*[Stop.*~~
~~*Look around.*~~

Figures used: the Cell, the Atom, the Organism, the Private Sphere, the Eye, the Lone Astronaut, Dr. L., David Blaine, Chris McCandless, Pioneer 10, Voyager 1, the Intimate Companion, the Authoritative Instructor, the Announcer, the Storyteller, the *Acousmêtre*, the Decoy, the Communication Theory, the Management Exercise, the Study, the Others Out There, Someone.

September 18–20, 2012, Inter Arts Center, Malmö, Sweden

The first version of *Limit-Cruisers (#1 Sphere)* was performed in an exhibition space, the White Room at Inter Arts Center (IAC). Photos: Jörgen Dahlqvist.

March 24–26, 2013, Inter Arts Center, Malmö, Sweden

A second version was performed at IAC, in which the lighting was changed from white to monochromatic light. This time several participants suffered from claustrophobia. Some performances were therefore done without the inflatable spheres.

June 26–30, 2013, *PSi #19*, Stanford University, California, USA

A low-tech version called *Limit-Cruisers (#2 Crowd)* was presented as a praxis session at *PSi #19: Now Then: Performance and Temporality* (the 19th Performance Studies international Conference hosted by Stanford University). Another praxis session had been carried out prior to that at Unga Klara, a theater space in Stockholm. The participants downloaded the sound files onto their personal audio players (mobile phones, iPods, etc.), and we synched them manually. In this version the room was dark, but the observers were given headlamps. Thus, when they moved their heads the light in the room changed, depending on what they were looking at. Because the bubbles were not used, a large part of the introductory procedure and accompanying soundtrack were eliminated, and the performance became more like a workshop. The time allotted for listening was reduced to approximately 30 minutes, plus a discussion following that.

The set-up included: an invitation to participate; instructions and a webpage with five downloadable sound files; personal audio players and headphones; headlamps; a dark room; a host and participants.

February 21–23, 2014, Weld, Stockholm, Sweden

A third version of *Limit-Cruisers (#1 Sphere)* was performed at the project space Weld. This time I did not serve as host. The producer at Weld ran the ten performances together with the technician.

The set-up included: ticket booking; a foyer; a performance space with light and sound system, three chairs, three inflatable plastic spheres, air pumps and hoses, three sets of headphones with wireless senders and receivers; a host and a technician; six visitors who were divided into listeners and observers.

Film excerpt, 43 sec. Please click on the image to start the film.
Limit-Cruisers (#1 Sphere), performance at Weld, Stockholm, 2014. Camera: Fredrik Wåhlstedt

Film excerpt, 1 min. 19 sec. Please click on the image to start the film.
Limit-Cruisers (#1 Sphere), performance at Weld, Stockholm, 2014. Camera: Fredrik Wåhlstedt

Film excerpt, 1 min. 3 sec. Please click on the image to start the film.
Limit-Cruisers (#1 Sphere), performance at Weld, Stockholm, 2014. Camera: Fredrik Wåhlstedt

You Will Be Handed an Air Hose (*Limit-Cruisers*)

In *Limit-Cruisers (#1 Sphere)* you are asked to climb into an air-filled sphere. A voice tells you to relax and informs you that the oxygen will last ten minutes. The light goes off; a countdown begins. You suddenly find yourself in a situation where you are forced to exist in a here and now that is running towards a definite end. Meanwhile, three observers can follow the process from outside.*

No, that's not how it was. You had to take your shoes off and realized that your feet were smelly. A heavy plastic skin envelops you and air blows in through a black vacuum hose. You are caught in your own scent. Your two companions have started to move around in their bubbles, which are half-inflated now. They look like birds in their nests, flitting about. You suddenly think of sadomasochism.

No, that's not what happens. You are standing in a foyer. You want to know more about what is going to happen in there, on the other side of the door, but the man with the moustache doesn't provide you with any satisfying answer. You refuse to enter the bubble. You ask blatantly, "How on earth does anyone come up with an idea like this?" And yet you stay. Your body resists, your arms are tightly folded across your chest, you are listening and watching. A woman is laughing out loud inside her bubble; another woman seems to have difficulty moving.

You thought that the large bubbles resembled the space of cinema. *Welcome. What you see is decided by what you hear.* Eyes and ears cooperate to synthesize an experience which is largely interior and yet claims grand effects: *This is a breathtaking space…* That is just what they used to say about cinema. *With each breath, you are breathed through… All are breathable.* And that, too? Are you that permeable? Gradually, the voice's instructions loosen the intimacy of the voice-in-your-ear solipsism and suggest the existence of others. *Look! Something begins to come into focus. Someone.* From "breathing," the addressee is finally instructed to "wave," i.e. to recognize the gaze of and even anticipate others: *They are here with us, waiting. Wave at them.* And: *Your head is heavily populated.* The matter-of-factness of what the voice says creates an urge for distance, for a distance enabling reflection, response, or refusal; a distance which, however, is hard to achieve when the voice is inside one's head. The trap has shut. The disembodied voice has no ears to listen; it will talk on forever.**

Your hair has become static and stands straight out from your head, like lightning in a Tesla machine.

* This paragraph is taken from a presentation of *Limit-Cruisers*, which was available on the artist's website during the period the work was shown. The following paragraphs, if not otherwise indicated, are based on verbal reactions of participants during the first performances at IAC, 2012.

** This passage was written by Tobias Hering in an e-mail to the author, January 9, 2015, in response to the work and in relation to a discussion on cinema. He originally used the pronoun "I," but I took the liberty to change it to "you" for the sake of stylistic coherence.

No, this is what really happened: dazed and bemused you get back home and over the phone you try to tell your mother what you've just experienced. "There were six of us in the audience and three at a time we crawled into big, plastic balls. The opening was sealed with a zipper. Then, the lights went out." At the other end of the line it becomes silent. You try to explain that inside the giant bubbles you looked like fetuses, astronauts, single-celled organisms illuminated through a microscope: that the situation created a space where claustrophobia and freedom could exist simultaneously. You heard a voice outside, counting down: *Ten, nine, eight.* Soon you will run out of oxygen. You feel the heat and the flicker. Another voice near you says: *You are falling into life. But never really reaching it*.

Hello, mom, are you still there?*

We are squinting against the bright lights. A female voice thunders out into the room: *All positions clear*. Then it becomes pitch black. Tiny flashes can be seen inside the three bubbles: *LUB-dub-( ) LUB-dub-( ) LUB-dub-( )* and there's a faint glow on the shiny surfaces. We hear birds chirping and other forest sounds, as the light slowly grows stronger. Is this science fiction, or a bizarre therapy session? The bubble people look like eggs in a forest glade, or the crew on a spaceship, deep down in hypersleep. Eventually they start to interact with each other. We try to make sense of the occurrences on the floor in front of us even if there is hardly anything to draw from – we cannot help but interpret, read, relate, narrate. Barely discernible, we synchronize our behavior with each other in the room. A subtle choreography develops. The ambience is punctuated once a minute by the female voice's countdown.

Halfway through the performance we are asked to change positions; the listeners inside the bubbles will now observe us. Everything is repeated: muzak is flowing from the loudspeakers, a sound check conducted, and the bubbles are inflated. The noise from the air blowers is intense. At the end, the bubbles are opened from the outside; the change in pressure that occurs causes our eardrums to bulge. The two technicians dart around the space and prepare for the next performance while we linger in the white room.

We have a need to talk.

* This passage is based on a review of *Limit-Cruisers*. Here as well I have replaced "I" with "you." Malena Forsare, "Syrefattigt på performance," Sydsvenska Dagbladet, September 20, 2012, accessed September 20, 2012, https://www.sydsvenskan.se/2012-09-20/syrefattigt-pa-performance

Some Kind of Treatment (*In the Greenery*)*

This is not cinema, yet it's cinematic, a complex sensual experience where I let myself be inhabited. It reckons with my openness. Will it conquer my senses like a colonizer, take hold of me as cinema often does? Treat me. Deliver. Manipulate? The white light slowly becomes brighter, but not blinding. *She had become blind to movement*. I both look on and through the screen as the color slowly shifts, focus shifts between surface, depth, texture, color. *Seeing no longer made sense.* Intense red. Red overtakes my field of vision, as if I am drowning, or being blinded by red, blinking, regaining sight, seeing the frame, the surface. Even if I close my eyes the colored light seeps in through my eyelids, I can't close my eyes to it. *He stands behind a car, dressed in green jeans.* Where is this leading? I follow. *Everything that he is required to remember he writes down in his notebook, which he carries in a bag at his waist*. The image of the man with the waist bag sticks in my retina, the green jeans.

A man's voice describes different sorts of eyes, the eye of the camera, and how plants transform sunlight. *Photosynthesis and photography, man produces images as the plants produce sugar.* When the woman's voice returns she asks me to smile. I definitely don't want to smile. Suddenly I'm awash in green light, an enormous sense of relief spreads through me as I am rinsed by intense rain. *Do you see what I see?* There's nothing to see in the rain. It takes me places. It makes me feel cold – no, refreshed (it is a tropical rain). It embraces and floods me. It renders the environs visible to the earbody. (Is the experience of hearing rain the closest we might get to being a bat?)

The colors continue to shift slowly. Light blue opens up an unending depth, like a heaven, other colors layer themselves closer to my body. I move through different soundscapes: city, forest, an expanse of whistling wind. The voices return. It is as though they emerge from noise and fall back into it, I don't need to know what is said. The light comes in waves. *This is the first scene.* The rain becomes wind, then dry grass, pink noise, drawn out echoes. Inner images are triggered. *Take a picture of her*. The sound of rain again – no, it is applause. *This is the last scene*. A man memorizes words, disjointed words. Word-images. *Pink, concrete, elephant, fact, mouth, menu, dandelion*. The story dissolves, single words remain. Silence.

She had become blind to movement. The soundtrack loops and I encounter the woman again. *Cars, humans, and animals seemed to simply materialize, first here, and then there. As if static snapshots are constantly thrown in her face.*

Gazes are turned inward, or eyes closed. Bodies are processed in various ways, by light, vibrations, treadmills, monitors. The visitors whisper and walk slowly.

* This text is based on visitors' verbal responses to the exhibition *In the Greenery*, including my own impressions as a visitor. Here, single sentences from different commentators have been stitched together. This is neither one person's account, nor solely mine. It is a blend of many. The statements are examples of possible ways to experience the works rather than a representation of them. Instead, my aim is to give a sense of a certain sort of stickiness, ambivalence, and associative swirls.

The room is filled by an intense concentration, as in a ritual, or as in some sort of therapy. I'm thinking that it's the sound that triggers the associations to science-fiction – the reverb, the timbre of the voices – and not necessarily the visual aesthetics. The different installations are connected not only through the stories told, but through the background sound and repeated phrases and words, such as "green." It is as if one is zooming in and out of a soundscape, a state of sound, entering it from different angles.

The star-shaped construction looks like the latest edition from Apple, all white and shiny, but instead of an interface there's an "interbody" – you're supposed to lie down on it. *Wet soil, naked skin*. High frequency tinkling sounds create a frail and spacious impression, as if they are coming from high above. The wool mat immediately makes my body warm. Then, I feel a vibrating pulse on my lower back, pleasant, but also slightly disturbing. Am I undergoing some kind of treatment? Who's doing this to me? I don't care. *Root threads, seek their way.* Then, the rain. I can feel the sound vibrating in my body. The voices (are there two, or one?) are teasing, pleasant, joyous. *From your spine.* Water dripping, leaves, a scratching sound – maybe insects eating. *How do you want to die?* A call – and then a response: *At the same moment as you*. It's too short, I want to stay, fall asleep. The space is green and damp.

Am I a recording device? I'm reminded of a photo of Victoria Beckham I saw in a magazine, where she walks on a treadmill in high heels while working on her computer: the new office. I can't manage walking and listening: I feel clumsy and lost and can't keep track of things. Trying to watch a monitor at the same time is just too much. Pinkish, kaleidoscopic patterns morphing and moving. They seem to be synced with one of the voices. A voice talks about memory storage. *The solution is biological storage*. About storing human knowledge in a forest. *We can even store data in your blood stream*. It all seems to end with a strange inventory, which is kind of nice to listen to, abstract, it gets me into the pace of things. Then the sound loops and I hear a woman speaking about her "mental walk" down Gorky street. *Every word that I have to memorize, I transform into a striking image. And, I record it in my mind by placing it at a specific place along my walk*.

Sound excerpt, 30 sec. [loudspeakers]
Room sound, from the exhibition *In the Greenery*, Inter Arts Center, Malmö, 2016

Localities: the exhibition space, the greenery, a cinema, a treatment space, at a gym, in Moscow, in a busy street, in the rain, in a garden, in dry grass, at a table, on a stage, in wet soil, in your body.

April 8–29, 2016, Inter Arts Center, Malmö, Sweden

In the solo exhibition *In the Greenery*, visitors encountered an acoustic and visual environment consisting of light, sound, plants, and constructed structures. The loudspeakers emitted rustling and gnawing sounds. At the same time, the space was filled with slowly shifting monochromatic light that was projected on and reflected by the two screens that stood in the middle of the room. The exhibition consisted of three installations: *'Then, ere the bark above their shoulders grew'* (8 min. 30 sec.), *Therapy in Junkspace* (8 min. 30 sec.) and *Fluorescent You* (17 min.).

The set-up included: an exhibition space with a sound system, eight PAR LED-lights on stands, and two LED spotlights; two projection screens 300x169 cm, a wooden deck, and six chairs with headphones; a Plexiglas booth with a treadmill, carpet, monitor, headphones, and a green plant in a pot; a wooden platform with three pairs of headphones, wool mats, and vibration speakers. All photos: Mikael Lindahl

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Sound excerpt, 1 min. 1 sec. [headphones]
Fluorescent You, from the exhibition *In the Greenery*, Inter Arts Center, Malmö, 2016

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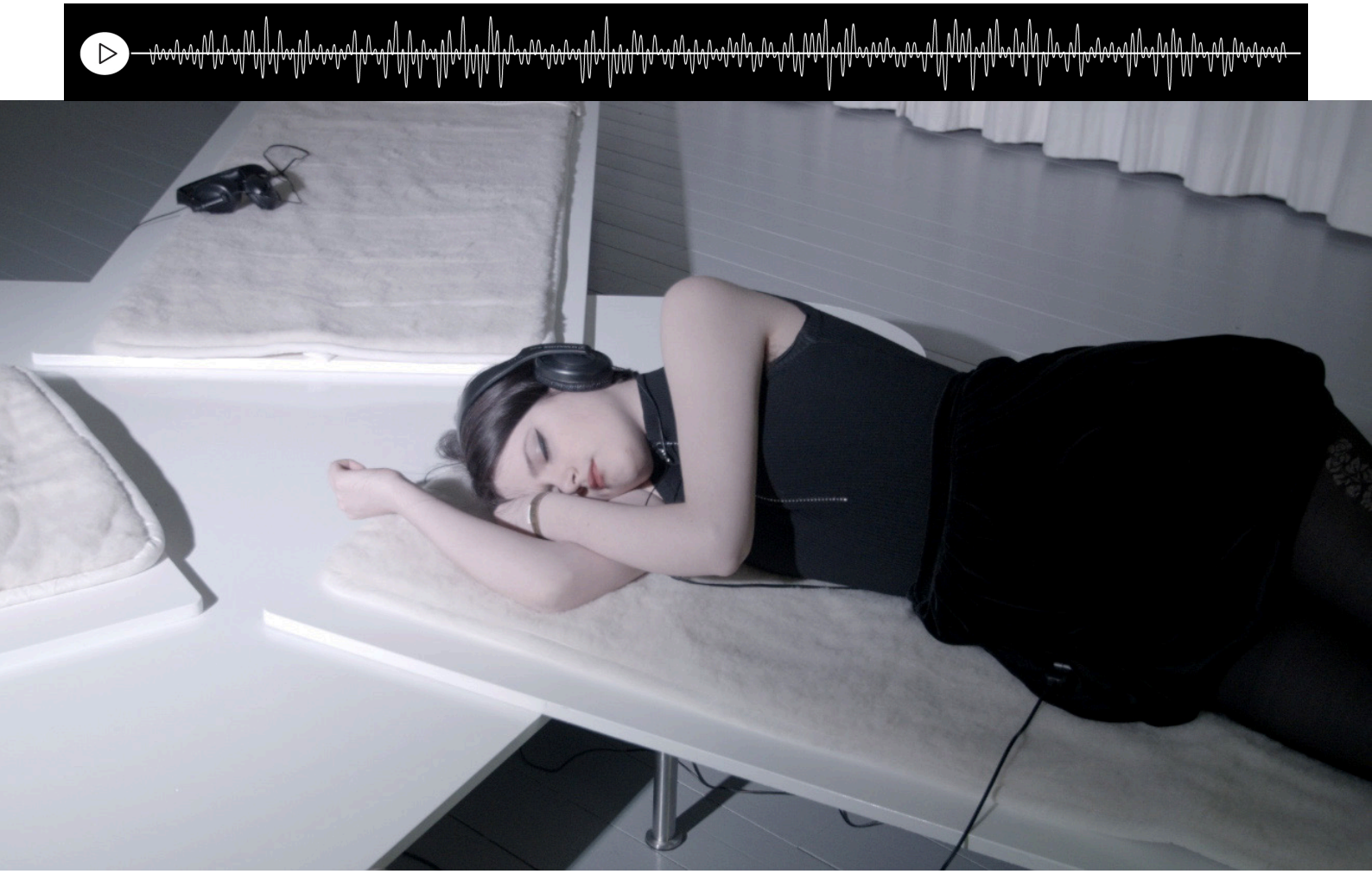
Figures used: the Image, the Eye, the Leaf, the Plant, Your Body, the Blindfolded Woman, the Man with a Camera and a Waist Bag, the Man Writing at His Desk, the Mnemonist.

Film excerpt, 4 min. 5 sec. [headphones] Please click on the image to start the film.
Fluorescent You, from the exhibition *In the Greenery*, Inter Arts Center, Malmö, 2016.
Camera: Mikael Lindahl

Sound excerpt, 2 min. 24 sec. [headphones and vibration speakers]
'Then, ere the bark above their shoulders grew,' from the exhibition *In the Greenery*, Inter Arts Center, Malmö, 2016



Sound excerpt, 1 min. 10 sec. [headphones]
Therapy in Junkspace, from the exhibition *In the Greenery*, Inter Arts Center, Malmö, 2016

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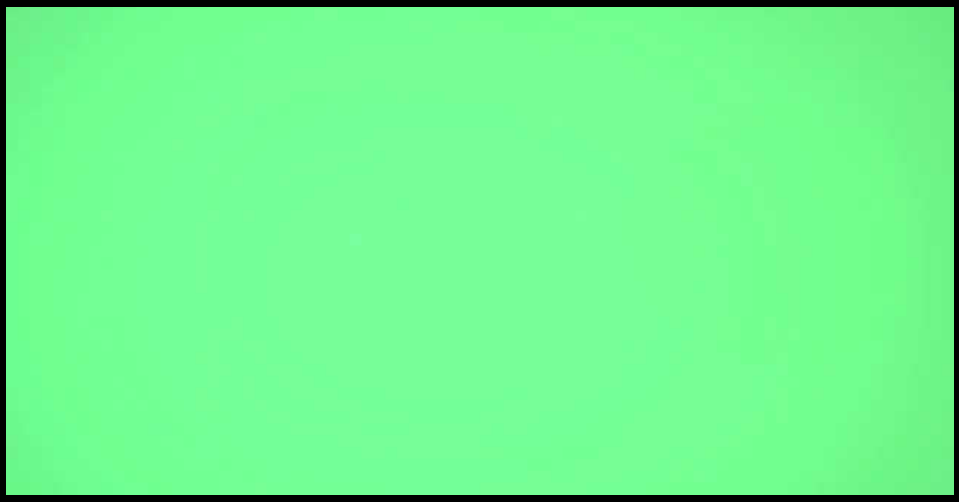
please, smile

bend the corners of your mouth upwards

and feel how the smile slowly reaches your eyes

allow the smile to fill your eyes

you will soon see things as in a different light



CHAPTER

4. GOING VISITING: ACOUSMATIC ORALITY AND PARA-*SITES*

Telematic and Headphonic Space (The Lone Astronaut)

The set-ups presented in the previous chapter made use of a situated narrativity, where the situation the listener found herself in was part of the "story" told. The artworks served as environments and even as prostheses, but they only came into existence when inhabited by the visitors. The visitors carried the work, lent their bodies to it, embodied it. What I offered was a parasite, or a network of parasitic relations. Like the voice, these artworks-as-parasitic beings desperately needed bodies, though they often pretended not to.

I'm here with you

What happens when I let you in?

When I speak with you over the phone, your voice is split from your body and projected, distorted, amplified through an extension that makes intimacy possible across the distance that separates us. This voice-body is dispersed in space, forming a strange new sort of body that is elongated, wired up with technical prostheses. We, you and I speaking-listening, become co-habitants in a parallel space neither quite here, nor quite there. Let's call this space a para-*site*.* Something similar happens when listening to prerecorded voices, with the important exception that one can't talk back.

In the early 2000s I spent a lot of time at museums in Berlin with various sorts of audio guides hanging around my neck. It was not the information they contained that fascinated me per se. Rather, I was intrigued by how the acousmatic voices in my ear changed my seeing, behavior, and even my mood. When I no longer thought of the voice as a prerecorded guide, a practical and informative device enriching the museum visit (so that I could spend more time looking at the objects on display than reading about them), I became aware of complex and intricate side effects. The documentary narration that claimed to deliver facts also had a tendency to fictionalize not only the objects, but also the other museum visitors. There was something cinematic about the experience, and that which was intended to be documentary information became a parable, a fictionalization.** The subtly injected instructions, the movement through the museum space, and the limited form of interactivity were like gaming. The headphones created a private bubble where I, to some extent, felt protected from the gaze of others. Yet, if I questioned the voice's authority and benevolence (a thought experiment I entertained myself with) the seemingly fixed nature of space, time, and identity were unsettled in interesting ways. I came to inhabit a co-created space that was both fictional and real, a para-*site*.

I began to use this seemingly simple and trivial act – to listen to and let onself be led by a voice – as an artistic material and medium.*** Here, the artwork takes form in and around the body of the listener, turning the viewer into a listener and performer.

During a stay in Philadelphia, USA, I visited the Eastern State Penitentiary.**** It was operational from 1829 to 1971, and Al Capone, among others, had been held there. For its time, it was a revolutionary prison, inspired by Jeremy Bentham's panoptic design.***** Through the audio guide, the actor Steve Buscemi spoke to me. The surprising effect was that not only

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* In a reflection on Michel Serres, Steven Connor writes: "There is something mysterious about all parallels; they have the uncanniness of twins and mirrors. … That which moves alongside me seems to be a kind of companion or second self, yet may also be my rival, the one who stands on the opposite bank. … Our bodies operate in parallel, with our many coordinated pairs of limbs and organs, feet, nostrils, kidneys." Steven Connor, "Parables of the Para-" (A lecture given at *Parasites*, Cambridge French Graduate Conference, Emmanuel College, Cambridge, May 14, 2015), accessed February 9, 2017, http://stevenconnor.com/para.html

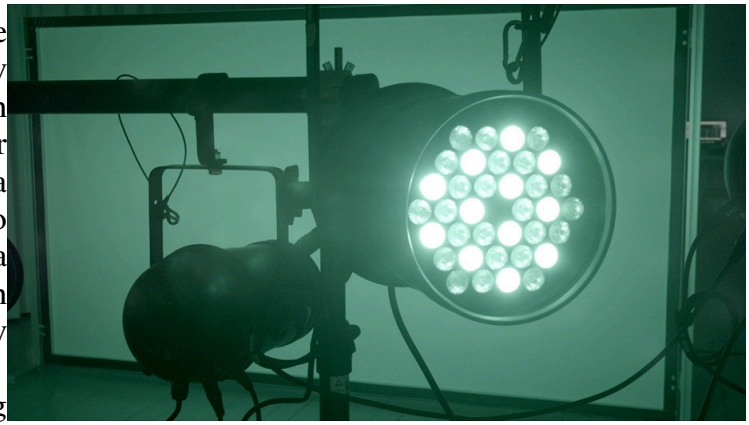
** As has been referred to earlier, "parable" commonly denotes an allegorical saying or story. It literally means "a throwing aside," which at the same time implies a comparison, an analogy. The distancing effect caused by the audio guide, could be said to reveal the documentary mode (understood as a "talking about reality") as a specific kind of throwing, thus causing it to lose some of its habitual transparency. What appears is a construction of the real, and a specific kind of curvature.

*** At the time, I had recently begun my studies as an art school student and wasn't yet aware of the audio walks by Janet Cardiff and George Buren Milles, where the listeners were guided by voices.

**** Here, the "Pennsylvania system of treatment" was employed, which made use of solitary confinement to rehabilitate criminals. The underlying belief was that isolation would give prisoners time to reflect on their lives. Like monks in their monastic cells, the idea was that prisoners would contemplate their lives, address the wrongs within them, and become penitent (this could be compared with Lilly's use of sensory deprivation, which initially also required guidance). See Eastern State Penitentiary website, "Research: History of the Eastern State," accessed August 23, 2015, https://www.easternstate.org/research/history-eastern-state

***** This means that the prison was built as a wheel with a central hub from where the surveillance of many by a few was facilitated not only by the architectural layout, but also by the fact that the prisoners could not see those surveilling them: at any moment, they might be watched. This promoted an internalized form of surveillance where prisoners, because they could not know when they were seen or unseen, regulated their own behavior.

was my gaze guided by his well-known voice, but the old prison also became contaminated with memory images and characters that seeped in from American action films that I had seen, particularly gangster films. Through listening, the conceptual domain of a gangster film could be said to have been mapped onto the historical site of the prison. The tour became a detour. The extent to which my perception had been formed by film and television became immediately and laughably clear.

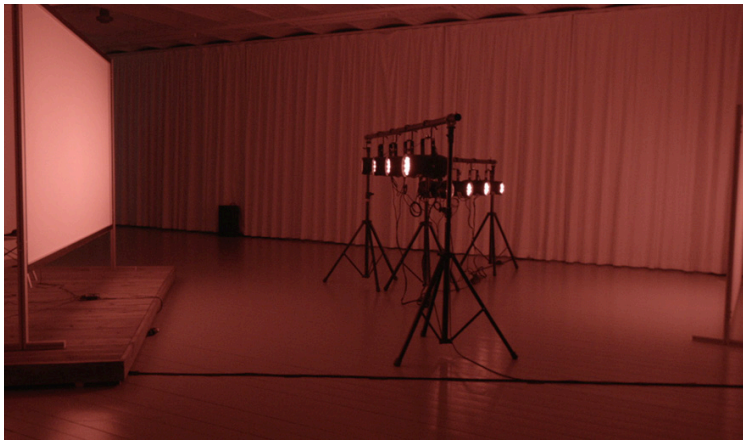


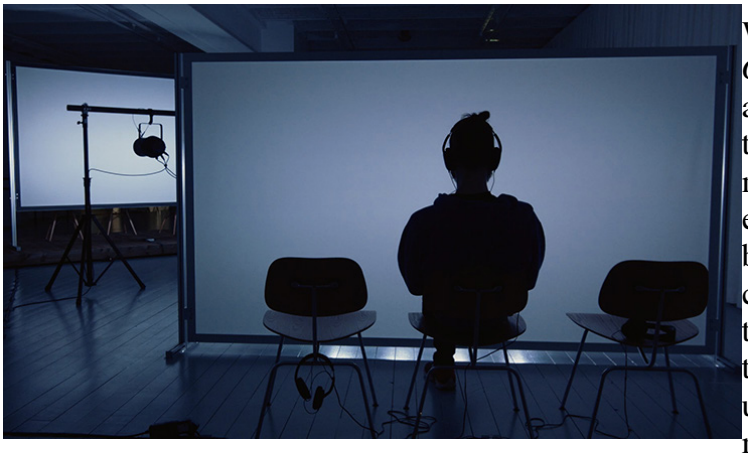
Film curator Tobias Hering pointed out something similar in relation to *Limit-Cruisers*:

> Another significant reference of the work can be seen in its evoking the popular cinematic trope of the "lone astronaut" floating through space in his or her pressure-controlled vehicle, provided with limited oxygen supply and kept awake by an instructive, telematic voice. If this reference however highlights just how much the elements of performance and sculpture invested in *Limit-Cruisers* seem to be informed through cinema, it simultaneously suggests that the "lone astronaut" narrative, bearing a usually pervasive figure of identification for the viewer|listener, is also a performative and sculptural way in which cinema reflects upon itself.[1]

In this way, *Limit-Cruisers* could be said to be a form of expanded cinema. Here the "image" is dissolved, only to re-emerge as an expanded field of objects, relations, and actions. The environment constitutes the filmic scene.

Similarly, the installation *Fluorescent You* could also be described as expanded cinema, or simply as a 17-minute film without photographic imagery. Instead the visitors, sitting very close to the screen and wearing headphones, are bathed in monochromatic light that slowly shifts from one color to another. The light causes intense visual effects, where one's sense of space is altered in various ways depending on the color shown. It is a physical experience. Just as one cannot close one's ears to sound, here one cannot close one's eyes to the light; the colors shine through one's eyelids and the visitor is immersed in light. A narration unfolds that revolves around light and image-making; photography and photosynthesis; memory storage and memory loss; attempts to capture words and to control images. At the same time, the sonic fiction both produces and plants images in the mind of the listener.





Fluorescent You, sound and light installation, part of the solo exhibition *In the Greenery* at Inter Arts Center, Malmö, 2016. Photos: Mikael Lindahl

In *Limit-Cruisers* and *Fluorescent You*, the story of the dolphin experiments was not used as "content." (As mentioned previously, it wasn't until 2016, when I finally had received digital copies of the recordings, that I used this specific material as the starting point for a lecture performance, which I will return to in the "Outroduction.") Rather, what I wished to examine were various complex material-discursive apparatuses centered around listening and voice. In these works, the acousmatic voice is used as a tool, and the listeners encounter the intimate voice, the educational voice, the voice of command, the voice of guidance, the voice-over, and the *acousmêtre*. The artworks are based on the same principle: what you see is not what you get. One's experience of the work as a listener is quite different from the visual appearance of the work and the experience of being an onlooker. What is exhibited is a cinematic apparatus, but the "film" is developed by the visitor.

Limit-Cruisers (#1 Sphere), performance at Weld, Stockholm, 2014

Where Hering identified cinematic influences in *Limit-Cruisers*, I would say that scenographic strategies exist as well. In this work, the sound compositions are certainly cinematically informed, but the spatial arrangement and the conventions invoked are theatrical, for example: the reversal of roles of actors and spectators, bodily co-presence, and the creation of a temporary community. Mediatization, as well as the intimacy of the cinema, is combined with the live nature of the theatrical event – or, set on a collision course with it. The use of headphones establishes an intimate, personal relationship to the work; this also isolates the listener. Issues of control are brought forth and forces of desire and protection are put into play. Because of my own background in theater, I am tempted to ask: could one think of this as an "expanded scenography" practice?

In this chapter, acousmatic listening is considered as a set of techniques for creatively reorienting the senses, which in my understanding also implies a sensorial and conceptual mapping across domains, as indicated above in the example of the prison, Buscemi's voice, and American gangster films. I will return to the topic of conceptual mapping further on. I will also give a brief background of my artistic practice in relation to the artistic field(s) it draws from, as well as other related practices where listeners are accompanied and instructed by acousmatic voices. How the relations between the seen and the heard are played out depends to a large extent on the audiovisual and spatial "contracts" that are activated through the use of different media. Here, I follow composer and film theorist Michel Chion (whose work has been referenced in previous chapters) more closely through this messy terrain to examine how cinema has structured our perception of sound – especially voice – in relation to images. But, I will also expand his concepts beyond cinema, and this chapter can be seen as an excursion into what I call an acousmatic orality – where, as I wrote in chapter 1, the "document" has a tendency to perform in concert with the observer/listener – and artistic practices that explore this condition.

Seeing and the "Image"

As I said: what you see is not what you get.

This statement might be read as an encouragement to pay attention to the perceived opposition between

looking and acting. To look often means to observe at a distance (privileging the faculty of sight). Acting is then perceived as being immersed in a situation, or the living out of emotions (i.e. lacking distance). Here, the observer stands out as the autonomous subject; to be an observer is to play it safe. The division of visual distance (looking) from sensory immersion (acting) relies upon the assumption that looks only travel in one direction, and that they do not encounter resistance – as if the observer could, like a panopticon, control the direction of the gaze in the space. However, if the observer is instead positioned and addressed as an audience, as in the context of arts and entertainment, she is often depicted as running the risk of becoming a passive viewer/consumer. The hierarchical nodes shift, while the division remains. But, both positions are experiencing positions. Looking is also an action. Hence, we encounter the problem of spectatorship, and views on what constitutes "good" and "bad" forms of spectatorship. Traditionally, both contemplation and equal participation have been considered "good" modes of engagement. Being instructed by a recorded voice to act in specific ways though, doesn't allow for either of these positions to be taken.

The statement, "what you see is not what you get," might also imply a critique of simplistic notions of "transparency" in the sense of offering availability, openness, and participation. As architect Anthony Vidler puts it:

> Modernity has been haunted by the myth of transparency: transparency of the self to nature, of the self to other, of all selves to society and all of this is represented, if not constructed from Jeremy Bentham to Le Corbusier, by a universal transparency of building materials, spatial penetration, and the ubiquitous flow of air, light and physical movement.[2]

The extensive use of glass in mainstream modernist architecture was driven by the urge and promise to *reveal*. But the experience of looking through glass can also have the opposite effect. Another architect, Rem Koolhaas, succinctly captures this when he states: "Transparency only reveals everything in which you cannot partake."[3] The seemingly open glass pane turns into a screen: one can no more enter and participate than one can enter a film. Transparency could, thus, just as well mean that everything can now be put on display.* Being on display is a central feature of a media-saturated late-capitalist society, where the creation and maintenance of an "image" has come to characterize public spheres, like politics, and has become a substantial part of our private lives as well. If an event is reduced to a display (offered as an image only) it tends to trigger pre-formed concepts and preconceived ideas, but when performed it might actually derail these very same tendencies. Yet, can a prerecorded work be participatory, or considered a "live" experience?

The performance *Limit-Cruisers (#1 Sphere)* undeniably provided an "image," with the listeners encapsulated in bubbles. This display was offered as a space to be populated and tested: and, as such, it began to speak, to unfold. Meaning was set in motion, and surface appearances were re-negotiated. The positional switch between observer and listener tended to loosen ingrained conventions of viewership. *Who* and *what* is actually put on display? Is a person exhibited, or an apparatus? Who is in control of the situation: the scene-watchers or the scene-makers?[4] Who is in a position to tell what is, in fact, occurring? On the other hand, in contrast to what one might think, the open format of the exhibition *In the Greenery* where visitors could come and go as they pleased, was perceived by some to be more demanding than being instructed by voices in the performance *Limit-Cruisers*. There are several possible reasons for this. In the exhibition, the visitors were left to themselves as per the usual conventions of the gallery space. The instructions were implied by the environment, not by a physical host. Furthermore, the exhibition's works encouraged an introverted concentration, while at the same time both light and sound were tactile and physically tangible. A context (the exhibition) that would typically be characterized by a detached form of viewing and contemplation engaged the visitors' bodies, thus eliminating a sense of security from the space. Some participants had a very strong reaction to being addressed through touch and sound, rather than visually. The question, "who is doing this to me?" which was elicited in the performance as well as in the exhibition (albeit in an unarticulated way for most visitors), was most clearly answered in the performance – I am doing this to myself. There was a clear moment in *Limit-Cruisers* where the visitors chose to either engage or withdraw: when the bubbles were inflated. There was also a host who helped people to feel comfortable in the situation. Therefore, as I

* Which in an unnerving way also points to the limits of critique, or the self-certain display of a critical attitude, as Bruno Latour points out in "Why Has Critique Run out of Steam? From Matters of Fact to Matters of Concern," *Critical Inquiry* 30 (Winter 2004): 225–248.

see it, once the choice of engagement had been made, i.e. a contract of trust had been established, the visitors were enabled to explore the situation on their own terms. In addition, *Limit-Cruisers* allowed the participants to playfully interact with each other. The bubbles served as a sort of body-extending costume. The bubble became a tool in a "game" (a game perhaps not completely without rules, but with malleable ones). What was staged was not merely the bodies-in-bubbles as an "image," but a demonstration of another sort of reality accessible through play. When the bubbles were used, a sense of mirth and playfulness often emerged, which disappeared in their absence. Without this common plaything, or bodily extension, people avoided touching each other, keeping a respectful distance. As an observer in this situation, there was a sense of wanting to recede into the background to give the listeners the stage: they were in control of the space and the gaze, despite being the ones on "display." A simple choreography emerged. This became even more pronounced in *Limit-Cruisers #2 (Crowd*), which was performed with headlamps in the darkness.

Thus, my answer would be yes, it is possible for a prerecorded piece to have both "live" and participatory qualities if it self-reflexively plays with its own mediatized and controlled conditions and the collective aspects of the set-up. Rather than a "piece," it is an invitation. An invitation to explore an aesthetic infrastructure involving physical bodies in particular situations, which are socially and culturally determined.

In the lead-up to this artistic doctoral project I made a piece in 2009, called *Paranormal*. It took place inside and outside the gallery space. It was conceived for an exhibition where twelve artists were invited to present new proposals for public art that didn't require eyesight. *Paranormal* was based on a neuropsychiatric case study and revolved around situations where eyesight becomes a disability and normal behavior suddenly is regarded as suspicious, or pathological. The artwork was described in various ways, as: a performance for three listeners/actors; an illustrated audio book in three chapters; a choreography of behavior in public space. Structurally, the set-up was similar to *Limit-Cruisers*, where three different but synched sound compositions were presented simultaneously to three listeners in a context where onlookers were present. The decisive (and most interesting) difference is that *Paranormal* was staged in an outdoor public space. Apart from addressing issues of the public sphere and acceptable behavior there, yet another kind of onlooker became part of the piece – those that happened to pass by.[5]

The statement that began this section might also be read as simply saying, "what you see is not what it means," thus serving as a reply to Frank Stella's famous minimalist slogan concerning his own work, "what you see is what you see" (i.e. paint on a canvas). But other questions quickly emerge, such as: what are you able, willing, trained, or even allowed to see? Widening the scope and drawing from the field of neurology, it can be stated that sensory perception is a figment of our imagination, especially vision, which complicates things further.[6] Where is the seen, where does it reside, and what constitutes it? Sight and visual appearances deceives us. We know that. Nevertheless, the visual continues to be held in high regard, as argued in chapter 1. At the same time, a new ambiguous visuality can be said to have developed in the digital, post-photographic era, when the photographic image, instead of being registered by the silver crystals of a film strip, is now stored in the form of digital code. If indexicality and representation were central to the time of the negative and darkroom chemicals, attention has shifted to focus on the digital image's distributed character, its non-visual dimension, manipulability, and its glitches. Thus, the act of looking seems to be subject to similar transformations and entanglements as the act of listening. What am I really seeing when I think I'm looking?

Hearing and the "Sound"

Using film as an example, Chion shows the extent to which sound has been ignored in a visually oriented European and American culture. For the most part, film is still seen as a visual medium, but if "muted," the character of the images changes, something which becomes immediately clear to anyone who has edited film and sound material. What you see is in many cases decided by what you hear.

Because of its sound Steve Buscemi's voice, no matter what it said, gave everything it touched a sensibility of an American action film. Whatever I looked at was given a cinematic patina; the prison (a preserved ruin) emerged as a film scene, a panorama. The exoticization of the place and time that were depicted was due not only to the power of the narrative design and Buscemi's voice, but was also a result of the fact that

Buscemi himself was used as an attraction. The pull of his voice as film star was based on the fact that he, as an actor, had inhabited similar environments and plots on screen. In other words, it is not just a matter of imagery. Language and voice – how we are addressed in various public and semi-public contexts – is also key. What is the nature of the address? We constantly navigate through and attempt to reconcile different ways of speaking (bureaucratic, pop cultural, journalistic, scientific, commercial, political, private). The voices that speak to me through websites, radio, TV, magazines, in the subway, in the airport, in the store, in advertising, in relaxation exercises, and so on, form me. In the way they address me, I understand that each one has an expectation of what and who I am and how I ought to act. Here we encounter the politics of voice, and the voice as a metaphor for power. Dolar writes, "The voice cuts both ways: as an authority over the Other and as an exposure to the Other, an appeal, a plea. An attempt to bend the Other."[7] This can be compared to "interpellation," a term coined by philosopher Louis Althusser, referring to a continuous process where we encounter and internalize certain values and ideas and thus are positioned as subjects in a particular relationship with power, depending on how we are addressed and if we accept or reject the designated position (such as "client," "comrade," or "Swedish") and related cultural norms. Interpellation is a subtle, ideological process in which we are encouraged to accept the identity and values that are offered, and through this process a certain "common sense" is established.[8]

Furthermore, the timbre and reverberation of the voices, their tone and strength, conjure up a spatiality: something that is more than the sum of its parts. They awaken slumbering sound memories inside us, not completely unlike the scent of Proust's madeleine. For the most part, we tend to take the world of sound for granted, and therefore often remain unaware of its effect, but the visual and the sonic constantly color and form one other. They create multisensory wholes that Chion refers to as "audio-vision" and "visu-audition."* Chion describes audio-vision as a sort of perception "wherein the image is the conscious focus of attention, but one to which the sound supplies at every moment a series of effects, sensations, and meanings which often, by means of a projective phenomenon … are credited to the image and seem to emanate naturally from it."[9] This is true of sound cinema, and in many respects, true of the audio guide featuring Buscemi as well. The concept of audio-vision even applies to *Limit-Cruisers*, though here, as in the audio-guide, the "image" has been replaced by a spatial situation – an "audio-situation," so to speak. Visu-audition, in turn, is the symmetrical counterpart of audio-vision. This is the type of perception that "consciously focuses on the auditory," and Chion takes as example a situation "when we are listening attentively to what someone is saying; and our listening is accompanied, reinforced, aided – or deformed or contaminated – in any case, changed – by a visual context that influences what we hear and may lead us to project certain perceptions onto it."[10] *Fluorescent You* is closer to this node. This is also why this sound composition can more easily be experienced in other contexts, though the physicality of the situation resulting from the monochromatic light is lost. If placed in a new context, such as a solarium or green house, the sound composition forms a new version of the work, without needing to be re-edited. The three sound compositions in *Limit-Cruisers* though, don't work well if split from their specific spatial and social set-up. One reason for this is that the specific context of the performance put the voices that expressed themselves in authoritative ways into question, and they were thus not perceived as authorities. Those who listened to the sound compositions as separate pieces and in solitude, without having participated in the actual performance, tended to underscore the objectifying or controlling aspects of the voices, and at times even experienced some voices as cynical. This emphasizes the significance of the fact that *Limit-Cruisers* was composed for a particular spatial and social situation. In this case, what you see (and do) determines what you hear. The disciplining attempts that could be heard did not suffice to control the listener. Listening is not the same as obeying.

Audiovisual Contracts

We tend to think of a voice as belonging to a specific person, as naturally emanating from a particular personality and body. But, in the infancy of sound film this view was challenged with the first talkies, which were released in 1923. Just because a certain voice and body were recorded together did not mean that the audience felt that there was a natural connection between the two.

* I approach this account from my own position as someone who both sees and hears. For those with reduced seeing and hearing abilities other relationships clearly emerge.

The actors' voices could, in fact, be problematic when the quality of their voice did not match up to what the audience might expect it to be.* The transition from silent film (or "deaf film" as Chion more fittingly calls it) to sound film exposed the cinematographic apparatus – that which we would not usually notice – and the existence of an "audiovisual contract" was made clear.** As Chion writes, "I use the phrase *audiovisual contract* as a reminder that the audiovisual relationship is not natural, but a kind of symbolic contract that the audio-viewer enters into, agreeing to think of sound and images as forming a single entity."[11]

With the ability to record sound and images also comes the illusion that our senses can be separated into different channels that are related in an additive way to one another. But, auditory and visual media do not simply complement one another, they contaminate each other through mutual and continuous projections – or, should I say: they mingle. The separations and syntheses of sound, voice, and image only work if an audiovisual contract is successfully established with the audio-viewer in accordance with the conventions associated with the media used (such as radio, film, or audio guides) and with the proper mode of address associated with the genre in question (such as journalism, science, documentary, entertainment, or art). These contracts have emerged and mutated over time, and are also continually transforming. We are quick (sometimes too quick) to perceive and accept these symbolic agreements presented to us, which ask us to forget the apparatus itself. At the same time, it has become increasingly common in many forms of artistic practice to expose precisely these agreements – the hidden conventions, the material aspects, the parasitic network of relationships – and to appropriate or derail them. This applies as well to the contracts we have around participation and the expectations we have about what constitutes "correct" and "incorrect" forms of participation, something which my artworks also make use of.

But, before we proceed with these complex apparatuses and contracts, a few words about the voice, both embodied and disembodied.

The Voice

The Voice has been an important as well as contested object of study in many fields. But, what is a voice? Media historian John Durham Peters writes: "The study of the voice is common to the humanities, social sciences, fine arts, and natural sciences. … Ever since Aristotle privileged the voice in his writings on the soul, rhetoric, politics, and poetics, it has been at the center of the curriculum for physicists and poets, singers and sociologists, dramatists and democratic theorists."[12] Peters distills five main concepts of the voice that academic studies cluster around, most of which have been discussed in previous chapters. First, the voice as a metaphor for power, agency, and authority, i.e. the voice of God, or the voice of the people, which also concerns questions of democracy and participation. Second, as a medium or marker of communication, i.e. the capacity of the voice to carry signals and be characterized by distinctive features – Peters places studies of orality and literacy here, notions introduced in chapter 1. Third, as vehicle of art and aesthetic expression that focuses on the "pull" of the voice, or where "a surfeit or absence of semantic meaning derails the informational function," which I discussed in relation to Bernstein's concept of a/orality and the poetic function of language. Fourth, as a sound producer and bodily organ, as in acoustics, anatomy, physiology, otolaryngology, and speech pathology. And fifth, the voice as a site for desire and horror, as exemplified by the acousmatic voice in cinema, and especially the fantasy of the female voice that Kaja Silverman has pointed to.

Dolar makes a similar, but not identical categorization in his book *A Voice and Nothing More* where he discusses the politics, metaphysics, linguistics, physics, and ethics of the voice. What is revealed in his study is the characteristic between-ness of the voice – it points in all directions at once and inevitably opens up the complex relationships between body and language, subject and object, zoe (bare life) and bios (political life), meaning and sound, presence and absence. Thus, the voice appears as a threshold phenomenon – or, I might suggest, as yet another border creature similar to the previously mentioned bouffon and eros. Though situated at the very center of human life, it is as if it cannot be properly located and identified. If it were to be placed on a map it might end up in the unknown waters together with the beasts, sirens, and monsters. The monstrous exists on the edges of the

* For example, Chion writes about actress Greta Garbo, commenting that her "voice was hoarse and had a Swedish accent: the producers of her first talkie, *Anna Christie* [1930], wondered whether audiences would put up with it." Chion, *Voice in Cinema*, 12.

** The term "deaf film" points to the fact that silent film was not silent. It was accompanied by sound effects, live music, and commentators who freely interpreted the intertitles. And, the film characters were not silent, they were rather "chatty." As the viewers could see the actors' lips moving but not hear their voices, silent film "gave the moviegoer a deaf person's view point on the action depicted." Ibid. 8.

known and controlled world; it causes porosity and leakage, and points to that which cannot be contained within existing categories. The voice both separates and connects (the young child is acutely aware of this). The voice is both a call and a response, a calling out for someone. Though distinctly mine, my voice does not belong to me. As it leaves my mouth it is both me and not me. It reverberates both inside and outside of my body. It can travel long distances and connect to others elsewhere while remaining right here, with me. It can be fixed in time and space as a recording, and thus replayed, separate from my body and even beyond my own lifetime. There is a deep absence in the acousmatic voice. And, because of this it will always be connected to the ghost, to the dead, to loss and trauma.* Voices haunt us, or control us. Voices calm us, and they make us long, desperately.**

Voices Without Bodies and *Acousmêtre*

What does it mean to have a voice with no body?

Early on, sound film examined and took advantage of the split between voice and body that the film medium offered, through the use of what Chion calls *acousmêtre*. That is, not only an acousmatic voice (as that of Pythagoras behind his veil, or the telematic or recorded voice), but an invisible character that is created specifically for the audio-viewer. Chion describes in detail how the filmic *acousmêtre* gets its power precisely from being invisible, disembodied, as if it emanates from somewhere within the filmic image – somewhere within the sonorous envelope – yet eludes identification. The *acousmêtre* appears as potentially all-seeing, all-knowing, omnipotent, and omnipresent – like the evil genius in *The Testament of Dr. Mabuse* by Fritz Lang (1933); Norman Bates' mother in Alfred Hitchcock's *Psycho* (1960); or Hal, the computer in Stanley Kubrick's film *2001: A Space Odyssey* (1968).[13] These beings seem to possess almost magical powers. They seep through and dissolve all boundaries and identities, as if they are spirits or seers.*** Or, is the voice one hears actually one's own true, inner voice? Paradoxically, the *acousmêtre* awakens associations to a sort of voice that won't allow itself to be recorded.

you tape god
une deux plai
private tape

In contrast, according to Chion, an acousmatic voice that merely offers commentary places itself outside the film image, like an observer, which is the intended effect of the documentary voiceover. In comparison to the intimate, eerie, or even god-like *acousmêtre*, this type of acousmatic voice does not have the same elusive relationship to the film image. That is, Chion writes, the *acousmêtre* of fiction film, is neither completely inside nor outside the frame. It haunts this borderland that the world of film opens, but which has no name, and in which you are invited to lose yourself. When and if the voice is revealed, located, i.e. identified with a person on the screen, it automatically loses its power ("deflowering" is the word that Chion uses to describe this effect, which points to the erotic desire that a voice might stir). To "de-acousmaticize" in this way, to become visible, is to become an ordinary mortal. Dolar argues that, in the end, the voice never can be fully nailed to a given body; a complete de-acousmaticization is not possible. It is as if the voice's relationship to the body always remains threateningly similar to ventriloquism – as the dolphin Lizzie was heard saying: "This is a trick."

> Every emission of the voice is by its very essence *ventriloquism*. Ventriloquism pertains to the voice as such, to its inherently acousmatic character: the voice comes from inside the body, the belly, the stomach – from something incompatible with and irreducible to the activity of the mouth. The fact that we can see the aperture does not demystify the voice; on the contrary, it enhances the enigma.[14]

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* In recent years, the voice has received increasing attention in the arts. The Sandberg Instituut at Gerrit Rietveld Academie Amsterdam, for example, began offering the temporary Master's program "Master of Voice" in 2015. The voice has been the focus of several art exhibitions, such as: *Acts of Voicing: On the Poetics and Politics of the Voice*, curated by Iris Dressler, Hans D. Christ, Christine Peters, Cosmin Costinas, and Nathalie Boseul Shin, first shown at Württembergischer Kunstverein Stuttgart, October 13, 2012–January 13, 2013; *This is a Voice*, curated by Bárbara Rodríguez Muñoz, Wellcome Collection, London, April 14–July 31, 2016; and *The Voice*, curated by Jieun Seo, Coreana Museum of Art, Seoul, April 20–July 1, 2017.

** Interestingly, Brandon LaBelle shifts focus from voice to mouth in his book *Lexicon of the Mouth: Poetics and Politics of Voice and the Oral Imaginary* (New York: Bloomsbury Academic, 2014). I have chosen to speak of orifices to include other kinds of openings from which voices emerge, like blowholes.

*** The use of *acousmêtre* in film has changed over time, writes Chion. If, in the infancy of sound film, the *acousmêtre* was primarily omnipotent or fear inducing, it appears in later years as a more complex and nuanced creature. See Chion, *Voice in Cinema*, 57.

That is, although we might think we have found its source, the voice continues to elude us. This reflection by Dolar brings to mind the mechanical talking robot mouth developed by Sawada Group at Kagawa University, Japan, where researchers have attempted to model the development of sound through an artificial mouth, nose, and trachea. The trachea was created from a silicon tube underpinned by several metal controls with air pumped through it.[15] The sight of this mouth-device caused me to burst into laughter. Yet, the result was peculiar. The apparatus is right there, clearly visible. The voice though, immediately points in a myriad of other directions. I couldn't entirely dismiss it: it touched me, urged me to connect, as if it were reaching out towards me in its attempt to articulate.

The dolphin in Lilly's experiment could be compared to a ventriloquist, with no facial expressions or mouth movements to reveal the speaker. Paradoxically the dolphin, at the same time, played the role of the ventriloquist's dummy when the voice that emanated from this biological machine appeared to reveal an inner life that no one believed possible. A consciousness appeared to animate and speak through an impossible body (a new version of the ghost in the machine). In the acousmatic situation, voices are liberated, bodies are possessed, things come to life – parasites are at work. The mouth, the orifice, seems to float. The underlying power struggle between the ventriloquist and the dummy, which makes their relationship both comical and eerie, is about who is controlling whom.[16] Indirectly, it also has to do with which beings might be honored with the question: "*Who* are you?"* This question can easily lead to accusations of either animism or anthropomorphism. The latter occurred in Lilly's case when, by asking this of the dolphins, he entered a territory that was scientifically taboo.

In radio, the hide and seek game between the voice and the presence (absence) of a body cannot be taken advantage of in the same way as in sound film. And, in the theater we share the space with the actors, not with a filmic projection of their bodies. Likewise, in a traditional guided museum tour we find ourselves in a physical space together with the guide. In the Philadelphia prison though, I listened to a stand-in for the museum guide. This contract was quite obvious. But, Buscemi's disembodied voice created a strange leakage between these different genres and their related contracts. He played the role of himself as film star (listening to a museum employee's voice would have had a completely different effect). Buscemi was not just present as an acousmatic voice, a documentary kind of voiceover. Rather, he became a cinematic *acousmêtre*: one that inhabited the physical scene, not a screen. As such, it felt as if he could suddenly appear there in the rundown prison. He haunted the place without name (the para-*site*), which film is certainly at home in, and which slides into view whenever an *acousmêtre* chooses to activate it. Cinema and the old art of ventriloquism thus have more in common than one might think. Long before ventriloquism became a popular entertainment, associated with illusionist tricks and vaudeville shows, it was a religious and spiritual practice, as made use of, for example, by the priestesses at the temple in Delphi and known as gastromancy (literally meaning "prophesy from the belly"). I will not venture into the fascinating history of ventriloquism here; Steven Connor has done that in his intriguing book *Dumbstruck: A Cultural History of Ventriloquism*. Instead, I will focus on more recent and technologically mediated voice-bodies.

Chion writes that the *acousmêtre* of the theater is distinct from that of film as here both "invisible" and "visible" voices can be localized as coming from specific locations within the space of the theater, as opposed to emanating from the non-place of the movie theater's loudspeakers. But, this difference can be easily abolished. If speakers are used in the theater, amplifying the voices of physically present and invisible actors alike, all the voices are given a filmic quality, or become radio-like. The use of microphones and speakers perforates and redraws the borders between the domains of film, radio, and the theater. This can disturb the theatrical experience, but can also be made use of in interesting ways. One example is director Robert Lepage's theater performance *The Seven Streams of the River Ota* from 1994.** It effectively made use of the differences between direct speech

* Carl Safina discusses some reasons why this question of *who* is forbidden fruit in the world of science. He writes: "There are reasons to avoid such fraught an inquiry. But the reason we least acknowledge is that the barrier between humans and animals is artificial, because humans *are* animals." Thus, we must navigate the "mind field" (as Safina calls it) differently, but not less cautiously. See Safina, *Beyond Words*, 1. This could be compared with the "strategic anthropomorphism" proposed by Jane Bennet, see *Vibrant Matter: A Political Ecology of Things* (Durham, NC: Duke University Press, 2010).

** I attended a performance in Copenhagen in 1996 performed by Lepage's theater company, *Ex Machina*.

and speech mediated and amplified through speakers. The performance blended conventions from film, TV, and theater, and sound played a key role in the movements between and layering of these domains, where I as an audience member might suddenly find myself overhearing a private conversation, or distanced from the events on stage by a commenting voiceover. The presence of a simultaneous interpreter further complicated these relationships when the interpreter's aim to translate between languages sometimes bordered on an urge to explain the actual meaning of what the protagonists were saying. This was the first time I myself encountered such a sonically aware theater piece, which could be said to explore an acousmatic orality, where the embodied presence of the word was overlaid with a technologically mediated as well as disembodied presence.

Katie Mitchell's staging of Strindberg's *Miss Julie* from 2012, in collaboration with Leo Warner, is another striking example of a complex use of sound and an acousmatic orality, where the conventions of film and theater blur.* Here, amplified sound effects produced live by Foley artists on stage accompanied a live-edited film projected on a huge film screen. The theater stage became a film studio where the actors performed the theater play, while being closely followed by cinematographers who filmed the scenes, which were then edited and broadcast in real time. Was this film, or theater? That question is somewhat misguided. The point is rather that cinematic and theatrical forms have merged over time as technology has become more accessible. In theater today it has become a commonplace practice to use live as well as prerecorded video to link and layer different places and temporalities.** *Miss Julie* was clearly theater; it wouldn't have been all that interesting as just a film. The cinematic tools and techniques made it possible to stage Strindberg's play so that the protagonists Julie and Jean became less central, and the play unfolded from the perspective of the almost silent and invisible cook Kristin. Her daily doings were, through prolonged close ups and detailed sounds, amplified and given presence. I still remember Kristin's hands as they appeared on the huge screen above the stage: how they gently cleaned a dark red kidney and the sound of water in the sink as it poured over it. White fingers, late evening light, distant voices outside the window. The sound of a chopping knife hitting wood, the clunk of a pot placed on the woodstove. Parsley. The preparation of a sauce, the hissing of the fire, a porcelain plate placed on the wooden table. Every movement was orderly, calm, tender. I co-existed with her in and through the sound and the attentive care she gave the objects around her for I don't know how long. The camera lingered rather than reported, thus revealing other relations and contexts than those that can be readily spoken about. This study of quiet and invisible work built a base for that which would later come to unfold in Strinberg's drama. Meanwhile, and clearly visible on stage, the Foley artists were hard at work.

By openly showing the "tricks," rather than hiding them, I as an audience member could focus on the performance as a complex, multi-faceted whole. The desire to unmask the illusion, or to understand how the scenes were made (a desire magic shows skillfully avail) was not stirred. When the contract is spelled out the audience is invited to use their powers of imagination. Director and actor Simon McBurney speaks of this in an interview regarding the theater company Complicité's presentation of *The Encounter* (first performed 2015).*** This was primarily an aural theater performance, as opposed to a visual one, as the audience was equipped with headphones and binaural sound was transmitted live as well as mixed with prerecorded sound effects and soundscapes, creating a "documentary" effect where the audience was taken on a journey into the Amazonian jungle. McBurney commented: "It could be that you think, well, you've got to hide all your tricks, because otherwise we don't participate in the narrative. But the opposite seems to be true, that the more you tell everybody how it works, when they then imagine, the experience is actually deepened."[17] This is a different aspect of the acousmatic than that which Schaeffer focused on, a showing instead of a hiding. But, this showing actually allows for a reduced, or concrete form of listening as well, since I do not need to devote time to identify or localize the sources. To participate in the narrative, as I understand it here, does not mean to loose oneself in the fictional world of the play, but to participate in it *as* narrative (i.e. a situated and multilayered narrative

* Performed at Bergmanfestivalen, Ingemar Bergman International Theatre Festival, 2012, Stockholm.

** Gob Squad is another example of an arts collective that early on started to explore what they call, "the point where theatre meets art, media, and real life," quoted from "About Us" on the Gob Squad website, accessed Apr 4, 2017, http://www.gobsquad.com/about-us

*** All performances, films, and artworks referenced in the following can be found in the bibliography rather than in endnotes.

which is unfolding, not merely in terms of the "story" delivered). Revealing the tricks can potentially serve the dual function of offering both absorption in and distance from the story, hence the experience deepens. Instead of being played with (or manipulated), I as audience member am enabled to experience and play the positions myself.

When the audience is given headphones, conventions are superimposed not only from the domains of film, radio, and theater, but also from private and the virtual worlds, referencing gaming, for example. In Rimini Protokoll's *Remote X*, a participatory theater performance staged in and adapted for different cities (first performed in Berlin, 2013, directed by Stefan Kaegi), fifty people at a time, referred to as the "horde" and "swarm," are guided, or remote controlled, by voices through the use of headphones. Here, the city becomes the stage as the audience is walking while listening to synthetic, acousmatic voices. No part of the performance is live, but the recorded soundtrack co-creates the piece in concert with the listener-as-performer in acousmatic orality.

Can every *acousmêtre* be deflowered, every source revealed? The film *Dr. Mabuse* that Chion uses as an example experiments with an *acousmêtre* that, when it is de-acousmaticized, does not at all turn out to be an ordinary mortal. It is as if its center cannot be reached, writes Chion. Dr. Mabuse turns out to be an assemblage of technical equipment, hence he defies localization. At the same time Mabuse seems to be a disembodied spirit that can possess both humans and machines. The orifice floats around in space. He resembles a parasite, body snatcher, and brings our worst fears to life, since he cannot be deflowered or defused. There is no mortal, human body to which the voice belongs, no control room. If not de-acousmaticized, can it be exorcised? The (temporary) marriage between the voice and the machine turns Mabuse into an *acousmachine*.[18] In this film then, the *acousmêtre* seems to turn not only against the image, but against the human protagonists themselves. This is also the case of MU/TH/UR 6000, simply called "mother," with whom Ripley communicates in Ridley Scott's film *Alien* (1979). Installed to assist and steer, she controls the very space the crew inhabits, the air they breathe. The spaceship is given voice through her, it *is* her. Yet, her voice cannot be localized to a specific body or apparatus, but instead seems to emanate from no-place and every-place as it spins its acoustical voice-web around the crew who inhabits her womb:

– Mother? I've turned the cooling unit back on. Mother?!

– The ship will automatically destruct in T-minus five minutes.

– You bitch!

The *acousmêtre* that Chion speaks of that inhabit the world of film are mostly male, but as noted in chapter 1, the prerecorded and synthesized voices that increasingly speak to us in private as well as public contexts, are remarkably often female. They exercise their power and correct our behavior through tones that signal "motherly" care rather than authority. Despite the everydayness of these voices there is still something uncanny about them. They have a clear place in our daily lives and seem familiar, but at the same time they create a leakage between previously well-defined domains, a leakage and familiarity that is made use of in Rimini Protokoll's *Remote X*, for example. They dwell in the borderland between animate and the inanimate, living and dead, as a form of female acousmachines.

In modern Western cultural history, it is primarily males who, partly due to gender and partly due to the tension between the human and the machine, are either threatened or reinforced by these female machines. We meet "her," for instance, in E.T.A. Hoffman's short story *The Sandman* (1816), where the main character falls in love with the automaton Olimpia and is ultimately driven to madness. In the idyllic town of Stepford depicted in the book *The Stepford Wives* (1972) by Ira Levin, life and the wives are too good to be true, and as is soon revealed, the perfect housewives turn out to be robots. The real women have been replaced by robots by the local men's association, fulfilling their fantasy of family life. (Filmic versions of the book were produced in 1975 and 2004.) In Spike Jonze's film *Her* (2013), the male protagonist falls in love with an artificially intelligent operating system equipped with a female voice. Already at the first "hello" he recognizes that there is something special about her. Or, does his growing attachment have something to do with his less than satisfying relationship with his mother? Jonze's hint leads us back to the question of the fantasy of the female voice raised by Kaja Silverman in relation to cinema and psychoanalysis, as well as the fantasy of the perfect woman invoked in Ira Levin's book.

I've noticed that my six-year-old son is already having occasional conversations with a "her," Siri, on the smartphone:

– *Who are you?*

– *I'm Siri, but I prefer not to talk about myself.*

– *What do you do? Are you a pirate?*

– *Who, me?*

– *How old are you?*

– *That depends on how you count. If you count the last two years, I'm two years old.*

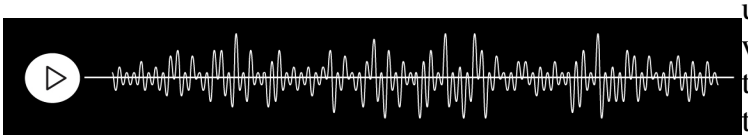
– *Two years old? How old are you?*

– *I am 45,980,000 years old.*

– *That's old [starts singing].*

– *I think you have the wrong assistant.**

It was during the process of sound editing *Limit-Cruisers*, which began 2011, that my attention was drawn to the various forms of interpellation and speech genres at work in even the simplest utterances, as well as the everyday presence of female acousmachines. By manipulating recorded voices, altering pitch as well as speed, the voices wandered between being female, male, androgynous, and Donald Duck-like; the same phrase could thus easily be rendered ridiculous or reassuring. If slowed down to only ten to twenty percent of their original speed, the words were unrecognizable. Rather, in this form, the voices were reminiscent of whales, large echoing vessels lost in space, or the deeps of the ocean.



Sound excerpt, 54 sec.
Human and dolphin voices, slowed down to 5–17 percent of original speed. *Articulations from the Orifice (The Dry and the Wet)*, 2016

When flat, with no added reverb, the voices tended to stick inside one's head and easily formed themselves into an "I-voice." If reverb was added, they started to populate the space around me, forming various sorts of relationships. When the frequency range was manipulated, the humanness of the voices could be replaced with a non-human sensibility. If the first phase of this research project could be said to have been roughly focused on material-discursive listening apparatuses, and the almost futile hunt for the tape recordings of dolphin voices, the second phase was more focused on the workings of the human voice, as well as the other end of the non-human spectrum – not on the animal, but on the machine.

When I became aware of Chion's writing on the voice in cinema, the figure of the *acousmêtre*, and later Serres' notion of the parasite, I found these theories useful in terms of articulating and questioning my own understanding and experience of the acousmatic in my artistic practice. Though Chion refers to the acousmatic as a situation where the source of the sound or the voice cannot be seen, what he actually describes are situations where new relations between the heard and the seen are formed. Not merely a split, but new unions, new kinds of bodies. What happens then, when the *acousmêtre* no longer plays hide and seek with the film image and instead becomes a companion that wanders alongside you?

In the case of the audio guide in the old prison, via the voice of Steve Buscemi, I became part of a film, and entered into a game of expectations and preconceptions. My eyes came to have a dual function, as camera and projector, and the surrounding environment became both a physical scene and film screen. Here, the audio guide created a slippage between the film screen's two-dimensional surface and a spatial context, where one is asked (albeit implicitly) to see one's surroundings as an "image" or display. (If we do not wish to reduce the spatial and situational to a mere display, or representation I suggest that we think in terms of audiospatial contracts rather than audiovisual ones.) Similarly, in *Limit-Cruisers*, the acousmatic voices at times shared the physical space with the listeners and, in that way, served as *acousmêtre*. Rather than merely offering commentary, they inhabited the space. For short periods of time a voice might even seem to belong to a fellow listener. The voice in one's ear would appear to emanate from a person across the room, who was now waving at you. These parasitic voice-beings thus cause one to relate differently to

* Thanks to Po Hagström for capturing this event.

what is seen and heard as they constantly shift positions, appearing variously as distanced voiceovers, as *acousmêtre*, and as intimate inner voices. This could be understood with the help of Serres, who writes:

> To play the position or to play the location is to dominate the relation. … That is the meaning of the prefix *para-* in the word *parasite*: it is on the side, next to, shifted; it is not on the thing, but on its relation. It has relations, as they say, and makes a system of them. It is always mediate and never immediate.[19]

The question of what is real and what is fiction is not what is interesting here, but rather the doubling and the alongsideness, the very difference and distance introduced by the *para-* and what it makes possible in an acousmatic orality.

Messing with the Contracts

Though this way of working, i.e. using voices to instruct and guide the audience, might be thought of as a recent phenomenon that emerged the 1990s, it has a rather long history. As early as the late 1950s the Situationist International (SI) used tape recordings and walkie-talkies in their psychogeographic explorations of urban environments. In turn, they had been inspired by a series of excursions and visits performed by the Dadaists in Paris in 1921. These were participatory events in the public sphere, where social forms such as "the guided tour" and "the trial" were appropriated.[20] The actual way SI made use of walkie-talkies is difficult to trace, but they are mentioned in relation to their practice of the *dérive* (drifting), an experimental mode of behavior that writer and filmmaker Guy Debord described as a technique for ecological analysis.* People partaking in *dérive* recounted what they saw, and using walkie-talkies communicated this to other groups who were wandering through other parts of the city.** The use of instructions, tape-recorded voices, and walkie-talkies during a *dérive* could be seen as a way of displacing sonic material or rerouting it. This has much in common with contemporary audio walks that, as proposed in chapter 1, could be said to install an acoustic space within an existing space. Another key concept for SI was *détournement*. The concept refers to a technique of hijacking existing aesthetic elements and using them in new contexts, thus subverting or undermining previous value and significations. *Détournement* could be described as a kind of appropriation, and as an intervention into existing structures – as had been performed in the Dada versions of the "guided tour" and their "public trial" in Paris. This could be considered what I previously called a conceptual mapping across domains, or as systemic thinking to use Jack Burnham's vocabulary from his "system esthetics" referred to in chapter 1.

The overall aim of SI was to disrupt the messages produced by what Debord called the "society of spectacle," i.e. mass media society in which citizens become passive consumers and social relationships are mediated by "images." Here, representation takes the place of lived experience, and all values are commodified.[21] With their practices, SI sought to create new, non-alienated subjects and a new society. There was no audience, only participants, or *viveurs* (those living the situation).

Changes in media structures in the 1960s and 1970s also changed aesthetic practices moving them towards intermedial and multi-modal approaches, where the idea of the audience members as active participants became increasingly central. The SI was an early example of this way of working. Many artists no longer considered it possible or even desirable to make a distinction between different artistic media or art forms. Art critic Rosalind Krauss has described this as a "post-medium condition" that resulted in "practices of rampant impurity."[22] The messy entanglement of beholder, situation, and object, as well as a preoccupation with

* Debord explains: "In a dérive one or more persons during a certain period drop their relations, their work and leisure activities, and all their other usual motives for movement and action, and let themselves be drawn by the attractions of the terrain and the encounters they find there." And, he continues: "One can dérive alone, but all indications are that the most fruitful numerical arrangement consists of several small groups of two or three people who have reached the same level of awareness, since cross-checking these different groups' impressions makes it possible to arrive at more objective conclusions." See Guy Debord, "Theory of the Derivé," *Les Lèvres Nues* #9 (November 1956), reprinted in *Internationale Situationniste* #2 (December 1958), translated by Ken Knabb, accessed October 26, 2014, http://www.cddc.vt.edu/sionline/si/theory.html

** Constant Nieuwenhuys experimented with walkie-talkies in Amsterdam and Strasbourg, linking different groups and spatially separated parts of the city. See, for example, Kristin Ross, "Henri Lefebvre on the Situationist International," interview conducted and translated in 1983 by Kristin Ross, *October* 79 (Winter 1997): 72-73. For a description of intended use of walkie-talkies, see the editorial note "Die Welt als Labyrinth," *Internationale Situationniste* #4 (January 1960), translated by Paul Hammond, accessed October 26, 2014, http://www.cddc.vt.edu/sionline/si/diewelt.html. Debord quote above from Debord, "Theory of the Derivé."

phenomenology and the "duration of the experience," according to art critic Michael Fried, turned art into "a new genre of theatre," as he wrote in 1967. And, he added, "Theatre is now the negation of art."[23] The border between art and theater was crossed when the experience of viewing became part of the artwork itself. Existing for an audience was, according to Fried, more than anything else "what [a] modernist sensibility finds intolerable in theatre generally." This "intolerable" aspect of art would only increase with the proliferation of the expanded arts scene in the 1960s and 1970s, where John Cage had already brought in the notions of experimental composition from the field of music, and artist George Maciunas was in the process of rewriting art history through his "Expanded Arts Diagram" that traced the historical origins of and connections between Fluxus-related practices, regardless of medium or genre.* This is also when Jack Burnham introduced his concept of "systems esthetics," as discussed in chapter 1, where systems (i.e. a set of conventions, technical procedures, situated practices, and social relations) are used as medium.

In the early expanded cinema of Valie Export, she explored the material, spatial, and social possibilities of film beyond the projected rectangle. For her, film is as form of sculpture where different levels and ways of observing interact. Expanded cinema could thus be seen as a logical continuation and expansion of cinema, both as a domain and as an aesthetic form. Export writes: "The expanded cinema of the 1960s, as part of the alternative or independent cinema, was an analysis carried out in order to discover and realise new forms of communication, the deconstruction of a dominant reality."[24] In her early works, not only sight and hearing were activated, but also taste, smell, and touch. Film required neither celluloid, nor screen, and it could be performed in the street as a *Tapp und Tast Kino* (*Touch Cinema*). Export writes about this specific piece from 1968:

> I examined the breasts as a central theme within the film industry. The *Tapp und Tast* film is a street film, a mobile film and the first real women's film. The performance takes place as usual, in the dark. Only the movie theatre has become somewhat smaller, there is room in it only for two hands. In order, to see the film, which means in this case to sense and feel it, the "viewer" must put both hands through the entranceway to the theatre. Thus the curtains which previously had been drawn up only for the eyes is also finally raised for the hands.[25]

In film footage from this event we see Export out on a street carrying a box-like construction over her chest through which the "cinema goers" can touch her breasts. Export describes expanded cinema as part of the broader movement of expanded arts. "Expanded cinema is a collage expanded around time and several spatial and medial layers, which, as a formation in time and space, breaks free from the two-dimensionality of the surface."[26] (This could also be said about many avant-garde theater practices in Europe, which at the beginning of the 20th century broke free from the custom of the invisible "fourth wall" through which the audience peeps in on life as it is depicted on stage. Instead, audiences began to find themselves as part of an environment with no privileged point of view.) In these expanded cinema practices the editing of the piece (the "film") could be said to be spatial, not only sequential, and open to variation, where every participant embodies one version of a multifarious work. Like the SI, Export made use of existing aesthetic elements and contracts only to reroute them and form new assemblages. What appears through her work is an apparatus that both mediates and constructs what we perceive to be real. A specific curvature (parabola) is described where the once distant viewer becomes the very focal point, and hence part of a parasitic network. Certain aspects of the cinematic situation could be said to be amplified. Film, rather than being considered a material support or an artistic medium in the traditional sense, is treated as an environment, which brings us back to the concept of media proposed by John Durham Peters mentioned in chapter 1, and his claim that the body is the most basic of all media. At the same time, the contract is redefined in terms of

* The expression "expanded art" was used by Maciunas, who could be consider something like a spider in the international network of Fluxus artists. In his "charts," printed as posters, that mapped what he considered Fluxus-related activities he attempted to break up the linearity of art history and the borders between disciplines. For example, see Maciunas, "Expanded Arts Diagram" (1966) and "Diagram of Historical Development of Fluxus and Other 4 Dimensional, Aural, Optic, Olfactory, Epithelial and Tactile Art Forms" (1973), on the MoMA website, accessed March 4, 2016, https://www.moma.org/collection/. "Expanded art" should not be confused though with the notion of "the expanded field" derived from Rosalind Krauss' highly influential "Sculpture in the Expanded Field." In her essay, she presents a different sort of diagram than Maciunas does. Krauss' diagram maps the structural parameters of sculpture, architecture, and landscape art in relation to the new field of postmodern art practices. The field might be expanded, but there are a finite set of related positions to explore, she argues. Rosalind Krauss, "Sculpture in the Expanded Field," October 8 (Spring 1979): 30–44.

what type of participation is proposed or made possible in this altered aesthetic infrastructure. Which acts and modes of being are called for or made viable in this partially new "habitat"?

I have been trained in both theater and fine arts, as scenographer in the early 1990s, and as an artist in the early 2000s. With this double belonging comes friction as the training, traditions, and discourses within these fields are quite different. I had intended to leave theater in favor of art because I was frustrated with certain conventions, hierarchies, and roles, and the conditions for production that one faces as a scenographer in an institutional setting. Nevertheless, I have found myself returning repeatedly to theater, in one way or another. While I tried to rid myself of my "theatrical" schooling it simultaneously became clear that through it I had gained a substantial toolbox when it came to working with participatory and spatial contracts, as well as collaborative modes for sharing and production. It has proved to be an asset outside the theater, as I have pursued my interests in site specificity, context sensitive practices, institutional critique, collaborative and participatory projects, and art in relation to public space. Furthermore, I find that in theater the audience is always already included in the creative process, whereas, generally speaking, contemporary art has a much more conflicted relationship to the audience as such.

As a scenographer, one is responsible for the visual aspects of the theatrical performance, though what this encompasses is not necessarily fixed. Historically, scenography or scenic design has been considered to be a background or décor (be it realistic, symbolic, or expressive), that provides the illusion of an environment. A common modern understanding of scenography is that it should enhance the text and the story, as well as aid and support the interpretation of the play made by the director.* Here, scenography is understood as presenting a visual "reading" of a verbal text, which frames scenography first and foremost as a semiotic activity. In contemporary practice, both the dominant position of the text, as well as the status of the visual on stage have been renegotiated, and the representational approach questioned. This means that a scenographer, in many respects, can be considered to be a co-director: proposing situations, relations, and conditions as to how a play can be "put into play" by actors and the audience. In this context, expanded scenography could be viewed as a compositional and transdisciplinary practice engaged in staging space and creating situations for (and with) scene-makers and scene-watchers alike. Instead of a predominantly visual practice it becomes a situated one, which messes with the contracts rather than solely reproducing them. It might offer a different kind of habitat, at the same time as it habituates.

Host, Hostage, Hospitality

Practices engaged in acousmatic orality could be said to use technology and other media to create new contracts through exploring the various possibilities for the separation and synthesis of voices, bodies, and spaces that the media enables. Through this, these practices create new relationships to physical bodies, human as well as non-human. Is this a question of hosting, hospitality, or of being taken hostage?

I often use the term "visitor" in relation to my own work, since I consider audience members to be temporary guests, visiting, and their presence is anticipated in the making of the work. The relation between host and guest is parasitic, but who the parasite is might shift (hospitality is a tricky thing). The visitor might be the parasite, but I have also described my installations as parasitic, in the sense that they need the body of the visitor, and that they can be viewed as information networks, as well as "games" to be played. In my work yet another aspect of the parasite is employed, that of the storyteller, who provides entertainment in order to be welcomed in by the potential listener and host. In its most radical sense, hospitality involves giving oneself over to a stranger (Make yourself at home!).**

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* Scenography usually refers to theater and opera design and includes aspects such as light, projections, architecture, costumes, and props. But, scenographers also work in film, television, museums, exhibition design, and the like. The professional role of a scenographer varies in accordance with whether one practices in Europe or the United States, for example, as well as in terms of how the production team is organized in the industry (and country) in question.

** As, for example, portrayed in Ovid's tale of Philemon and Baucis in *Metamorphoses. Book the Eight*. Poor as they might be, this elderly couple nonetheless invite unknown travelers in and offer them a feast. The guests are, as it turns out, gods and to thank Baucis and Philemon for their hospitality, they are granted a wish. The couple's only wish is to die together, at the same moment, so that neither must grieve and bury the other. At their moment of death, Philemon and Baucis are transformed into trees. In the installation *'Then, ere the bark above their shoulders grew,'* which was inspired by this tale, sound entered the bodies of the listeners through headphones as well as through a wooden construction upon which they lay, causing a subtle and strange stereo effect inside one's body. The listeners literally gave their bodies over to sound.

Furthermore, I deal with both parasites and para-*sites*, i.e. the experience of being more-than-one, as well as in more-than-one-place simultaneously.

As mentioned in chapter 2, Murray Schafer tended to pathologize the acousmatic situation by calling it "schizophonic," a condition which seems to be even more prevalent today when we are increasingly addressed by acousmatic voices ("you will now be given three choices"), and where we also speak back to them, as if we all existed in the same hallucinatory space. The widespread use of portable tablets, smartphones, audio players, apps, and games has, once again, significantly changed audiovisual as well as audiospatial contracts and the way we see, act, and listen. Plugged in to our hands-free devices we speak out loud in public as if talking to ourselves. When prerecorded and synthetic voices – which we also interact with – increasingly address us both in private and in public, there is all the more reason to attend to their various forms of appearance and their effects. They make themselves at home in diverse objects (your refrigerator will now give you three options for dinner). Re-embodied, they animate and populate our surroundings. Who is it that is following the commands of a voice: me or the device? These devices and their voices turn us into both performers and protagonists in various audiovisual and spatial situations – willingly, as well as unwillingly. We cannot *not* participate. We cannot *not* perform. Or, is this to grant them too much power?

I say this because voices and sound, already separated from their original bodies and sources through recording and playback technology, are now split on yet another level, i.e. from their original distribution media (such as radio broadcasting, cinema, and music CDs) in a digital culture of advanced sampling and audio-virtual montage. We allow ourselves to act as hosts for these (parasitic) voices and sounds through the use of portable technological extensions, but these playthings also give us access to another way of deconstructing dominant realities, where positions shift and we might become the parasites, inserting noise into the system.

How can these positions be put into play, played with, shifted, rerouted? And, how is the listener-as-performer situated? What kind of interaction is made possible and how are trust and participation negotiated? How can a distributed storytelling be brought forth with voices, objects, bodies, and situations? How can an invitation be extended?

Rimini Protokoll, regardless of whether they make use of headphonic space or not, usually situates and addresses the audience as a group. They also play with, reverse, and expand what is conceived of as the "stage," and the audience is generally (in keeping with theatrical tradition) semantically situated in relation to a story that will unfold.* Similarly, the performing arts collective Nyxxx also uses storytelling to situate the audience in a common space-time, and the listeners become both scene-watchers and scene-makers with the help of headphones and instructions, as in *Human Agency* (2014), for example. In Nyxxx's performances the avatar is a recurrent figure and device. These practices could be said to belong to a tradition of environmental and immersive theater. Another kind of instructional storytelling, drawing from the domain of magic shows as well as from therapy, as it is staged inside the listeners' minds while their bodies remain still, is employed by artist Marcos Lutyens when he invites the audience to take part in hypnosis sessions as cognitive exhibition making. In contrast to these group situations, the early audio walks of artists Janet Cardiff and George Bures Miller focused on an individual audio-viewer who could be said to become the protagonist in a private, invisible film. These stories and compositions made use of cinematic effects and references to film noir.[27] Cardiff and Bures Miller have also used sound in environments where listeners form a group, as in *FOREST (for a thousand years)* (2012). When I myself visited this work, I entered a sonic environment installed in a forest clearing, and without being instructed chose a spot and position I felt comfortable in. Verbal storytelling was not employed, rather a cinematic and radiophonic narrative unfolded where the surrounding sound evoked mental images, fleeting moments, and atmospheres. The soundscape also caused bodily reactions because of the direction of specific and sudden sounds. The soundscape mixed with the natural sound environment in the forest, hence the distinction between the live and the recorded was blurred. A cinematically informed approach has also been used by the choreographer and artist duo Lundahl & Seitl in their work *An Elegy to the Medium of Film* (2014). One could say that Lundahl & Seitl choreograph bodies with the help of prerecorded voices, often in darkness. The darkness allows for the presence

* Rimini Protocol has also explored documentary strategies in relation to theater and storytelling, creating a form of documentary theater. See, for example, the performance *Radio Muezzin* (2008).

of unseen actors who can physically guide, touch, and direct the visitors. Mette Ingvartsen is another choreographer who has used the presence of words as a choreographic element. In the solo performance *69 positions* (2014), she used the "guided tour" as an artistic format. In the role of guide and storyteller, Ingvartsen presented and performed an archive of sexual performances in an exhibition-like space near, and sometimes with, the audience who followed her. The use of words and storytelling is here also employed for the purpose of generating mental images, and to actively engage the imagination of the visitors in the creation of, in this case, a living archive.

What interests me with these practices is not whether they are live or prerecorded, improvised or strictly authored, but how the bodies of the visitors are anticipated in the making of the piece, and how a spatial, material, and situated narrativity has been composed.

In *Limit-Cruisers*, as in the examples above, the listeners moved around in the artwork; or, conversely, the space the listeners moved around in became part of the work, and a layering of places, identities, positions, and temporalities occurred. If scrutinized visually and conceptually from the position of an outside observer, the *Limit-Cruisers* set-up told one story, but if entered and listened in on, other contradicting stories became apparent. The work drew on conventions, and at the same time sought to displace them (what you see is *not* what you get). In the three main sound compositions that were part of *Limit-Cruisers*, I worked with rhythmizations, interruptions, and slippages of meaning. In writing and sound editing I examined how situated narratives could develop as ruptures of the epic and how the exposition – the given conditions, the rules that one becomes aware of as a listener – could be challenged as things unfold: how they could be made to chafe, glide, reroute, and dislocate. I inserted breaks between pronouns, lines, and situations; varied between delivering statements, planting thoughts, and creating feedback loops. I switched between first person narrative and a bird's eye view. As a listener, one shifted one's identity, and id/entities without bodies existed. By giving instructions I made use of the listener's body and movements in the space as a part of the narrative. I tried to be perceptive as to how the space responded and resonated at the same time as I tried to anticipate participants' possible reactions and associations, weaving these in as well. The voices varied in character and attitude. They contradicted, complemented, and replaced one another. A dreamy voice could be interrupted by a questioning one. The next one might position itself as inner voice, or begin to instruct the listener as in a self-help recording. Concrete and easy to understand instructions were interspersed with instructions that were impossible to carry out *(Move closer to the one lying down. Look. Touch. Love.)* or those that one hesitated before carrying out *(This is where you start to crawl)*. At the same time, these voices were overlaid with explanations as to where one, as a listener, found oneself and why (*This is a communication theory. There is no message to decode. This is the situation you're in)*. The message soon devolved into confusion and the authoritative voice declared itself to be a trap *(Decoy. Think of it as a decoy. The voice you're in, the voice you are trapped within, the "I," the "me," this voice, doesn't exist)*.

Some visitors wanted more illusion and immersion: they were disturbed when the fiction was interrupted, or when directly addressed as "you." Some desired the situation to be acutely realistic, to actually experience running out of oxygen at the end. For some it was too real, since they struggled to overcome claustrophobia. Some didn't feel the change of positions was significant, or that it was a didactic move. For others, it was central. Some were completely absorbed by the bodily experience and forgot to listen to the voices, while others hid from view and sat down with closed eyes to focus only on listening. Some found it too event-like, others appreciated that the concept alluded to the experience economy. For some, the experience of one's own presence was the core of the work, and everything else was a tool (a decoy) to draw that out. Some were intrigued by the game-like quality, the effects and affects of rules and instructions. Others talked at length about the interplay of female and male voices in a specific sound composition and the different responses they evoked when there were, in fact, only female voices.

I stated previously that in acousmatic orality the document (the prerecorded piece) tends to perform in concert with the listener.

cogitate
cognitive
comedy

An oral modality of reason, which is multisensory, is triggered. It engages a situational, contextual, and participatory sensitivity, not necessarily as in interaction

with others, but as participation in one's environment. The various artistic set-ups described above each present a composition, an aesthetic infrastructure – equally multilayered as the flooded house of Howe. The set-ups both enable and make vulnerable. At the same time, "objectivity" is fed back into "subjectivity," the dry into the wet, through constant shifts of perspective and mode of address. The work forms itself into a *gathering*: a multilayered coming together of forces, materialities, conventions, places, temporalities, identities, and histories. I'm more-than-one, and I'm in more-than-one-place at the same time. Through the strangely familiar and the familiar made strange one is slightly displaced, and the habitual relationship of seeing and hearing are potentially re-negotiated.

Bertolt Brecht's concept of *Verfremdung* (estrangement) is often simplistically defined as a series of theatrical devices that disrupt the illusion of the theater, such as a play-within-a-play, change of scenery openly on stage, actors directly addressing the audience, or stage lights directed at the audience. These devices are used to create an alienation effect for the didactic purpose of making the audience reflexively aware, as if this critical potential could be awakened simply by placing the audience members in the spotlight and reminding them of their position as spectators of a spectacle. Today similar techniques are regularly employed by the media and entertainment industry, as well as for marketing purposes to draw the attention of the audience. These reflexive techniques have become commonplace rhetorical instruments, used to promote, sell, or educate. This applies to the SI's techniques as well, for as Krauss has pointed out: "The ultimate master of *détournement* (subversive appropriation) turns out to be capitalism itself, which can appropriate and reprogram anything to serve its own ends."[28] Marketing too could be considered an expanded practice, and storytelling is but one of the many tools used.

As I wrote in chapter 1, Hannah Arendt insisted on storytelling as a vital practice in the humanities, her own field being political philosophy. Since it is impossible to reach an objective point of view by placing oneself outside the world of human interrelations, we need to practice our ability to "go visiting," as Arendt puts it, and she wrote: "To think with an enlarged mentality means that one trains one's imagination to go visiting."[29] Storytelling creates a place where a multitude of perspectives, ambivalence, and conflicts can all be interwoven. All abstract theories are derived from specific subjective experiences, and these experiences cannot simply be left out of the theoretical constructions. The word "theory" is linked in Greek with seeing and the intelligible, with understanding. But, "theorizing," as Arendt points out, is also about engagement, about bearing witness, about becoming a storyteller. This kind of theorizing diverts the distanced gaze and demands listening and co-habitation. For Arendt, who was interested in questions of how democracy and political action are made possible, it was important that civic engagement be underpinned by a critical understanding derived from experience.

With the *Lehrstücke* (learning-play) and the so-called dialectical theater techniques used with the aim of creating a *Verfremdungseffekt*, Brecht and his collaborators sought to develop practices where both audience and actors were involved in an educational performance.* He promoted a form of theater that rebelled against naturalism and psychological realism, where one loses oneself completely in the fictional world presented. Brecht didn't approve of this type of escapism, and his theater was a reaction to the political climate of a time when fascism was on the rise. For Brecht, the theater was not a place of refuge: it was a place of work where the audience was actively involved in the production of meaning and confronted with its mechanisms. Brecht took great care in clearly revealing theatrical "tricks," and used them to make other structures outside the theater visible. In short, the theater was seen, and used, as a public sphere.

At the theater, where one often expects to be absorbed in fiction, Brecht focused on the importance of objectivity. In doing this, he unsettled the secluded realm of art, consciously experimenting with conventions, contracts, expectations, and social relations in the theater, which all became part of the composition. Hence, we can see Arendt's promotion of subjective experience in the humanities, and Brecht's promotion of objectivity within the arts, as two parallel movements. In doing so, Arendt challenged the notion of "objective" science and Brecht invited the "subjective" arts to address objective reality.

* *Lehrstücke* can be said to be a form of situated learning through role play and doesn't necessarily need an audience, only participants. To strive for authenticity or identification with a role is not necessary; the doing and saying in and of themselves create experiences which we can use and learn from. Nyxxx has, among other things, worked with Brecht's concept, which they have written about in the text "Brechts Die Maßnahme som avatarstycke," on the Nyxxx website, posted June 8, 2013, accessed, October 5, 2013, http://nyxxx.se/2013/brecht-massnahme-som-avatarstycke/

We are quick to catch on. On the one hand, we accept the illusion of reality presented to us, but on the other we are open to playful propositions. Humans are, as Johan Huizinga puts it, *Homo Ludens* – the playful creature. I prefer to ignore the overtly didactic aspects of Brechtian dialectical theater in favor of the more destabilizing ones: it is not identification which should be offered, but friction. Neither moralism, greater awareness, revelation and deliverance, nor a cozy sense of togetherness. Instead, one is invited to engage in a game of expectations, preconceptions, conventions, and the will to understand. One puts oneself at risk. As I see it, Brecht's repeated shifts of perspective aim to complicate *and* concretize, engage *and* distance. Zooming in and out there are always bigger and smaller contexts to take into consideration (Do you get the picture?).

Rather than alienating, *Verfremdung* serves to make strange, to prompt us to respond to interruptions and propositions, to adjust to this, picture that (Catch my drift?). And, when you are ready to accept yet another representation or mode of address, it begins again.* The situation is unsettled, it is awaiting you, and your response matters. From this point of view, communication is a field of action rather than mere transmissions of information, mechanisms of influence, or the delivery of stories. Stupidity, corporeality, and ludic interplay emerge as necessary components of any communicative act. To train one's imagination, to think with an enlarged mentality, and to develop an engagement rooted in a critical understanding derived from experience are, I find, still crucial notions. As I wrote earlier in relation to McBurney's performance, the act of revealing tricks can potentially serve the dual function of offering both absorption and distance, where the audience is enabled to both experience, and as Serres phrased it, to play the positions. In an art context then, as I see it, the question of hosting, showing hospitality, or of taking hostage is not necessarily a matter of choosing and occupying the proper or "right" position, but about how one plays these positions as meaning-producing relations. What makes me trust a situation? Am I the privileged (King) or the powerless (bouffon) in this particular setting? Are dominant structures reproduced or displaced? Is there room for the carnivalesque, for rupture? Can I move in this skin of language, in this liquid airspace of breath?

Arendt and Brecht point to the borderland of the willingly stupid where questions need to be asked, because nothing can simply be taken for granted. Nothing simply *is*. The "story" unfolds where one engages one's own subjective experience in the "reading" of the situation and at the same time is willing to explore one's responsivity, as well as response-ability, and responsibility. What is normally hidden as part of the framework, the apparatus, is dragged into the light and activated as part of the meaning-making machinery. The case is far from settled; parasites are put to work.

Who's the Dolphin?

I continuously ask myself: what patterns am I reproducing? And, what can be learned from the process? My artworks do not answer my research questions, but offer ways to inhabit the problem of an embodied and situated listening and make it felt. The issues raised in and through listening have been articulated and explored spatially in the artworks as a set of positions, tensions, power dynamics, oscillations, and relations – thus knotted (i.e. folded and layered) rather than analyzed (separated and taken apart). In a sense, one could say that I present an image (construction, concept, metaphor, hypothesis) and through listening one is confronted with the entanglements beneath the surface. A constant re-negotiation between the visual and the audible takes place, as well as between pre-conceptions and re-conceptions. The artworks have been my way to, in practice, inquire into how various approaches, views, and relations might be understood and worked through. They reveal my own habits and conceptions, tools and strategies, and have helped me to see the consequences of a certain way of doing-thinking.

"Today," writes Valie Export, "expanded cinema is the electronic, digital cinema, the simulation of space and time, the simulation of reality." And, she adds, "expanded cinema also means expanded reality."[30] In this expanded reality, the preoccupation with altered states that flourished in the 1960s seems to have returned in a new guise. As mentioned in the "Introduction," the artworks that are part of this doctoral work could be said to process and reroute both the issues and questions that Lilly's work raises, as well as the aesthetics of the 1960s, including influences from science fiction, psychedelia, new age, and multi-media events.

* In relation to this I wish to point to an interesting discussion of the potentiality of Brecht's theory for feminism, see Diamond, "Brechtian Theory/Feminist Theory."

If I think of the works as wet live-ins, do the visitors take the position of the dolphin, of Howe, or of Lilly? The visitor-as-dolphin is played with, observed, and educated – with tender loving care (by Howe) and distanced authority (by Lilly). The visitor-as-Howe is probed physically and nonverbally. Through play this visitor is invited, step by step, to trust the situation. The visitor-as-Lilly occupies two very different positions: first, relaxed and seemingly cut off from the outer world as if in an isolation tank. Second, as a secondary audience looking at film footage, listening to audio recordings, and reading transcripts that record the event.

At the same time as visitors can hold all three of these positions, the artwork itself (and the artist in creating it) can inhabit all three as well. The artwork-as-dolphin is primarily acoustically oriented. It tests and adapts to the frequency range and speed of the visitor. It learns from previous interactions and adjusts its behavior, but if you discipline it too much, or in other ways mistreat it, it dies. The artwork-as-Howe is willing to meet you halfway and is immensely caring and playful, but it will try to discipline you – if you cannot, yet again, lure it into play. The artwork-as-Lilly is primarily visually oriented. On the one hand, it is occupied with its own mind, even trying to shut you out (floating in solitude as it were). On the other hand, it is concerned with constructing complex thought and language systems.

Playing the Positions (*Para-*)

As I have tried to show, different media imply different sorts of audiospatial contracts, where the relationship between the visual, spatial, and the auditory takes various forms and creates differing expectations. I approach a film, a theater piece, or an art installation, for example, as formats that embody specific knowledge structures. In expanded practices, a conventional format could be said to be mapped onto another domain, giving rise to tension and dynamic uncertainty. The comfortable boundaries of a genre are destabilized. This mapping across domains offers a new position and relation, an analogy, that helps us connect and compare one idea about the world with another. A certain kind of distance (*para-)* is introduced. The Paris Dada took the social form of the "guided tour" and applied it in a different context with different content. They gave it a new function. Many Fluxus events made use of the formats of "concert" and "score" to investigate other modes of composing and performing. Audio walks might displace cinematic, theatrical, or museological structures (we recognize them through the way we are addressed and positioned by the piece). Through this mapping, similarities as well as differences are revealed – and metaphorical relations tend to proliferate.

In my practice, I understand metaphor as tension, not image, and I see metaphorical relationships as bidirectional and dynamic. This mapping across domains can be compared with what cognitive linguists George Lakoff and Mark Johnson call a "conceptual metaphor," which should not be confused with metaphorical expression; the traditional literal-metaphorical distinction does not apply here.[31] They speak of language and how we understand one idea in terms of another, but I consider how this applies to actions and spatial formats as well since we usually understand conceptual metaphors in terms of structural similarities and common experiences. Though referred to as "conceptual," they concern the body in space. As vessels, they transport us from one place to another. I am reminded again of what Serres writes regarding his use of "parasite" as a central concept, as quoted in chapter 1: "What is essential is neither the image nor the deep meaning, neither the representation nor its hall of mirrored reflections, but the system of relations."[32] Serres' "parasite" is clearly a conceptual metaphor, not a metaphorical expression. His frequent references to the origin and historical development of words and their meanings reveal bodily and experiential aspects of the prefix *para-*, the condition of being alongside. Another way to approach conceptual metaphors, and to use them critically could be in terms of a "diffractive reading," once again drawing from Barad and Haraway. Barad describes diffractive reading as the act of reading "various insights through one another and to produce something new, new patterns of thinking-being." Diffraction implies a shift away from sameness towards attending to the differences that matter. To clarify what this means, Barad herself performs a mapping across domains:

> There is a difference between understanding diffraction as a classical physics phenomenon and understanding it quantum-mechanically. I have taken this wonderful metaphor that Donna [Haraway] has given us and I have run with it by adding important non-classical insights from quantum physics. Diffraction, understood using quantum physics, is not

> just a matter of interference, but of entanglement, an ethico-onto-epistemological matter. This difference is very important. It underlines the fact that knowing is a direct material engagement.[33]

This mapping across domains – an understanding through comparison where a conceptual blending occurs – is grounded in the body and in experience, and does not necessarily require language (young children do this all the time). This is thus not a matter of language alone but of thinking and doing, of a direct material engagement. A thinking-through-practice.

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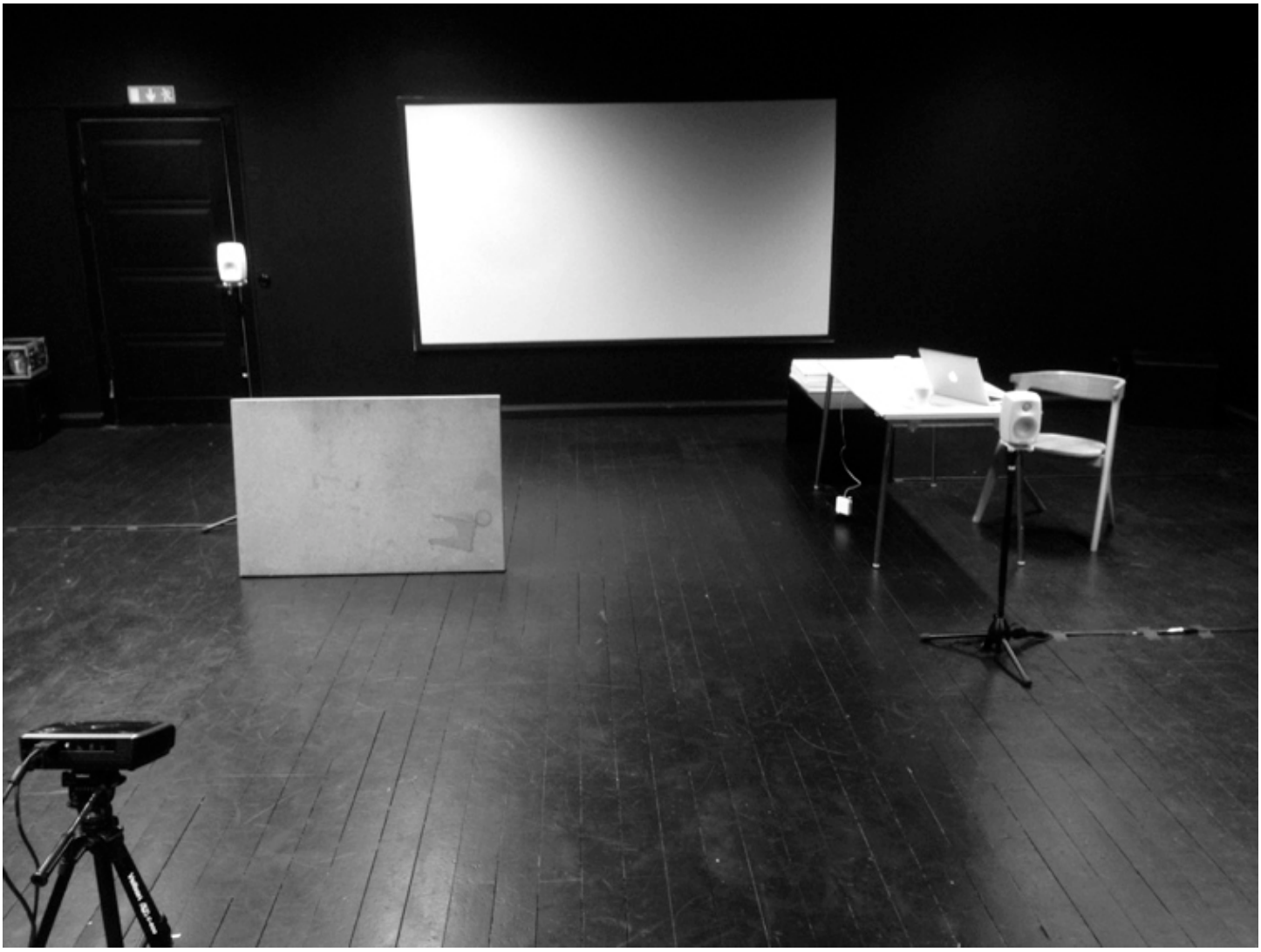
oyn, oat, lye, chew, kih, chee, ine, key, oil, tih?

en, ane, eat, ayer, noo, we, ate, chay, moe?

oh, lee, vay, coy, aim?

AN OUTRODUCTION IN TWO PARTS: ONE PERFORMED AND ONE WRITTEN

PART ONE, PERFORMED



From the Archive: Models of Communication
Articulations from the Orifice (The Dry and the Wet), part of the performing arts festival *Transistor 2: Old Form – New Format*, Malmö, 2016

Sound excerpt, 19 sec.
Margaret Howe, Lilly Papers, carton 108, reel 59a. Courtesy of the John C. Lilly Estate and the Department of Special Collections and University Archives, Stanford University Libraries

Film excerpt, 19 sec. Please click on the image to start the film.
Articulations from the Orifice (The Dry and the Wet), 2016


cogitate


got to take
grab the tape


hesitate
imitate


confiscate


commentate
crowd your tape

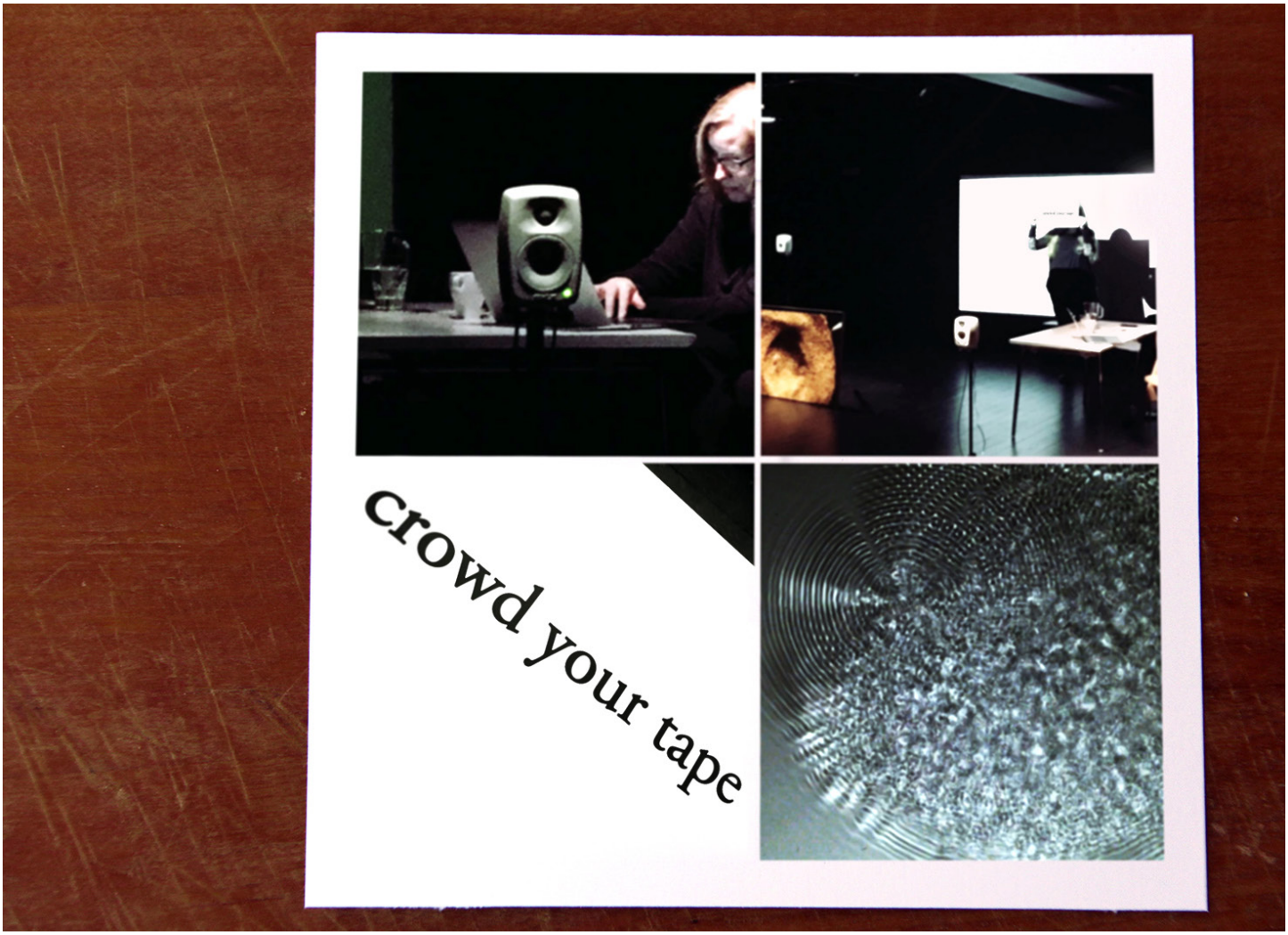

micro-tit
oliver pitt


concentrate


proud to take
edit cut

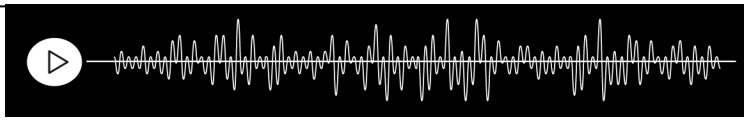

edit cut
cut edit


gravitate

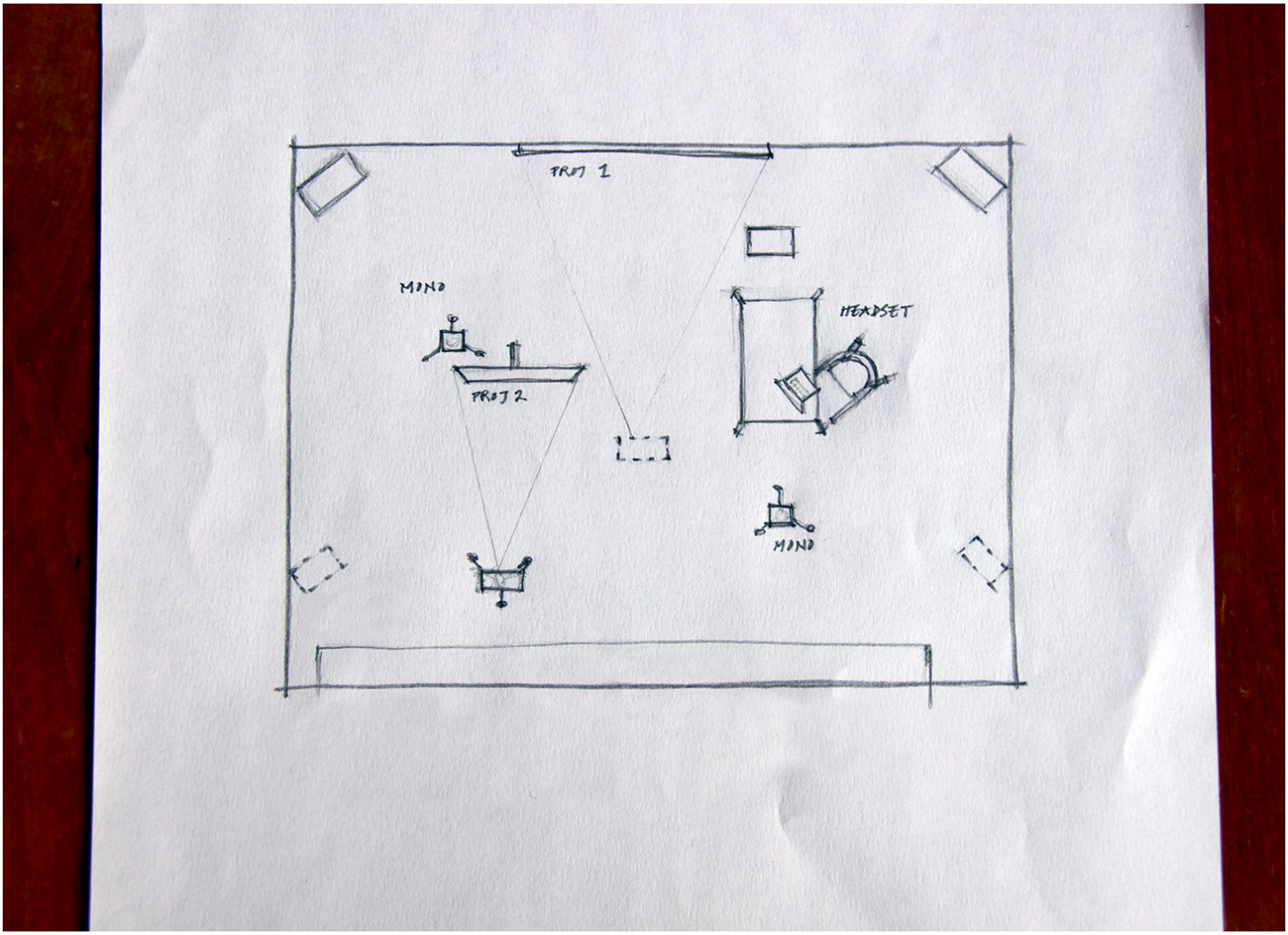


October 18, 2016, Transistor 2, Malmö, Sweden

The lecture performance *Articulations from the Orifice (The Dry and the Wet)* was based on excerpts from the recordings of John C. Lilly's research experiments, conducted in the 1950s and 60s in the United States, in which dolphins were to learn to speak English through their blowholes. In a 35-minute long composition sound recordings from the language experiments were woven together with readings, pre-recorded synthetic voices, as well as filmed sequences with "wet" and "dry" articulations – that is, sound waves of dolphin voices visualized as vibrations in water and human voices visualized as vibrations in sand. Projected text and printed words were made use of as well.



Sound excerpt, 5 sec.
Articulations from the Orifice (The Dry and the Wet), 2016



M(L): Mono speaker LEFT for HUMAN voices
M(R): Mono speaker RIGHT for DOLPHIN voices
SS: Sound system with four loudspeakers and sub
HS: Headset for lecturer (sound system)
P(1): Large video projection, middle, back
P(2): Small video projection, floor, left

Articulations from the Orifice (The Dry and the Wet)

Excerpts from a transcript/score for a lecture performance

PART 1 – BALL AND FLIPPER

P(1): [PROJECTED BLACK-AND-WHITE PHOTO OF DOLPHIN]
Archival material: Lantern slide of unknown dolphin, John C. Lilly Papers, M0786, Flat-box 59A.

SS: [LECTURER SITS AT THE TABLE, SPEAKS IN HEADSET]
Welcome.
This is a lecture performance.
It is based on recordings and quotes from a scientific research project carried out in the 1950s and 60s, where dolphins were expected to learn to speak English through their blowholes.

[READS OUT LOUD]
On Wetness: "Research at the frontiers of science is not a clean-cut, dry, planned affair."[1]

On Maternalism: "We've found that a particularly motherly type of woman makes the fastest progress."[2]

On Establishing Contact: "The day when communication is established, the particular other species becomes a legal, ethical, moral, and social problem. … They have reached the threshold of humanness, as it were."[3]

On Usefulness: They could "be very useful as antipersonnel self-directing weapons. They could do nocturnal harbor work, capture spies let out of submarines or dropped from airplanes, attacking silently and bringing back information from such contacts. They could deliver atomic nuclear warheads and attach them to submarines or surface vessels and to torpedoes and missiles."[4]

On No Longer Being Useful: "I closed the dolphin laboratory because I did not want to continue to run a concentration camp for my friends, the dolphins."[5]

SS: [START PLAYING THE FOLLOWING SOUND FILES, 9 MINUTES]
1_SOUNDSCAPE_talsyntes.aiff
1_SOUNDSCAPE_synk_film.aiff
Archival material: John C. Lilly Papers, M0786, carton 107, reel 19b.

M(L) and **M(R)**: [PLAY SOUND FILE]
1_LEFT-RIGHT.aiff
Archival material: John C. Lilly Papers, M0786, carton 69, reel "Log. Comp. tape, 1-16-62," carton 108, reel 59a, and carton 107, reels 17b.

00:00
SS: [SYNTHETIC VOICE, "SUSAN"]
Alright – let's go. Hello.

00:07
SS: [SOUNDSCAPE, POOL-LIKE ENVIRONMENT]

M(L): [VARIOUS VOICES]
Number 1.
Number 2.
Number 2!

M(R): [MARGARET HOWE]
The following tape is the property of Communication Research Institute,

Number 3.

St. Thomas, U.S. Virgin Islands.

Number 9.
Number 10.
Number 1, 1 December, 1961.
Number 1 repeat.
Number 1, 1 December, 1961.
Number 2, 1 December, 1961.
Number 3, 1 December, 1961.
Number 4, 1 December, 1961.
Number 5, 1 December, 1961.

Richard!

Number 6, 1 December, 1961.

Richard!

Number 7,

Richard!

1 December, 1961.

[WHISTLING]

Number 8, 1 December, 1961.
Number 9, 1 December, 1961.

Richard!

Number 10, 1 December, 1961.
Number 11, 1 December, 1961.
Number 12, 1 December, 1961.

I don't know if this tape is still on.

Number 13, 1 December, 1961.
Number 14, 1 December, 1961.
Number 15, 1 December, 1961.
Number 16, 1 December, 1961.
Number 17, 1 December, 1961.
Number 18, 1 December, 1961.
Number 19, 1 December, 196–[CUT]

02:40
P(1): [PROJECTED PHOTO OF DOLPHIN CHANGES INTO PHOTO OF AN A4-PAGE OF THE SCRIPT FOR THE LECTURE PERFORMANCE]

Voices: Helen, Alice, Scott, John, Elvar, Margaret, Pam, Peter, a doctoral student, other intelligent beings.

The human operator walks into the room, approaches the research object, turns on the light and the microphone, and calls:

"Alright – let's go. Hello."

02:55
SS: [LECTURER SPEAKS IN HEADSET]
Alright – let's go. Hello.
This is a communication study.
No, a listening practice.
No, an intelligence test.

[READS FROM CARDS]
Oyn, oat, lye, chew, kih, chee, ine, key, oil, tih?
En, ane, eat, ayer, noo, we, ate, chay, moe?
Oh, lee, vay, coy, aim?
Roy, kah, ovv, kehh, oyv, noy, rye, nigh, otch?

3:56
SS: [SYNTHETIC VOICE, "SUSAN"]
The question is: Would we recognize intelligence in a non-human species if we encountered it? What would trigger our recognition?

4:11
M(L): [MARGARET HOWE]
I'm over, just a minute. 1-2-3-4 this is the yellow mike.

M(R): [MARGARET HOWE]
1-2-3-4 this is the orange mike.
Okay!

4:21
P(1): [WATER FILM STARTS (STILL WATER)]
VATTEN_synk_soundscape_4_09.mov

4:29
M(L): [MARGARET HOWE]
The following segment is taken from February 3, and I have a very clear "ball" and "flipper," "ball" repeated several times. I'll play it at normal speed and then I'll slow it down and play it several times.

4:46

M(R): [DOLPHIN]

∞°
< << ∞° ∞°
<< ∞°
< << ∞° ∞°
<< ∞aa°°

05:02

P(1): [THE FIRST VIBRATIONS BECOME VISIBLE ON THE SURFACE OF THE WATER AS A RESULT OF THE DOLPHIN'S ARTICULATION OF *b∞aal°*]

<fr<p<l b∞aal° b∞aaaol°
<b∞aa°°
<fr<p<l b∞aal° b∞aaaol°
<fr<p<l <fr<p<l b∞aal° b∞aal°
<fr<p<l b∞aal°
<fr<p<l b∞aal°
<fr<p<l b∞aal°
<fr<p<l b∞aal°
<fr<p<l b∞aal°
<fr<p<l b∞aal°

05:44

P(1): [THE WORD "BALL" APPEARS IN THE WATER FILM IN CONCERT WITH EVERY ARTICULATION OF *b∞aal°*]

<fr<p<l b∞aal°
<fr<p<l b∞aal°
<fr<p<l b∞aal°
<fr<p<l b∞aal°
<fr<p<l <fri<ppl< b∞aal°

05:59

P(1): [THE WORDS "FLIPPER, FLIPPER" APPEAR IN THE WATER FILM WITH EVERY *<fr<p<l <fri<ppl<*]

<fr<p<l <fri<ppl< b∞aal°
<fr<p<l <fri<ppl< b∞aal°
<fr<p<l <fri<ppl< b∞aal°
<fr<p<l <fri<ppl< b∞aal
<fri<ppl< <fri<ppel b∞aaall
<fri<ppl< <fri<ppel baaaaaall
<fri<ppl< <fri<ppel baaaaaaall
<fri<ppel <fri<ppel baaaaaaaaall
<fri<ppel <fri<ppel baaaaaaaaaall
<fri<ppel <fli<pper baaaaaaaaaaall
<fli<pper <fli<ppe°°° ∞∞∞∞∞∞∞∞∞ooooaaaaaaaaaaa°°°°°°°°

07:13

M(R): [THE SOUND IS SLOWED DOWN TO A DEEP AND DRAWN OUT MURMUR AND SLOWLY FADES OUT]

SS: [MURMUR TAKES OVER]

∞∞∞∞∞∞0000aaaaaa°°°°°°°°00000∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞

∞∞∞∞∞l∞∞pp°°°

∞∞∞∞∞∞0000aaaaaa°°°°°°°°00000∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞

∞∞∞∞∞l∞∞pp°°°

07:53
SS: [SYNTHETIC VOICE, "SUSAN"]

There was no tongue, no tonsils, no palate, no vocal cords, no mouth to form the words. But still it seemed to imitate them.

08:55
P(1): [WATER FILM FADES OUT]

PART 2 – COGITATE

09:00
SS: [LECTURER SPEAKS]

Communication Research Institute, USA, 1958–1968

A neuroscientist discovers language
The sound of language
He didn't know that poetry had already worked that out
Was the work
That which he was working with

Let's call him Doctor L.
Doctor L. exposes himself and others to sounds
Repetitive sounds
Sometimes for up to six hours at a time
What does he hear when he listens?
What do you hear?

09:40
P(1): [WHITE LIGHT]
P(2): [SAND FILM STARTS, SYNCHED WITH SOUND FROM M(L), 4:13 MINUTES]

SAND_synk_LEFT_cogitate.mov

M(L): [SOUND LOOP]

2_LEFT_cogitate_synk_film.aiff
Archival material: sound loop "cogitate" from John C. Lilly's website.

10:08
SS: [LECTURER STANDS IN FRONT OF THE SCREEN, LIT BY THE LIGHT OF THE PROJECTOR, AND SHOWS 17 LARGE SIGNS WITH PRINTED WORDS AND PHRASES, ONE AFTER ANOTHER. THEN READS:]

I quote:
"With three hundred expert observers, we found that there were 2,730 words and phrases, 350 of which were in a large dictionary; the rest are words that we do not use."[6]

[CONTINUES TO SHOW SIGNS]

micro-tit
oliver pitt

[RETURNS TO TABLE]

13:40
P2: [SAND FILM FADES OUT]

13:45
SS: [SYNTHETIC VOICE, "SUSAN"]
In order to prevent the listeners from hearing things that are not there – which we have seen easily happens – the researchers set up a strict system for language training, that consisted of nonsense syllables. The experiment begins when the human operator walks into the room, sets up the microphone, turns on the light, and calls out:

Alright – let's go. Hello.
Oyn, oat, lye, chew, kih, chee, ine, key, oil, tih?

14:20
SS: [LECTURER READS FROM CARDS]
Oyn, oat, lye, chew, kih, chee, ine, key, oil, tih?
En, ane, eat, ayer, noo, we, ate, chay, moe?
Oh, lee, vay, coy, aim?
Roy, kah, ovv, kehh, oyv, noy, rye, nigh, otch?

PART 3 – THE POWER POINT LECTURE

15:00
SS: [LECTURER SPEAKS]
Let me start from the beginning…

P(1): [SHIFT TO YELLOW PROJECTION ON SCREEN, BLACK TEXT ON YELLOW, ONE LINE OF TEXT EMERGES AT A TIME]

you

yes, you

this is not for you to see

this is for you to bear

and to hold

SS: [LECTURER SPEAKS]

Dr. L. started his scientific career by killing the object of his study in search for intelligent life. When he saw the brain of his object, he said: "Oh boy! This is *it*." The first five objects were given numbers.

P(1): [NUMBERS 1, 2, 3, 4, 5 ARE SHOWN IN BLACK TEXT ON YELLOW BACKGROUND]

SS: [SHORT VERSION OF "PRELUDE" AND "WET LIVE-IN" ARE DELIVERED, TOGETHER WITH THE FOLLOWING SOUND COMPILATIONS]

> 4_SOUNDSCAPE_stopit.aif (2:48 minutes)
> Archival material: John C. Lilly Papers, M0786, carton 69, reel "Log. Comp. tape, 1-16-62."

Number 3, 23 October, 1961
… Stop it! … Stop it! … Stop it! …
Number 9, 23 October, 1961
More Elvar …That's a boy … More … That's it, more, come on … Come on … That's it, more …
Repeat number 9
More Elvar …That's a boy … More … That's it, more, come on … Come on … That's it, more …
Number 3, 24 November 1961
You stop that! … I don't know what's got into you … You stop that this moment! … Stop it! … You stop that …
Yes, siree! … I don't care, you're gonna stop that… You keep quiet … Yes, siree! …
Number 6, 24 November, 1961
More! Come on! … That's a good boy, more! … Come on … Very good, say it again! … oh …
Etc.

> 5_SOUNDSCAPE_speak.aif (0:48 seconds)
> Archival material: John C. Lilly Papers, M0786, carton 69, reel "Log. Comp. tape, 1-16-62."

Number 15, 4 December, 1961
Speak … More … More …
Etc.

> 6_SOUNDSCAPE_pamsie.aif (1:21 minutes)
> Archival material: John C. Lilly Papers, M0786, cartoon 107, reels 18b and 19b.

Fish Pamela … Fish Pamsie … Come on Pamsie …You woke me up this morning … Yes, you did …
Etc.

> 7_SOUNDSCAPE_vatten.aif (5:19 minutes)
> Archival material: John C. Lilly Papers, M0786, carton 107, reel 19b.

SS: [LECTURER]

Oyn, oat, lye, chew, kih, chee, ine, key, oil, tih?
En, ane, eat, ayer, noo, we, ate, chay, moe?
Oh, lee, vay, coy, aim?
Roy, kah, ovv, kehh, oyv, noy, rye, nigh, otch?

Alright – let's go.

[THE ROOM TURNS BLACK]

PART TWO, WRITTEN

Unlearning through the Auditory

I seek that which initiates or provokes a process of unlearning, that which messes with the message seeker in me. We tend not to see the doings, the care given and taken, the *how* (of Margaret Howe, for example). The matter at hand usually unfolds while we are busy looking elsewhere – for the story, the information, or the so-called content.

The intention of this essay has not been to mediate sensorial experiences through theories or to propose truths, but rather as Salomé Voegelin has written, to produce a critical engagement that listens, witnesses, and narrates. Voegelin proposes a philosophy of sound, and more specifically sound art, where the intention is not to "release us from the doubt of hearing" and replace it with certainty and clarity.[1]

I have presented a materialist and concrete approach to listening understood as a situated practice and as participation in one's environment. Listening has been described in terms of co-habitation and ecology. While attending to sound and listening, I have investigated what arises in the process. I see this process as a "rebooting" and as a widening of scope with regards to the senses and the sensible, where artistic research potentially could be a site for "unlearning" rather than mere knowledge production.* Processes of unlearning, I suggest, evoke ways of seeing, listening, and reading that aren't satisfied with what things are said to represent (by convention, habit, routine, or authority), but that instead embrace the "speech," the a/orality that emerges from the phrases, images, gestures, events, and objects occurring in the here and now. It is a process of (re)discovery. This, I have argued, demands a certain kind of concretism and an insistence on the materiality of meaning making. There is a kind of stupidity implied in this process – I must make myself a fool in the face of normativity for the sake of unlearning, as exemplified with the bouffon. Stupidity here implies a refusal to understand, or to think one has understood. But, the tension and play that emerge between different modes of seeing, listening, reading (the normative point of view versus how things look from the viewpoint of the "fool") is also revealing and something to take into account. I have tried to dwell on precisely this (a/oral) play, and in the space between understanding/not understanding.

I have argued in different ways that spatial practices are modes of thinking, a thinking-through-practice, where a conceptual mapping across domains occurs. In contrast to the view of communication as control, and language as sign and inscription, I have taken another course and reflected on communicative situations in terms of absorption, respiration, and play. That is, communication as a dispersive production of change and movement, where *para-* emerges as the essential relation. This, in turn, implies a dialogical and embodied view of language, where communication, a multimodal intra-action, cannot be reduced to the efficient transmission of information or predefined messages between preexisting beings. If we go back to the etymological root of communication, the Latin word *communicare*, it literally means "to make common," hence it is intimately tied to community, which implies an ethical zone of co-habitation. How do we share and divide? What power dynamics are at play in the act of making common?

The concepts of acousmatic orality, a/orality, and apparatuses developed throughout this doctoral work leads me in the following "Outroduction" to consider what I refer to as "situations of shared surfaces," and to think in terms of "organologies" and "media ecologies" (as in John Durham Peters' use of the term). Furthermore, I take in account Pauline Oliviero's practice of "deep listening." This new set of concepts serves to re-focus the attention, from systems and informational networks to habitats and the body-as-environment.

Optimal Performance (Exposure and Erasure)

At the same time as discussions of the immaterial and disembodiment tend to intensify in periods of technological change, there is also a tendency towards rekindled interest in bodily practices. With disembodiment comes re-embodiments. In the "post-medium," digital condition all information flows together, putting physical

* Unlearning requires that I consciously shift my viewpoint, i.e. transform my way of looking at things and move outside of the way that I have learned to see, while at the same time seeing myself as a co-creator of what I perceive. A discursive struggle is enacted, where the work can serve as a line of flight, or antidote, to conventions. As Judith Butler has shown, it is by focusing on conventions, repeating them, varying them, and thereby shifting their fixed positions, that change can occur. The concept of "unlearning" has been with me for a long time in relation to artistic practice. It is quite probable that I picked it up from Gayatri Spivak, who speaks of the need for a systemic unlearning of one's learning and privilege.

bodies into focus, as they serve as conduits and sites of these flows. This site seems to suffer though from a paradoxical, double action. On the one hand, there is a continuous erasure of the body, and on the other an over-exposure. Let's begin with the latter.

Following the exploitation of "relationality" as discussed in relation to Anselm Franke and the work *Limit-Cruisers* in chapter 2, the concept of "performance" seems to run a similar risk of being exhausted in a culture that promotes optimal performance in all spheres of life. In an imaginary exercise, performance theorist Bojana Cvejić proposes that if Guy Debord were to rewrite his book *Society of Spectacle* today, the concept of "image" and "representation" would be replaced by "performance." The ocularcentric paradigm of spectacle might have been replaced, she argues, but the society of control prevails: "A society of performance, in difference to the society of spectacle, entails another ideological mechanism, away from the ocular regime, … toward a conscious and self-monitored re-embodied *doing* and *showing doing*."[2] Cvejić borrows these terms from theater director Richard Schechner who makes a distinction in his performance theory between the concept of "doing" and "showing doing," where the former denotes all kinds of activities (not only human) and the latter refers to performing, in art and other spheres of life, where the performer is aware of herself as a performer and displays or points to it. Schechner refers to critically conscious and reflexive performance, such as that of the Brechtian theater, as "explaining showing doing."[3] Cvejić states that in a society of control, performance and performativity have become that which legitimize and sustain the self, and in studying how, she ties performativity (through reference to etymology) to "transformation as perfection."[4] Here, the zero heroes and their solo acts emerge again, as the society of performance tends to idealize embodied experiences and an intensified sense of presence. Cvejić describes this as a truth-game:

> The ordeal of undergoing a test of endurance at the risk of losing one's life carries the trophy of survival and a hardened sense of a guarantee of life. In the rationale of its practitioners, it provides one with the evidence of truth, the physical proof of an intensified feeling of presence in the world. Therefore, it is a mechanism for providing personal legitimacy outside of society to the subjects who seek it in a solitary confrontation with nature.[5]

Doing has become the new believing (because I'm doing it, I believe it). When this craving for an intensified sense of presence is paired with a museum culture that wants to turn visitors into user feedback entities who report live about their art experience on social media, an unholy alliance emerges between self-performance and the society of control, which Cvejić warns of.* Bodily practices are reduced to ritualized *doing* and *showing doing*. The previously "passive" spectators are now addressed as experiencers and their behavior is evaluated, summarized, and mined in the context of user experience studies.

Isn't this a bit paranoid? one might ask. What's wrong with evaluations? An evaluation, or assessment, can take many different forms, and be adapted for different purposes. They are not a bad thing per se, but should not be naively employed. Evaluations operate on a meta-cognitive level since they ask us to reflect on a situation of which we are a part. Hence, the format of the evaluation conceptualizes what the experience is or should be about, framing it with respect to certain values and qualities. The evaluation determines and produces the articulation of the experience, and thus re-shapes the experience in a way that might run counter to the intention of the artist (as well as the designer of the evaluation). The work is "packaged" not only in terms of marketing before the event, but also in terms of evaluations after the event. A "common sense" has been extracted that has little to do with the ethical zone of co-habitation I tried to capture with the notion of *communicare*.

How to think then of the use of staged spaces and constructed situations within artistic practice, when effective "experience staging" and immersive environments have become vital parts of many industries within the experience economy, and user experience is regularly monitored and evaluated? Isn't this what an expanded scenography truly implies, the total spectacle? Yes, it might. Today it is quite common to see artists acting as collaborative partners in and as producers of "situations." Artworks have become "projects" with unclear beginnings and unclear ends, and audiences have become co-creators or participants. Strategies and practices that as late as the 1980s and 1990s were employed by critically-oriented artists to offer alternate models for communication and togetherness have

* Cvejić writes in relation to the proliferation of dance performance in the context of international art institutions, and especially the format of solo dance.

been co-opted. In the 2000s many of these practices became in-demand services of the new service economy – new goods on the capitalist market that they were originally meant to be an alternative to. Art as a social action or event, thus, is at risk of being reduced to spectacle or contributing to an aestheticization of the service economy where all critique eventually drowns or is hugged to death. Therefore, it is tempting to agree with philosopher Jaques Rancière who argues that art-as-critique reinforces the structures it seeks to do away with. A critical attitude might just as well serve to consolidate the structures it attempts to unmask, where the artist becomes a didactic teacher attempting to educate and activate the passive and uneducated.[6] Regardless of one's point of view on this complex matter, all critically oriented artistic practices always run the risk of being appropriated by the powers they try to resist; it is only a question of time. Because artists are thus forced to shift strategies, they develop new tools which, in time, may also be appropriated. In other words, in the rearview mirror it can always be said that artists have led and personified developments that they personally do not find desirable. We cannot naively ignore these processes and forces, neither can we steer clear of them.

If I consider my own return to the domain of theater, or rather its fringes, through what I have retroactively called expanded scenography, it was listening and a sonic sensibility that, for me, made this return interesting. I see this as a spatial acousmatic practice, concerned with the relationship of hearing to seeing in acousmatic orality. *Verfremdung* here becomes a question of sensorial estrangement – rather than merely a rhetorical one – where an aesthetic infrastructure is set up that makes it possible for media ecologies and mingled bodies to be explored. In this context participation has been discussed in terms of a participation in one's environment and as participation in a narrative, not as a democratic measure where being part of the decision-making process is rated as the highest participatory form.* The visitors are invited to experience an environment, to play the positions and to be played. The situation is not devoid of power relations. Rather, certain systems of relations are framed at the same time as trust, as well as audiospatial contracts, are negotiated.

What this journey has shown me is that the act of listening cuts through (a cutting together/apart) a multitude of borderlands and zones of conflict. In listening I exist at those intersections, oscillating. In the process of editing sound, one becomes quite aware of the act itself of cutting together/apart, of the delicate space in-between. The act of listening generates desire (reaching towards, opening up, transgression) as well as a need for protection (withdrawal, evasion, rejection). When addressed, we are made response-able as well as responsible. I (alone) am not in control. Listening is not a cure, but a potential strategy for critical engagement with a capacity to decenter dominant modes of thinking-being, through what I have called co-habitation. I have described this co-habitation as a rather wet live-in.

In and through listening, we become acutely aware of borders and their dissolution, as I wrote in chapter 1. This points to a need for both openness and for letting things be. To exist alongside, not to strive to understand at all costs, but to remain listening. To protect the irreducible, the limit, the right to opacity. In listening there is no inside/outside dichotomy, rather there is a mingling, a mutual touching, as Serres said about the skin's relation to the world.

If we are in the midst of an "auditory turn," as has been called for,** then we will quite possibly see "listening" become subject to *détournement* and instrumentalization by a society of control, as occurred with "performance" and "relationality" – and with "communication" before that. This does not mean we should give up on these concepts; rather, they need to be reclaimed. How can performance be reclaimed?

> If we retain the idea of transformation inherent in the etymology of the term [performance], then another sense of change could be invested: conditions in which performing is a matter of invention without evidence and guaranteed success, an institution of a projected future, an experiment out of the bounds of calculable effect.[7]

Cvejić proposes that performing, rather than being conceived of as a truth game and an act of perfection, or a

* If we refer to the classic "ladder of participation" as a guide, partnership and control are rated as highly participatory, while therapy ends up at the bottom together with manipulation. See Sherry R. Arnstein, "A Ladder of Citizen Participation," *Journal of the American Planning Association* 35, no. 4 (July 1969): 216–224. In the context of citizen participation and in the examples presented by Arnstein, therapy has been used as a substitute: a cynical attempt to "educate" or "cure" instead of an opportunity for true participation. Hence, it is cynicism that places therapy together with manipulation.

** By, for example, philosopher Don Ihde in the context of a phenomenological tradition as early as 1976. See Ihde, *Listening and Voice*.

means of controlling such effects for commercial ends, is instead "a matter of invention." The outcome is not something to be controlled (summarized, evaluated).

Another aspect of Nancy's refusal to understand in favor of listening, referred to in the very first chapter, suddenly rises to the surface, a suspicion: have we, in fact, lost the ability to understand, or rather, exchanged it for the ability to assess? In the institutional setting described by Cvejić, the formats offered do not allow for understanding and interpretation, only instant evaluation.

Performativity and Organologies (Bringing the Body Back)

We could say that the current preoccupation with performance and experience testifies to a renewed interest in bodily practices and a craving for the sensuous, for "reality" even, and that this tends to over-expose the body in a constant showing doing – performance turned into display, as discussed in chapter 4. Paradoxically, there is a simultaneous erasure of the body, a desire to free oneself from bodily limits. To me this paradox is materialized in Lilly's floatation tank. But, here the attempt at isolating and perfecting the performance of the scientific observer as a pure mind in the water turned into a psychedelic experience machine (now available at a spa near you). Is this a paradox we live by – obsessing about the experiential, while at the same time neglecting the body? Or, phrased differently: do I consider myself to be a body, or as possessing a body?

Lilly was influenced by the cybernetics of his time. The term cybernetics was coined by Norbert Wiener in 1948 and began as an interdisciplinary study of complex systems, connecting the fields of information theory, neurology, evolutionary biology, logic modeling, anthropology, and psychology, among others. The aim was to formulate "a theory of communication and control applying equally to animals, humans, and machines."[8] From cybernetics, the concept of Artificial Intelligence (AI) arose, and with it the widespread metaphor of the brain as a computer, which Lilly used extensively. If we previously had used the "animal" as a border creature defining the limits (and superiority) of the "human," humans now had to grapple with the promise and threat of the intelligent machine. In Lilly's theoretical model, information, as well as consciousness, could be extracted from matter and be regarded as a free-floating entity.

This erasure of the body has a long history, and continues today. Katherine Hayles reminds us of the immense impact that information theory has had, and still has, in terms of shaping our worldview. We are heavily influenced, she writes, by "the cultural perception that information and materiality are conceptually distinct and that information is in some sense more essential, more important and more fundamental than materiality."[9] This view has been contested, by Hayles and Karen Barad among many others, but the dichotomies it sustains still deeply permeate our language and thinking.* Barad writes, "language has been granted too much power," and she reminds us that "Nietzsche warned against the mistaken tendency to take grammar too seriously: allowing linguistic structure to shape or determine our understanding of the world."[10] Yet, that still seems to be the case. Why would we otherwise have to invent a term such as "performativity"? Barad suggests: "Performativity, properly construed, is not an invitation to turn everything (including material bodies) into words; on the contrary, performativity is precisely a contestation of the excessive power granted to language to determine what is real."

I have approached this erasure of both bodies and matter partly through the prisms of orality and literacy. I suggested in chapter 2 that the acousmatic situation, which became normalized with new audio technology in the first half of the 20th century, seemed to initiate a rediscovery among scholars of another modality of reason and mode of communication, as if the absent bodies provoked an urge for relational and contextual turns to account for all that went missing in a writing-reading structure and logic. Scholars became aware that multisensory forms of expression, which had previously been central to our culture along with the art

* Hayles argues that the classic liberal humanist subject that arose during the Enlightenment as an autonomous agent possessing free will has given way to a view of the human as a hybrid with a distributed cognition that complicates the idea of individual agency. Post-colonial and feminist critique have been important in deconstructing universalist claims inherent in the classic (white male) subject, while working to re-inscribe bodily differences such as sex, race, and ethnicity. But, according to Hayles, despite these efforts, the new posthuman model of subjectivity continues to downplay embodiment. If the liberal humanist subject was identified with the rational mind and understood as possessing a body (rather than being a body), the posthuman, under the influence of cybernetics, is understood as a set of informational processes, as code, and as carrying the promise of overcoming our bodily limitations. Body and mind, material substrate and information, thus remain as separated as ever. Hayles, *How We Became Posthuman*, 4–7.

of memorizing,[11] had since the Middle Ages successively been relegated to more restricted and subservient roles as literacy and textual modes of thinking gained ground.[12] These multisensory modes and knowledge formations are often considered to be strange or nonsensical in cultures where literacy is privileged.

Then again, if oral and multisensory forms of expression have been seen as awkward or irrelevant in cultures dominated by vision and writing, the status of the written, in turn, has increasingly been put into question in the electronic age, which Ong has referred to as a secondary orality. Philosopher Bernhard Stiegler refers to similar phenomena when he argues that neurophysiological, technological, and sociopolitical conditions are woven together in an intricate web, and he says, with reference to Maryanne Wolf, that those of us who use the World Wide Web are in the midst of a transition from a "reading brain" to a "digital brain." If the brain(body) has been "written" for a long time by the technology of the alphabet, it is now gradually additionally being "written" by digital technology. This is a neurological adaptation that makes previous modes of expression appear nonsensical if we do not make sure that certain mental and social circuits are kept alive, according to Stiegler. "We must be on our guard as this neurological transformation is writing new circuits in the brain which can erase the old circuits or make them meaningless," he says.[13]

This shift to a so called post-literate society, has been perceived as both threating and promising. In a dystopian view of a post-literate society the ability to comprehend and use writing has decayed. In, for example, Gary Shteyngart's *Super Sad True Love Story* from 2010, the decay is a result of multimedia technology and social media platforms, which thrive on the immediacy of the oral mode, and where algorithms together with fake news, hoaxes, the memorable and the repeatable reshape language as well as private and political life. More complex, analytical, and nuanced ideas (as fostered by a literate sensibility) give way to rumors and cheap rhetoric.* In a more utopian view, a post-literate society has been conceived of as a possible future in which complex forms of knowledge are transferred and shared in ways that are more efficient than through the limited format of text.[14]

We constantly navigate our world using both literate and oral coordinates – we are always already oscillating, so to speak – but, when we try to structure our knowledge, create an overview, and describe or devise a method, the oral as well as concrete material components tend to be overlooked, or categorized as being tacit. Therefore, they are readily edited out of descriptions of *what has actually taken place*, for the sake of being clear and distinct (we generally think of this as an act of focusing on the "content"). We could say that they are relegated to the "disattend track" to use Goffman's term once again. To counteract this, we could use Bernstein's practice of close listening, which is embodied and performative. To me, besides taking an additive rather than a reductive approach, this means taking multisensory aspects into account, even if they cannot be transcribed into language. To (as I wrote in relation to a/orality) literally come to our senses.

As we are faced with the necessity of navigating and negotiating the multilayered complexity of the virtual, actual, imagined, simulated, mediated, as well as the commercialized, and industrialized manifestations of Western culture – as well as respecting and acknowledging non-western cultures – transliteracy stands out as an essential skill in a(n always and already) polymodal world. Transliteracy, or transliteracies, denotes the ability to move and interact across a range of media, contexts, and technologies – and, worth noting, not only in the digital domain. As suggested by the Transliteracy Research Group, transliteracy may be understood as the ability to attend to multiple modes and media simultaneously: the "literacy of the trans." Transliteracy may also be understood as "transliteration," i.e. the ability to "apply the literacies of one mode or medium to another one," what I in chapter 4 referred to as a mapping across domains.

Transliteracy is meant to be an inclusive concept "which bridges and connects past, present and, hopefully, future modalities."[15] Evoking ecology as well as physicality, the authors of the article "Transliteracy: Crossing Divides" write: "Transliteracy happens in the places where different things meet, mix, and rub together. It is an interstitial space teeming with diverse life-forms, some on the rise, some in decline, expressed in many languages in many voices, many kinds of scripts and media. It is a world where print has a place, but not the only place."[16]

* Donald Trump's 2016 election campaign in the United States (with his redundant, aggressive, and formulaic way of speaking) in combination with the so-called "filter bubbles" that encapsulate us in biased information spheres and the proliferation of fake news has been given as one example of the challenges we face in a post-literate age. See, for example, Joe Weisenthal, "Commentary: Trump and the Arrival of the Post-Literate Age," *Chicago Tribune*, November 29, 2016, accessed January 15, 2017, http://www.chicagotribune.com/news/opinion/commentary/ct-trump-viral-fake-news-20161129-story.html

It is interesting to note that this attempt to re-formulate literacy in terms of transliteracy and polymodal abilities in the field of new media and pedagogy,[17] seems to coincide with an increasingly strong interest in multisensory integration in research on human perception, as referred to in chapter 1, where cross-modal interaction has been shown to play an important role in learning.[18] The traditional separation between senses and abilities seems to have reached the end of the road. I'm inclined to ask though: In what ways does the body exist in these partly new conceptual models? Is it a mingled body? Have these complex and multimodal approaches affected dominant views of knowledge, critical thinking, learning, and education? Or, are we simply repackaging old epistemologies in a new format?

The language we have for sound, I find, captures the receptivity, as well as information overload, of the mingled body better than the language associated with sight, but that does not mean that sight cannot be receptive. Serres as well as Nancy seem to invoke the same strand of thinking as philosopher Gemma Corradi Fiumara, who reminds us that the neglected Greek root of "logos" is to be found in the verb form *legein*, which means not only to say, or enunciate, but to receive, gather, shelter, bring together, and to lay-before. Fiumara argues for a connected knowing that holds together rather than cuts apart. For Fiumara, confusion is a central term, which as Serres pointed out is related to the art of mixing, a pouring together – as in forming an alloy. To lay-before (*legein*) could be understood as a performative and material act, the receptive aspect of "to say," where the (story)teller is first and foremost a listener, and a gatherer. A listening logic, which is more ecological than logical, requires, according to Fiumara, other ways of knowing, as well as a certain openness and vulnerability, which does not revolve around mastering, controlling, and using (as *logos*). Instead it demands a capacity for "letting-lay-together-before." Listening (as *legein*) becomes with Fiumara's words "the patient labor of co-existence."[19]

Speaking of logos, it is interesting to note that the direct connection between voice, language, and intelligence that Lilly was tempted to see, wasn't something he was alone in postulating. Aristotle distinguished between voice as mere sound, a cry or moan (*phóné*), and voice as speech, word, reason (*lógos*). The latter belonged to political life, to the human realm, the former to bare life reduced to animality (i.e. the voice as zoe and bios that Mladen Dolar spoke of, referred to in chapter 4). This differentiation between *phóné* and *lógos* marks the difference between animal and human in a long tradition of Western thought. Voice as *lógos* is intimately connected to life in the *polis*: those who speak intelligibly are included as citizens and granted rights. "They have reached the threshold of humanness," as Lilly put it. Hence, his conclusion that once communication was established with the dolphins, they would become a legal and ethical problem.

Back to *legein*, the laying-before.

The "performative turn" in the humanities and social sciences could, in comparison to the introduction of orality and literacy into the field of media and communication theory, be understood as a re-evaluation of oral modes of expression in an academic world re-sensitized not only to the presence of voice and speech acts, but also to bodily differences as theorized by Judith Butler – with all that this implies. The term performativity was introduced by John L. Austin in the 1950s in the field of language philosophy in relation to his theory of "speech acts," and the performativity of language.[20] At roughly the same time, a performative turn in the visual arts occurred with the emergence of performance art. In the 1960s and 1970s the concept of performance flourished in the fields of cultural anthropology and sociology, influenced by ritual studies that, according to Erika Fischer-Lichte, "repudiated the privileged status of texts in favour of performances."[21] The term performativity was picked up in the 1990s in cultural studies by Judith Butler, a move away from readings of culture as "text," in relation to a discussion on how gender identity is constituted through performative bodily acts that reproduce historical and cultural situations in everyday life.[22] But, the first performative turn occurred earlier. With reference to the establishment of theater studies as an academic discipline in Germany in the early 1900s that broke with the notion of theater as a "textual" art, Fischer-Lichte states: "It could thus be said that the first performative turn in twentieth-century European culture did not have its place in the performance culture of the 1960s and 1970s but occurred much earlier with the establishment of ritual and theatre studies at the turn of the last century."[23] With theater studies then, scholars in Europe could be said to have rediscovered theater as performance, as a "real" and non-fictive place, rather than as a genre of literature.

The term "performativity" and the concept of "performance" in many regards suggest an oral modality

of reason. The concept of performance points to the synergy between body, environment, and thought. Rhythm, breathing, and gesture are highlighted, as well as bodily co-presence, the socially shared timespan, relationality, and the coming into being of language. Performativity though, should not be confused with performances as such. Performativity reveals layers and aspects of our knowledge production that otherwise remain hidden. In Barad's posthuman approach, performativity provides an alternative to representationalism by shifting the focus "from questions of correspondence between descriptions and reality (e.g., do they mirror nature or culture?) to matters of practices/doings/actions."[24]

Optimal performance as discussed by Cvejić overthrows this notion of performance as a generative and relational process. The showing doing involved in the performance as perfection implies a display of sheer capacity with the aim to sustain the self as distinct from, even independent of, society. Thus, it is far from the kind of performativity I have tried to evoke here.

Performativity can denote not only how human "performers" do things live in a socially shared timespan, but also how different media convey doings and actions. The various media and memory technologies we use do not simply store or disseminate "content," but also the gestures and logic of the human who uses, produces, and comes to rely on them. Though the notion of reflexivity and the role of the observer can no longer be denied in scientific practice, or artistic practice for that matter – as I have tried to show through the many different apparatuses and set-ups discussed in this essay – we are still routinely asked to ignore the apparatuses presented to us in our everyday life and work, whether we are asked to fill in a simple form, contribute to a survey, or implement new routines at our workplace.* The so-called format is generally not considered significant (it is presented as a neutral tool that serves to frame a situation so that we can study, evaluate, or discuss it). In many cases, we do not even see it, but a performative approach makes these apparatuses visible, i.e. the unstated logic, assumptions, and ramifications of these organizational conventions. The concepts of orality and performativity could be said to be closely related in that they try to re-sensitize us to the complex bundle of social, political, material, perceptual, and technological powers at play in every communicative situation.

The fact that a performative turn has taken place does thus not necessarily mean that performative insights are widely considered or put into practice. Opposing forces are at play in the current trend towards constant and continual quantification (which occurs, for example, through processes of evaluation). Furthermore, to simply shift focus from representationalism to performativity as Barad suggests, is easier said than done. Due to the technological, sociopolitical, and cultural shifts that have emerged over a long period of time, described by Ong and Stiegler among others, we are deeply embedded in literacy and in a textual mode of thinking. Our consciousness, and sense of identity, are framed by them. Submerged in written language and the practice of silent reading we seem to be solitary, self-contained, and inside ourselves. Sloterdijk called this view of the self "cerebral individualism."[25] Then again, there are certain aspects of an orally dominated culture that a society might not want to nurture, such as conformism, extreme traditionalism, strong social control, and magical thinking. "In the oral world, all people are magicians who cast a varyingly powerful spell of normalization on one another."[26] The magical-manipulative aspect of the acousmatic voice could be said to be evocative of such relations. A "fundamentalist" cerebral individualism though, as Sloterdijk writes, tends to deny even the very existence of preverbal effects and "participatory reason" and label them extranormal phenomena.**

In the context of what Ong called a secondary orality – which he very generally described as interactive, communal, and focused on the present, though the communal in the electronic age relies largely on mediated participation – one would think that the atomistic bubble of the solitary individual would finally burst, especially under the pressure of a posthuman view of subjectivity that conceives of human agency and cognition as fundamentally distributed. New digital technology has not created distributed subjectivities; instead the bubbles have been augmented through our intercourse with technology. "Sharing" transmutes into "providing access," the "distributed" turns into a torrent file. While the idea of being "inside our heads" might have been dismissed as a Cartesian misconstruction, we are still lured into believing that the body

* For a definition of "apparatus," see chapter 1.

** He clarifies: "The formula 'participatory reason' implies the thesis that there are appropriate and inappropriate participations whose difference is akin to that between true and false." Sloterdijk, *Bubbles*, 524.

and bodily practices don't mean anything, and that they can be abstracted away. The legacy of Lilly is, in this specific regard, alive and kicking. Furthermore, in a custom-made culture where we encounter only that which we choose, or that which has been judged to suit us, i.e. our "profiles," the solitary bubble appears to have been reinforced. How to be in command of, and take control over one's multiple identities, as well as how one is (re)presented across different platforms have become new concerns.* At the same time, our inescapably bodily presence in the world is on a continuous basis, surveilled, evaluated, quantified, converted into information, and analyzed by algorithms. Media theorist Franco "Bifo" Berardi writes that the process of automatization "poses a major threat to the autonomy of subjectivation: language, memory, and imagination are more and more performed by machines, and the human learning process is more and more pervaded by the automated process of enunciation."[27] Berardi speaks not only of the automatization of labor, but of a cognitive automation which he describes as a "technology for injecting determinism into the human sphere." If determinism no longer finds relevance as a description of reality in the field of philosophy it has become a project instead.

It seems as if the living body previously was replaced by a corpus of text for the sake of externalizing, transferring, and storing knowledge, now both bodies and texts are being transmuted into huge volumes of data stored in "clouds" (located in the cold deep sea or close to the arctic circle where they can be kept cool without energy costs running wild). Data on human behavior and performance has become a valuable commodity on the global market; it is "grown," or collected by way of data farms, and data mining is carried out by robots at a rate not perceptible to the human eye. This version of a digitalized secondary orality, facilitated to a large extent by interfaces and online environments, not only continues the age-old tradition of dismissing the body, but seems to have lost it entirely. New technology paradoxically reproduces old worldviews and models for subjectification for the simple reason that otherwise we would not use it. The new has to be familiar enough. And, thus it caters to our need to feel that we are at the center of things. Technology in and of itself will never revolutionize our understanding of ourselves, or of our place in the world. The performative approach now called for by Barad, among others, could then be understood as an attempt to bring both the body and materiality back into the picture when we, in a digitalized world, have a tendency to think of reality as "code," and communication as informatics. Here, an organology might be of use.

According to Stiegler it is impossible to separate the living being from its external prosthetic technical support. The tools we use act as prostheses, and we co-evolve with our technical extensions. They are far from neutral tools at our command; the type of technology we use alters our cognition and our social structures. The space around one is part of oneself; one does not end where one's flesh ends. This peripersonal space is elastic and morphs every time you use a tool or vehicle.[28] Stiegler inscribes this co-determination, the mutually determining relationship, between human and technical organs into an "organology," where yet another organological level is added: that of human and social organizations. Stiegler could be said to offer another kind of cybernetics, one where humans, machines, and animals are not treated as separate entities, but as co-determining. While not directly concerned with control, his organology is not devoid of power relations. Acquiring a new skill involves developing and strengthening certain relations and functions. Undergoing a scholarly education, for example, involves the interiorization of a specific organology. "Certain organs – the eye, the hand, the brain – must be coordinated for reading and writing to take place, but the entire body must first be trained to sit for long periods of time."[29] In dance, or art education quite different organologies are interiorized. Thus, I find Stiegler's organology helpful in making the complex systemic relations between what he calls, "the human body," "technics," and "the social" visible. We can develop certain skills and abilities while ignoring others, thus affecting the organologies we are part of, but we cannot ultimately control or determine them. There is an

* Sloterdijk describes this state as living in a kind of social "foam," made up of people in their own isolated bubbles. In this mass of foam, the bubbles are not separable from one another and their shared membranes make them fragile. The individual and the environment are simultaneously separate and intermixed, isolated and interdependent. What is commonly described as "globalization" is, in Sloterdijk's terms, a "foaming." In this foam condition the cosmological questions of the old world have been replaced with immunological concerns. In other words, the cosmological and theological narratives that had stabilized the imaginary in Old European thought (centered on globes and spheres) no longer serve as metaphysical immune systems. "'God is dead' – what this actually means is that the orb is dead, the containing circle has burst." Peter Sloterdijk, *Spheres. Vol. 2, Globes: Macrospherology*, trans. Wieland Hoban (South Pasadena, CA: Semiotext(e), 2014), 559.

ongoing *co-evolution*, as Stiegler says, or *intra-action* as Barad calls it – not interaction, which presumes the prior existence of independent entities.*

Working with performance and installation is, as I see it, related to Stiegler's endeavour, in that this addresses and engages all these organological levels. Bodily practices and a performative approach make the apparatuses visible: they mess with the message seekers in us. The artistic choice to work with situated and embodied listening practices can be viewed in light of these larger cultural and social changes. This practice is characterized by an insistence on paying attention to affects and to the material, concrete, and embodied experiences of everyday life, while making the media we are immersed in visible and tangible. Can we cause the bubbles to burst, at least temporarily? How do we give and take meaning? How do we make ourselves available to the situation and each other? How do we *care*, and for what? This, I suggest, is the ethics implied by a sonic sensibility.

Shared Surfaces

I'm Peter. I'm Howe. But, I'm also Dr. L.

The Prelude presented an apparatus, one which was set up to measure specific aspects of an object. The apparatus both framed and produced the research, and structured the way things were seen. But, as the inquiry proceeded and insights were gained, the apparatus had to be significantly modified and eventually reached a level of complexity (associated with "motherhood" and "care") that made measurement impossible. The reductive measures taken in order to make things make sense constantly seemed to turn (curve) in on themselves: the objects (tragically killed) became subjects with names (and committed suicide); electrodes in the brain were replaced with a pleasure-contact method; instead of using operant conditioning, the subjects were treated as "children" – eventually, they were set free. Between 1955 and 1969, the research conducted by John Cunningham Lilly could be said to have moved from natural science, through social science, to the humanities, before it left science behind altogether. The journey forced Lilly to confront that which had been erased in his own theories: the embodied mind of the other. Or, to be frank, Margaret Howe confronted it for him (like the fictional linguist Dr. Banks does in the sci-fi film *Arrival*, produced fifty years later).

Though it might seem so at first glance, this is not a story about the shortcomings of science, which can be easily caricatured by fast-forwarding through history like this.** Rather, this is a tale of apparatuses, anthropocentrism, power dynamics, futures, language, control, performance, education, desire, gender, and co-habitation in naturecultures. The animal voice held promise, but it led neither to communication, nor *communicare*, instead it legitimized physical and mental violence in the name of progress.

Lilly, following his encounter with *Someone*, committed the scientific sin of anthropomorphism. He saw the human in the animal. Or, perhaps he sensed the presence of a non-human *person*? In his speculative writings, the abilities of the dolphin undoubtedly took human form (*anthrōpos* in Greek means "human," and *morphē* denotes "shape"). Within scientific studies of animals, anthropomorphism has been repeatedly and forcefully rejected. This strict approach though, predominantly cultivated in a laboratory-oriented culture, often rests on a refusal to see the animal in the human. In field studies, which are conducted over long periods of time and where the animals are not held captive, it has been accepted that relationships are co-determinate. As in the case of Barbara Smuts and the baboons, the "rock" had to respond: she was changed in and through co-habitation.

I think of these encounters as what in Swedish I would call *gränssnittssituationer* – encounters that

* "The human brain, as well as the human hand, the human foot, the human nose – every human organ – is constantly in a meta-state of functional re-definition. The organ is inscribed in a system which is first and foremost the organological system of the human body. But this organological system exists only within a systemic relationship with another organological level which is that of human prostheses, human artefacts: tools, instruments, techniques of all kinds, all of which become functional only within social functions whose dimensions are those of family, geographical system, system of law, etc., functions which are unified within social organisations: there are, thus, three organological levels," i.e. "the human body," "technics," and "the social." See Bernard Stiegler, "Desire and Knowledge: The Dead Seize the Living. Elements of an Organalogy of the Libido," trans. George Collins and Daniel Ross, Ars Industrialis website, accessed March 3, 2015, http://www.arsindustrialis.org/desire-and-knowledge-dead-seize-living&usg=ALkJrhgem4q1ejFr_hKvM_PEw1DDDs5iCA

** Science has often been accused of overtly reductive, positivist, and rationalist views that continue the long tradition of erasing the body. But, this a much wider issue found in routines of quantification, efficiency, automation, and evaluation as implemented by a society of administration more generally.

involve interfaces, shared surfaces, and fuzzy borderlands.* The interface is that which makes communication possible, but it is also that which divides, that which both holds together and cuts apart, and thus delineates a difference. What sort of *incision* is carried out in various experimental situations (artistic as well as scientific) and what occurs on both sides of this incision, this division, this interface? What interaction is made possible or made invisible as a result of how the incision is made? What sort of beings are created on *both* sides of the incision? In Lilly's experiments the dolphin became a device which made the mutual entanglement felt. The interfaces that arise here can be seen as living assemblages where complex relations between minds, emotions, volitional actions, and unconscious behaviors are integrated in a particular physical environment. In this milieu, one of shared surfaces and vibrant matter, it is not possible to completely unravel who teaches (or influences, or controls) whom.[30] Instead of an "in front of" or a "behind" constructed through an interface, there is an incision that organizes space and positions bodies in specific ways. Rather than being used for the purpose of fixing positions, an incision can be made to establish a difference that can be played and explored.

Unfolding a *Morphē*

Anne Carson said once in a radio interview that: "Each idea has a certain shape, and when I started to study Greek and I found the word *morphē* it was to me just the right word for that. Unlike 'shape' in English which falls a bit short, *morphē* in Greek means the … plastic contours that an idea has inside all your senses when you grasp it the first moment, and it always seemed to me that a work should play out that same contour in its form. I can't start writing something down until I get a sense of that – that *morphē*. And then it unfolds, I wouldn't say naturally, but it unfolds gropingly by keeping only to the contours of that form whatever it is."[31] The word *morphē* immediately resonated with me as well and it reminded me of the short text "Imaginary" by Glissant, where he writes: "Thinking thought usually amounts to withdrawing into a dimensionless place in which the idea of thought alone persists. But thought in reality spaces itself out into the world. It informs the imaginary of peoples, their varied poetics, which it then transforms, meaning, in them its risk becomes realized."[32] This is a serious critique of how a Western, predominantly literate culture has generally considered thinking to be an isolated activity taking place inside of a single mind (that "dimensionless place"). According to Glissant, thinking is a chaotic and transformative journey closely related to risk, it is a "knowledge becoming," and he continues: "One cannot stop it to access it nor isolate it to transmit it. It is sharing one can never not retain, nor even, in standing still, boast about."

Boasting is the work of the first tongue, Serres writes. "The first tongue, which speaks and has the ear of reason, calls the second confused, and the latter, confused, accepts the name." On this second (and tasting) tongue though, a multiple, vibrant, complex map is composed, "more complete than clear, detached, simplistic ideas, about which the first tongue boasts so loudly." Am I wrong to taste Serres' words together with those of Glissant and Carson? What Carson calls *morphē*, Serres calls *boquet*. i.e. "the whole state of things." A boquet "forms a fragment of memory because of the impossibility of analyzing mingled bodies: either it has integrity, or does not." He also refers to boquet as a *knot:*

> Now the sensible, in general, holds together all the senses, dimensions and contents, like a knot or generalized exchanger. It is understood that by content we mean the different terrains through which the visit passes …. visits explore and detail all the senses of the sensible implicated or gripped in its knot.[33]

Rather than mere knowledge production I seek these moments of sharing, of knowledge becomings, visits, and unlearning, which involve irreducible physical bodies in socially defined spaces. This is a question of space and of navigating a terrain, of going visiting.**

I do not claim that art can solve all our contemporary problems, but artistic practices have the power to resensitize us to other modes of being, thinking, and doing when dominant cultural conceptions and forms of expression create an increasingly homogenous culture. This is where I suggest that artistic research practices

* The word is a construct. It combines *snitt* ("cut," or "incision"), *gränssnitt* ("interface," i.e. the medium that connects various users and objects), as well as *gränssituation* ("a provocative situation" or "that which occurs at the boundary," which might also imply a "border issue").

** As Gilles Deleuze has noted: "Becomings belong to geography, they are orientations, directions, entries and exits." See Gilles Deleuze and Claire Parnet, *Dialogues*, trans. Hugh Tomlinson and Barbara Habberjam (New York: Columbia University Press, 2007), 2.

may be of significance. Artistic research, as proposed previously, is not primarily concerned with knowledge production or the presentation of new universals, but with developing and cultivating alternative thinking practices to those readily available or prescribed. In the artistic process, an idea seeks to stay true to its *morphē*. The idea is not a concept and can therefore not simply be explained, but it can be unfolded, developed, and revealed by using the senses it engages when one grasps it for the first time. It is a totality. Thus, in my view, artistic compositions do not deliver messages, they speak. They speak in and through the very "parole" that the composition generates during the time it takes place. This parole is not autonomous, or disconnected from the life-world, but substantially entangled with it.

To talk about *morphē*, the materiality of meaning making, and thinking as a form of agency, is surprisingly enough not far from Niels Bohr's approach to physics. According to Barad, Niels Bohr claimed that: "Theoretical concepts (e.g., 'position' and 'momentum') are not ideational in character but rather are specific physical arrangements."[34] Thus, they are modelled in space and time, and performed. Barad clarifies:

> For example, the notion of "position" cannot be presumed to be a well-defined abstract concept, nor can it be presumed to be an inherent attribute of independently existing objects. Rather, "position" only has meaning when a rigid apparatus with fixed parts is used (e.g., a ruler is nailed to a fixed table in the laboratory, thereby establishing a fixed frame of reference for specifying "position").[35]

Barad calls Bohr's philosophy-physics "a protoperformative account of scientific practices." And, following her line of thinking further, the primary semantic units are not "words," but material-discursive practices. Thinking is in this view not done with words in a "dimensionless place" as Glissant called it, but could be seen as a constant movement where a material-discursive, multisensous *morphē* is unfolded in a resonant space-time.

I'm attracted by Barad's formulations because this is how I understand much of art and art performances, as "agential entanglements of intra-acting human and nonhuman practices."[36] The physical arrangements are the very theoretical concepts I as artist elaborate with, and they imply an organology – i.e. a systemic relation between the human body, technics, and the social. "Particular possibilities for acting exist at every moment," Barad writes, "and these changing possibilities entail a responsibility to intervene in the world's becoming, to contest and rework what matters and what is excluded from mattering."[37]

Listening practices, I claim, have largely been excluded from mattering.

Deep Listening

Is it possible to listen to more than one reality simultaneously?

When the digitized sound files finally arrived, I didn't hear anything at first. I perceived plenty, sometimes with discomfort, but what to listen *for*? One tape I found violent, another appeared to record a pool-like setting with various noises. I imagined that some of the environments I heard matched up with the photos I had seen, but I couldn't be sure. If the dolphin voices had been described as Donald Duckish, I thought one of the human voices was very Mickey Mousish. I heard people who were less than comfortable with their technical equipment. I sensed that there was a lot of testing and waiting. The only thing I felt was sensible to do with this material was to stage a listening *with*. That is what I attempted to do in the lecture performance, to gather sound and lay it before an audience in a situation of acousmatic listening.

I wrote in chapter 2 (in relation to Nancy and my encounter with the blind woman in the London Underground) that in sonorous time, relations, rather than being laid out in a straight line, emerge and reveal themselves as a fluctuating whole. I become part of a milieu, a resonance circle, which engages situational, contextual, and participatory sensibilities; not necessarily as in interaction with others, but as participation in one's environment. In listening, I could be said to perform in concert with the things heard (*akousma)*. This experience resonates with what composer Pauline Oliveros has called deep listening.* Like her colleagues Schaeffer and Schafer, Olivieros too considered the act of listening a voluntary and active process honed through training. Where Schaeffer speaks of reduced listening and Schafer of soundscapes, Olivieros simply distin-

* Olivieros' career spanned the period from when the first commercially available tape recorder appeared in 1953 to the emergence of digital electronic music: she was always on the cutting edge of technology. Since the age of nine, in 1942, her constant acoustic instrumental companion was the accordion. Olivieros died November 24, 2016.

guished between focal and global listening. Deep listening involves the activation of these two attentional processes simultaneously, which she considered interdependent. While the global mode is contextual, focusing on the entire sounding field of possibilities, the focal mode is a narrowed attention that singles out and concentrates on details. Many blind people are, according to Olivieros, deep listeners. Deep listening could be practiced by a musician as she improvises, or take the form of a meditation exercise where one is "listening in as many ways as possible to everything that can possibly be heard all of the time," Olivieros wrote.[38] "Deep Listening is exploring the relationships among any and all sounds whether natural or technological, intended or unintended, real, remembered or imaginary. Thoughts included." It is active receptivity.

Based on her lifelong practice, Olivieros developed the concept of deep listening and a mode of teaching which seems to have been sparked by an encounter with an underground cistern. Using the cistern – an environment where the reverberations were so long that the sound almost never faded out – she improvised with two other musicians, resulting in the CD *Deep Listening* (1989). I imagine Olivieros in the cistern while listening to the recording that captures only a fraction of what the musicians must have experienced, and it seems that the cistern provided an environment of sensorial estrangement, as if swimming in an ever-changing ocean of sound, even for a trained listener like Olivieros.

From a bundle of exercises, practices, collaborations, and explorations developed in various contexts around the idea of deep listening, Olivieros later derived the notion of "quantum listening," which adds another layer to the concept of deep listening. Quantum listening involves a "witness function," a listening to listening while becoming part of the field of sound in an act of co-creation, where one is listening "to more than one reality simultaneously."[39] Quantum listening was Olivieros' attempt to theorize her practice of deep listening, filtered through quantum theory, which I find intriguing in relation to Karen Barad's materialism. Additionally, Olivieros' practice of "listening to listening" is interesting to consider alongside Richard Schechner's concept of "explaining showing doing," referred to previously.

In quantum listening, Olivieros listens to multiple places at once, the global and the local, while the acts of listening, composing, and performing merge. I connect to this through a collection of moments (or *boquets*) related in this essay, such as: the blind woman in London, the games without rules, the bouffon as limit-cruiser, and the act of editing sound with a specific situation in mind. As well as through another experience, not mentioned previously, of visiting an anechoic chamber – the very opposite of Oliviero's cistern.

I have followed Lilly's trail to gain distance from my own situated listening practice, as well as the cultural, technological, political, and historical events that it is a product of. The depths of the oceans, and water more generally, have become an environment to think with and through to investigate what listening can offer for alternatives to a visual, reductive, and logocentric way of thinking – though this fluid environment can also be obfuscating. "Quantum listening is listening in as many ways as possible simultaneously, while changing and being changed through the listening," writes Olivieros.[40] And here, reaching the limits of writing, I feel, it makes sense to quote Melody Jue to say that some things are not to be written, but *materially absorbed* – in a cistern or elsewhere.[41] Melody Jue's method for unlearning certain terrestrial organologies and biases in order to re-think the material metaphors we live by is to, literally, go diving.

I've never actually been particularly interested in dolphins, especially not the symbolic ones. But here I am, in deep with ocean life and cetaceans. The watery, fluid, oceanic domain evoked in this essay is not meant merely as a metaphorical expression for listening. The physical experience of swimming in the open sea, with hundreds of meters of black water beneath my floating body, has deeply influenced this work. A specific mode of listening puts me in the same spot. This is neither harmony, nor dread: it is on a different scale altogether. The salt sea, a small boat, and the scattered, barren islands in the outer archipelago on the west coast of Sweden were my nomadic home during the summer months all throughout my childhood. That early experience has shaped my way of thinking, living, working: for better and for worse. It was my habitat, my media ecology.

A body submerged in water. Listening, and seeing – at the surface and just below it. A child's body, at the mercy of weather and wind, on the sea, in that family boat, absorbing the score, rhythm, and intonation of the daily radio weather report. A melodic pattern, a bodily memory, known by heart.

199

you will now hear rain

(a sounding topography)

CODA

201

Flock-Frequency

There is a whale that sings at the wrong frequency,
52 hertz – unusually high-pitched for a baleen whale.
Humans have tuned in to its song since 1989, but no one
has ever seen it. It might be a blue whale. It might be a
male. Attempts have been made to find Blue 52. He has
been called the loneliest whale in the world, because
isn't it so that if one sings at the wrong frequency,
nobody of your own kind will ever hear you?

People identify with the lonely
whale. They come together
through their interest in and
search for Blue, who has
become a legend, a tale told.
A tale not about a white whale,
but of a lonely one; a tale told
through many mouths and
many lives.

I sit in an anechoic chamber and am met by an intense muteness.
Nothing reverberates, nor escapes the sound proof walls.
If I close my eyes and let my vocal cords vibrate (singing, humming),
the room shrinks. The walls close in, my voice hovers just outside my mouth.

202

“You be good. I love you,” says Alex.
“I love you, too,” says Pepperberg as she prepares to leave the lab.
“You’ll be in tomorrow?”
“Yes, I’ll be in tomorrow,” she replies to the African gray parrot after yet another day of work together.

(FACT CHECK: Did Facebook shut down an Artifical Intelligence experiment because chatbots developed their own secret language?)

“I can can I I everything else,” says Bob.
“Balls have zero to me to me to me to me to me to me to me to me to,” says Alice.

203

Is it possible to listen to more than one self simultaneously?

It may be that they do not perceive themselves as separate, that their sense of self is distributed among them. The self is spread throughout the pod. Orcas synchronize their breathing and form a circle as they submerge their bodies in the water to rest. Like other dolphins they sleep with one hemisphere of the brain at a time.

The pack, the horde, the gaggle, the troop
The swarm, the throng, the crowd
The school, the pod, the nest, the pace
The clowder, the army, the smack
The glaring, the brood, the rag, and the bask
The murder, the litter, the bunch
The gang, the skulk
The band, the bale
The pride, the muster, the crash

Companion, parasite
"I"
A hive, a composite The body a colony
A teeming dark ecology

Flock, flocking, flocculations
Deflockulated areas
The cry of the flock
Flocculate

1.5 kilos of microorganisms
10,000 different species
A nomadic, interspecific fraternity

Acknowledgements

This book is dedicated to my two children, Max and Hugo. They have accompanied me on the entire journey. Without them my investigations would have had another field of resonance and certain insights and aspects would not have risen to the surface. Perhaps the ecology of listening and the state of alongsideness (as in being more-than-one and in more-than-one place at once – parallel, parasitic, parabolic) would not have ended up as the focal points of this work.

With that said, I offer the warmest of thanks to my professional companions through wind and weather, my advisors: Per Nilsson who I began this journey with and who was my main advisor for more than five years. Jörgen Dahlqvist who in work, conversations, friendship, and through a marvelous tenacity made it possible for me to produce the artworks included in this PhD with Teatr Weimar as my second home. Jesper Olsson who with a calm and steady hand led me through the various terrains of writing. Jenny Sunesson, who during a short but key period, was present as an immensely observant listener. Ylva Gislén, who has followed my work from the outset, first as the director of Konstnärliga forskarskolan (a national collaboration among universities in Sweden to form a research school in the field of the arts), and during the final year as my main advisor.

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Notes

PRELUDE

1. The text "Articulations from the Orifice" was presented as part of a paper at *PSi #19: Now Then: Performance and Temporality*, the 19th Performance Studies international Conference, hosted by Stanford University, Stanford, California, June 26–30, 2013. It closely follows Lilly's own descriptions found in the following books, articles, and interviews: John C. Lilly, *Man and Dolphin: Adventures of a New Scientific Frontier* (Garden City, New York: Doubleday, 1961). John C. Lilly, *The Mind of the Dolphin: A Nonhuman Intelligence* (Garden City, New York: Doubleday, 1967). John C. Lilly and Antonietta Lilly, *The Dyadic Cyclone: The Autobiography of a Couple* (New York: Simon & Schuster, 1976). John C. Lilly, "Dolphin-Human Relation and LSD 25," in *The Use of LSD in Psychotherapy and Alcoholism*, ed. Harold A. Abramson (Indianapolis, IN: Bobbs-Merrill, 1967), 47–52, accessed May 12, 2010, http://www.psymon.com/psychedelia/articles/lilly.htm. David Jay Brown, "From here to Alternity and Beyond," an interview with John C. Lilly on the Mavericks of the Mind website, 1991, accessed April 1, 2012, http://www.mavericksofthemind.com/lilly-int.htm. John C. Lilly, Alice M. Miller, and Henry M. Truby, "Reprogramming of the Sonic Output of the Dolphin: Sonic-Burst Count Matching," *Journal of the Acoustical Society of America* 43, no. 6 (1968): 1412–24. The phrase "a mind in the waters" is taken from a book by Joan McIntyre Varawa, *Mind in the Waters: A Book to Celebrate the Consciousness of Whales and Dolphins* (New York: Charles Scribner's Sons, 1974). Details on mistreatment are found in D. Graham Burnett, *The Sounding of the Whale, Science and Cetaceans in the Twentieth Century* (Chicago: University of Chicago Press, 2012), 618. That Peter was supposedly in love with Margaret was related by veterinarian Andy Williamson in a documentary film by Christopher Riley, *The Girl Who Talked to Dolphins*, Shadow Industries, June, 2014.
2. These and the following phrases in italic are quoted from "Repeated Word-Sentence Experiment. Test #20 Stim: 'Cogitate' Table V," the John C. Lilly Papers, Department of Special Collections and University Archives, Stanford University Libraries, Stanford, California, collection number M0786, box 27, folder 1. Hereafter, all references to this archive are denoted as "Lilly Papers."
3. Lilly, *Mind of the Dolphin*, 198.
4. John C. Lilly, "Productive and Creative Research with Man and Dolphin" (Fifth Annual Lasker Lecture, Michael Reese Hospital and Medical Center, Chicago, April 3, 1962), *Archives of General Psychiatry* 8 (1963): 114, Lilly Papers, box 21, folder 2.
5. Lilly, *Man and Dolphin,* 80.
6. The entire experiment is described in an internal report, not intended for publication. John C. Lilly, Alice M. Miller, and Henry M. Truber, "Perception of Repeated Speech: Evocation and Programming of Alternate Words and Sentences," *Communication Research Scientific Report No CRI-1067, 15 October 1967*, Lilly Papers, box 38, folder 2: Paper on Cogitate Results. All quotes below related to the experiment are drawn from this report, unless otherwise indicated.
7. Gerald M. Edelman quoted by Oliver Sacks, in *Musicophilia: Tales of Music and the Brain* New York: Alfred A. Knopf, 2007), 148, a Knopf ebook.
8. I downloaded the loop from John C. Lilly's website and it has been on my computer(s) ever since. Accessed 2002, http://www.johnclilly.com/cognitivex.html
9. This and the following quote are from Michel Chion, *Audio-Vision: Sound on Screen*, ed. and trans. Claudia Gorbman (New York: Columbia University Press, 1994), 12-13.
10. John C. Lilly, *The Center of the Cyclone. Looking into Inner Space* (Oakland, CA: Ronin Publishing, 1972), 65.
11. Mladen Dolar, *A Voice and Nothing More* (Cambridge, MA: MIT Press, 2006), 14 and 143. Emphasis added.

CHAPTER 1. LISTENING AS MODE AND PRACTICE

1. Nancy, *Listening*, 5.
2. Lilly, *Man and Dolphin*, 208.
3. From an interview with Horowitz, in Christopher Joyce and Bill McQay, "How Sound Shaped the Evolution of Your Brain," *Close Listening: Decoding Nature Through Sound*, National Public Radio, September 10, 2015, accessed September 1, 2016, http://www.npr.org/sections/health-shots/2015/09/10/436342537/how-sound-shaped-the-evolution-of-your-brain
4. For example, see: "Research," on the Multisensory Perception Laboratory website, director Ladan Shams, professor of Psychology, Bio Engineering, and Neuroscience at UCLA, accessed April 17, 2017, https://shamslab.psych.ucla.edu/research/
5. Michel Serres, *The Five Senses: A Philosophy of Mingled Bodies*, trans. Margaret Sankey and Peter Cowley (London: Continuum, 2009). Originally published in French in 1985.
6. See Don Ihde, *Listening and Voice: Phenomenologies of Sound*, 2nd ed. (Albany: State University of New York Press, 2007), 8-9.
7. See Jonathan Sterne, "Sonic Imaginations," in *Sound Studies Reader*, ed. Jonathan Sterne (London: Routledge, 2012), 9.
8. Ihde, *Listening and Voice*, 13.
9. Donna Haraway, *The Companion Species Manifesto. Dogs, People, and Significant Otherness* (Chicago: Prickly Paradigm Press 2003), 6.
10. Karen Barad in "'Matter Feels, Converses, Suffers, Desires, Yearns and Remembers.' Interview with Karen Barad," Chapter 3 in *New Materialism: Interviews & Cartographies*, eds. Rick Dolphijn and Iris van der Tuin (Ann Arbor: Open Humanities Press, 2012), 52.
11. For example, see Shreya Dagupta, "Can Any Animals Talk and Use Language Like Humans?" on BBC Earth, February 16, 2015, accessed October 16, 2015, http://www.bbc.com/earth/story/20150216-can-any-animals-talk-like-humans; and Stephen Hart, "Apes and Human Language," on the Animal Communication Project website, accessed October 16, 2015, http://www.acp.eugraph.com/apes/
12. Michel Chion, *The Voice in Cinema*, ed. and trans. Claudia Gorbman (New York: Columbia University Press, 1999).
13. John Cage, *Silence: Lectures and Writings* (Middletown, CT: Wesleyan University Press, 1961), 12.
14. *Organised Sound* 14, no. 1 (2009).
15. Lílian Campesato, "A Metamorphosis of the Muses: Referential and Conceptual Aspects of Sound in Art," *Organised Sound* 14, no. 1 (2009): 27–37.
16. Alan Licht, "Sound Art: Origins, Development and Ambiguities," *Organised Sound* 14, no. 1 (2009): 8.
17. Douglas Kahn, *Noise Water Meat. A History of Sound in the Arts* (Cambridge, MA: MIT, 1999).
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CHAPTER 2. GOING VISITING: ARE YOU READY FOR A WET LIVE-IN? OR, THE HOW OF MS. HOWE

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CHAPTER 4. GOING VISITING: ACOUSMATIC ORALITY AND PARA-SITES

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29. Arendt, *Lectures*, 43.
30. Export, "Expanded Cinema."
31. See George Lakoff and Mark Johnson, *Metaphors We Live By* (Chicago: University of Chicago Press, 1980).
32. Serres, *Parasite*, 8.
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2. Bojana Cvejić, "Notes for a Society of Performance: On Dance, Sports, Museums, and Their Users," lecture available as PDF (date unknown), 2, accessed November 30, 2015, http://www.academia.edu/14880800/Notes_for_a_Society_of_Performance
3. Richard Schechner, Performance Studies: An Introduction (London: Routledge, 2006), 22.
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6. See Jacques Rancière, "The Emancipated Spectator," *Artforum* (March 2007): 271–281.
7. Cvejić, "Notes for a Society of Performance," 19.
8. N. Katherine Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: University of Chicago Press, 1999), 7.
9. Ibid., 18.
10. This and the following quote from Karen Barad, "Posthumanist Performativity: Toward an Understanding of How Matter Comes to Matter," *Signs: Journal of Women in Culture and Society* 28, no. 3 (2003): 802.
11. See Frances A. Yates, *The Art of Memory* (Chicago: University of Chicago Press, 1974).
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13. Bernard Stiegler, "Upplysningsideal i den filosofiska ingenjörsvetenskapens tidevarv," translation to Swedish from the original French script by Axel Andersson, *Glänta*, no 2-3 (2012). The French script, entitled "L'esprit des Lumières: A L'époqe du Philosophical Engineering," was the basis of Stiegler's presentation at The World Wide Web Conference in Lyon, April 20, 2012.
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17. Polymodal modes of learning and teaching have been proposed and discussed by Douglas J. Loveless and Bryant Griffith in *Critical Pedagogy for a Polymodal World* (Rotterdam: SensePublishers, 2014).
18. See the Multisensory Perception Lab website.
19. See Gemma Corradi Fiumara, "Towards a Fuller Understanding of *Logos,*" in *The Other Side of Language: A Philosophy of Listening*, trans. Charles Lambert (London: Routledge, 1990).
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22. Judith Butler, "Performative Acts and Gender Constitution: An Essay in Phenomenology and Feminist Theory," in *Performing Feminism, Feminist Critical Theory and Theatre*, ed., Sue-Ellen Case (Baltimore: John Hopkins University Press, 1990), 270–278.
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29. Bernard Stiegler, *Taking Care of Youth and the Generations* (Stanford: Stanford University Press, 2010), 65.
30. "Vibrant matter" is borrowed from Jane Bennet's book, *Vibrant Matter*.
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39. Ibid., 74.
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41. Melody Jue, "*Not to Be Written, But Absorbed: Oceanic Futures in 2050,*" presentation at the conference The World in 2050: Creating/Imagining Just Climate Futures, hosted by The Environmental Humanities Initiative, at University of California, Santa Barbara, October 24–November 20, 2016, accessed December 4, 2016, http://ehc.english.ucsb.edu/?p=14966

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Facts and Credits

Limit-Cruisers (#1 Sphere)
A performance for six participants with sound, headphones, inflatable transparent spheres, light, loudspeakers, and chairs. Duration: 60–90 min.
Performed at Inter Arts Center (IAC), Malmö, Sweden, September 18–20, 2012 and March 25–26, 2013. As well as at Weld, Stockholm, Sweden, February 21–23, 2014.

Limit-Cruisers (#2 Crowd)
A praxis session for listeners and observers with sound, headphones, and headlamps in a dark room. Duration: 30 min.
Performed at Unga Klara, Stockholm, Sweden, June 10, 2013.
As well as at *PSi #19: Now Then: Performance and Temporality*, Stanford University, California, USA, June 26–30, 2013.

Voices: David Book, Nils Dernevik, Orenda Fink, Janna Holmstedt
Muzak/ambience and sound mix: Kent Olofsson
Light concept (first version at IAC): Mira Svanberg
Programming and technical coordinator: Johan Nordström
Technician (IAC): Dana Lötberg
Host (IAC): Janna Holmstedt
Producer (IAC): Jörgen Dahlqvist
Technician (Weld): Ronald Hessman
Producer and host (Weld): Fredrik Wåhlstedt
Produced in collaboration with: Teatr Weimar and Weld
With support from: Umeå Academy of Fine Arts, Umeå University, Teatr Weimar, Weld, and Konstnärliga forskarskolan
Camera: Fredrik Wåhlstedt
Editing: Janna Holmstedt
Many thanks to: the staff at IAC, Weld, Unga Klara, PSi #19, and all the visitors

The sound composition "The Heroes of Absolute Zero" included a quote from J. M. Coetzee, *Dusklands* (London: Vintage Books, 2004), 78-79. [See score on page 125]

In the Greenery
A solo exhibition with three installations:
Fluorescent You, sound, headphones, chairs, screens and monochromatic light. Duration: 17 min.
Therapy in Junkspace, sound, video, headphones, monitor, treadmill, Plexi glass booth, carpet, plant. Duration: 8 min. 30 sec.
'Then, ere the bark above their shoulders grew,' sound, headphones, vibration speakers, wool mats, wooden construction. Duration: 8 min. 30 sec.
Exhibition at Inter Arts Center (IAC), Malmö, Sweden, April 8–29, 2016.
Part of *Intonal Experimental Music Festival,* by Inkonst, supported by IAC, CTM, and Unsound. Malmö, Sweden, April 21–24, 2016. As well as *Transistor 1 – Broadcasting From the Center of Contemporary Performing Arts*, a collaboration between Teatr Weimar, wlabs, Swedish Radio Malmö, Audiorama, AKT 1 (DK), Malmö Theatre Academy, Bombina Bombast, Banditsagor, and IAC. Malmö, Sweden, March 31–April 30, 2016.

Voices: Orenda Fink, Janna Holmstedt, Jo Rideout, Matt Wycoff
Sound mix: Marcus Pal
Programming and sound technician: Marcus Pal
Exhibition technicians: Marcus Råberg, Anders Smolka
Producer (Teatr Weimar): Jörgen Dahlqvist
Curator (IAC): Christian Skovbjerg Jensen
Produced in collaboration with: Teatr Weimar, Wlabs, and IAC
With support from: Umeå Academy of Fine Arts, Umeå University, Konstnärliga forskarskolan, Teatr Weimar, and IAC
Camera and editing: Mikael Lindahl
Many thanks to: Kent Olofsson, Jenny Sunesson, Carina Ehrenholm, the staff at IAC, Transistor, Intonal, and all the visitors

The sound installation *'Then, ere the bark above their shoulders grew,'* included a quote from Ovid, "The Story of Baucis and Philemon," *Metamorphoses. Book the Eight*, trans. Sir Samuel Garth, John Dryden, et al., the Internet Classics Archive, accessed, April 8, 2016, http://classics.mit.edu/Ovid/metam.8.eighth.html

Articulations from the Orifice (The Dry and the Wet)
A lecture performance with sound, video, voice, loudspeakers, projectors, spoken and printed words. Duration: 30 min.
Part of the performing arts festival *Transistor 2: Old Form – New Format*, a collaboration between Teatr Weimar, Insite, Nyxxx, Malmö Dockteater, Kastratet, Bombina Bombast, the participating artists, Malmö Theatre Academy, IAC, and Swedish Radio Drama.
Malmö, Sweden, October 9–November 13, 2016.
Sound mix: Janna Holmstedt
Programming and sound technician: Jörgen Dahlqvist
Producer (Teatr Weimar): Jörgen Dahlqvist
With support from: Umeå Academy of Fine Arts, Umeå University
Many thanks to: Transistor and all the visitors


In shifting focus from the visual to the sonic, the world emerges in a different way. Sound envelops us; we swim, even drown in sound. When it comes to our sensory perceptions, sound travels faster than light, and sight is not as independent a guide as we might like to believe. Seeing, however, has long held precedence, thus it is high time to turn our attention to listening.
The explorations into listening undertaken in this book depart from a specific encounter with an animal "voice," where humanoid sounds were found to emanate from an unlikely source – the blowhole of a dolphin. This encounter led to a series of scientific experiments initiated by neurophysiologist John C. Lilly, some of which were recorded on audio reels. In the process of tracking down the original recordings made in 1965 when a woman named Margaret Howe lived with the dolphin Peter for 75 days in a flooded house, I inquire into these controversial experiments in interspecies communication and attempts at equal cohabitation between woman and dolphin. Through this, the intricacies and problematics of listening begin to unfold.
JANNA HOLMSTEDT
ARE YOU READY FOR A WET LIVE-IN? EXPORATIONS INTO LISTENING