Panakustikon. Notes on acoustic control

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1. Monitoring data

Sounds respect no limits. They pass through walls, ignoring any visual barriers, they spread out in every direction. This imperceptible penetration is acoustic terrain. With cleverly-used rhetorical or tactical sounds, we can directly and immediately touch the skin of the audience. We can even touch their hearts: If the director wants the audience to feel a certain emotion, he'll speak to his sound designer for advice. Regardless of whether we want a soundscape or not, we can't do without it. Sound design provides people with something they haven't asked for, and suggests qualities in order to sell them.

If acoustic suggestion delivers sounds that haven't been requested, audio surveillance will take them from us without asking. Where images might manage to hide from the eye, sounds are always picked up by the ear. Not only people but also machines are heard: The supervision of production processes also counts towards operational optimisation. In our daily lives, we listen carefully, concerned about our direct environment, paying attention to danger or the timbre of a voice in order to work out the "mood" of the situation. Sometimes, through sounds, we can control, for example, the correct proportion of strings, which sound accordingly. And last but not least, listening is a way to carry on a war, whether it be hot or cold, public or private.

What is the relation between audio surveillance and sonification? With René Laënnecs invention of the stethoscope in 1816 at the latest, the basic principle of »the use of non-speech audio to convey information«—which is exactly one of the most common definitions of sonification—has been used in the sciences. Laënnecs discovery of the stethoscope allows listeners to receive information about the lung and heart region, blood circulation and actions of the bowels without having to resort to *surgical* procedures. In the mid-20th century this convincing method hooks up with another seminal invention made by Leon Theremin: His spy bug was able to track down communication from presumed »subversive elements«.

Although electronic eavesdropping primarily focuses on information from *speech audio*, the concept of the bug nevertheless seems to be of crucial importance to a cultural history of sonification. In the line with this approach to »making sense of data«, sonification can also be understood as *auscultation of a* »virtual body of data«. Other than focusing on the results or the reliability of eavesdropping measures, I'm trying to investigate the socio-cultural setting, that is the frame of mind that motivates eavesdropping in each case. The way from »external surveillance« to »self-surveillance« (as described by Foucault an others) can be reconstructed by audio-

signals—which consequently calls for a critical engagement with sounds that are being used as a medium for heuristic perception.

2. Eavesdropping fantasma

In an article by Dörte Zbikowski there is a large number of examples, which give a good illustration of the history of acoustic surveillance. She refers to "The Ear of Dionysus", a Sicilian tourist attraction. The legend goes that the local tyrant hid Attican prisoners of war there in the 4th century BC. The magnificent stone cave has a form reminiscent of an auditory organ and has impressive acoustics. Many travellers have visited there since as long ago as the 17th century. Among them was the painter Caravaggio who, impressed, fantasized about the cave: Dionysus must have drilled an acoustic passage from the cave to a nearby theatre. Sitting there, he could hear the prisoners talk amongst themselves, a legend which is still told to visitors today. Evidently, in this story is less said about antique rule than about Caravaggio's time. At least the painter was prone to Barroque curiosity, such as was Athanasius Kircher with his listening systems. In 1662, the polymath gathered together all types of complex architectures for acoustic surveillance of sovereigns' homes in his book “Musurgia Universalis”. Sound is captured by a large hopper and directed through a passage in the shape of a snail. In general, the opening in the room has the shape of a bust, this simply symbolising a secret informant.

But why were so many of these spying situations imagined during the 17th century? The reason is not so much in the number of conspiracies of the time, but rather in the playful art of secret communication. Presumably, Kircher's spying projects arose at the request of Italian nobles, for security, but also as an amazing "bonus" for their homes.

Another example: Nicolaes Maes, one of Rembrandt's students and a contemporary of Athanasius Kircher, painted time and time again the motif of the servant who listens carefully, spying on the gentlemen: The Eavesdropper. She is found in the foreground of the picture, in a corridor, her eyes fixed on the painting's observer, finger on her lips, indicating silence, while her masters can be seen through a slightly-open door further in the distance. The servant is in contact with us, warning us to remain silent. We see what she is listening to but can't see, while we can obviously see but not hear what she hears. This picture is not without some humour, as the servant and observer become partners in crime in making contact with each other. Our hope is that information can be found which until now has been unfairly kept secret.

3. Monitoring listening and diagnostic listening

Karin Bijsterveld and Trevor Pinch make a distinction between monitory and diagnostic listening, in other words between listening *if* something happens, and listening to *what* happens.

The famous model prison developed by Jeremy Bentham (1791), called “Panopticon”, already had a device designed for the interception of speech audio by using *monitory listening*. The basic construction: in the middle there is a tower around which the cells are set out such that the supervisor in the tower can see everything. Originally, every cell was supposed to be equipped with narrow radial passages leading to the tower. What finally caused Bentham to design the prison from a purely optical point of view was that the sounds would travel in both directions: in other words, that the prisoners would also hear what was being said in the central control tower.

Bentham's model was ultimately bound to the Enlightenment, since rehabilitation of the prisoner is considered potentially productive. He is controlled in order to verify his improvement. The reactionary response came from Vienna as from 1819. Prince Clement Metternich had the police state of the German Confederation under his command until 1848. Because bourgeois freedom was considered too unsettling, the foreign minister and the Austrian chancellor created a system of censorship and spying based upon the Karlsbad resolutions. In addition to the Federal Central Office in Frankfurt, where the protocols piled up, Metternich also maintained an information office in Mainz from where spies started, among them renowned intellectuals who had access to rooms in which they could hear interesting conversations (for example Karl Marx's circle). The fact that Metternich's system collapsed due to the revolution in 1848 in only a couple of months, was attributed to the spirit of the time: a system based on distrust of people themselves obviously could no longer continue to govern a modern state, following the Enlightenment. Ultimately individuals deprived of any influence don't create any added value.

But then: approximately a century later, Theremin invented the spy bug on request of the KGB, the ultimately acoustic control device. Meanwhile this device had not only a career as a real espionage tool, but also in many cinema and TV productions. Most thrillers and Cold War dramas are full of these broken characters on both sides of the microphone, as both the spies and the victims are pitiful.

In Francis Ford Coppolas movie, The Conversation, we are looking at the state of the US paranoia after the Watergate scandal: Gene Hackman, Harry Caul, as an eccentric specialist spy ends up being spied upon himself. In the final sequence, he tries to find the microphone apparently hidden in his private home. The scene ends with the complete destruction of his house. As the main character, the viewer cannot be sure if Caul has really been spied on or if he is simply suffering from manic paranoia.

The non-fictitious satellite monitoring system Echelon has a reputation just as bad as in fictitious examples. This international system of spying led by the American National Security Agency (NSA) has its origins in the Cold War era and has been implemented as an economic system of espionage. The discovery of this relationship goes back to the

investigations of the British journalist, Duncan Campbell. Since 9/11, the system has been taken up again as with the excuse of internal security.

But the interception of phone calls is not only considered completely positive in arguments about national security. It also appears as a technical innovation for the "good guys" in the much-loved North American series "The Wire" (2002-2008): A brave special unit uses subtle methods to fight against the Baltimore drug-scene. This method is presented to us as being much more effective than bursting into the place (with a taste in parallel montages). While foolish police officers raid supposed drug dealers' houses without success, our heroes sit in the office and smile silently if the man on the other end of the phone gives himself away. Spying on others' conversations with high technology seems, in this series, as creative and intelligent, discreet and elegant as the services of a counselling agency.

4. Voluntary self-control

Ernst Barlach's figures in “Der Fries der Lauschenden” (Frieze of the listeners, 1935) seem to be in complete harmony with themselfes. The sculptor had originally designed his wooden figures for a monument to Beethoven. But after that request failed, he converted them: One of the figures "watches her desires draw near", the other "simply beckons with an expression of welcome". They all have their eyes closed. They listen to themselves - monitory listening.

Today’s self-control works through deep listening, through a kind of inner survey. Sound contributes to self-control, that’s for shure, when, for example, the "You've got mail" Earcon calls people to their electronic devices or when a dashboard computer in a car calls our attention to some problem. Even audible feedback in the gym places us in relation to the task at hand. Here the pressures we are subjected to are made audible. Things are reported from outside but they reach our internal disposition, we wait for this message and so our mood is prepared for that. The requirement here is an invisible stethoscope for the ego, with which not only Barlach's listeners but also the flexible, post-modern person regulate their internal lives. And for this reason, we return to the Panopticon.

In Bentham's model, each cell contains only one person for whom the supervisor is invisible. So the prisoner cannot know if there is anyone in the tower or not. But, according to Bentham's innovative idea, the prisoner always behaves as if there were someone in the tower. As a result, the prisoner controls himself. His model is extremely rational, it individualises the convict and, as a goal, rehabilitates him for the public good. The person who learns to behave will be freed after a determined time and will therefore end up taking care for himself.

In his book “Discipline and Punish” Michael Focault takes a legendary interpretation of the Panopticon. For him, it reflects the principle of late-capitalist society. With the

omen and spirit of personal freedom, the individual constantly controls him or herself: controls the own body, explores the personal lifestyle, matches the competitive profile with market requirements.

To conclude, I'd like to compare Foucaults diagnosis which a literary narration that prominently features acoustic influence. In Franz Kafka's unfinished story, The Burrow, a subterranean animal talks to himself, becoming more and more hysterical, because he can't find the origin of a sound which he can hear around him. Meanwhile, he complains about how he does things controlled by others, "as if the guard had arrived and one had to act as if in a comedy." The text written in 1923/24 makes reference, amongst others, to the sounds made by foreign enemies in the trench warfare of World War One. It has also been considered that Kafka could have been hearing the true internal sound of his incipient pulmonary tuberculosis (in this case, the image of self-diagnosis could have its own meaning).
That the sound is inside the animal is plausible. However, my understanding is that the noise is not a symptom of disease in the physical sense, not a hiss in the lungs. Rather it is self-control, which speaks, a superego which gives orders impossible to follow. Kafka's animal's home is not his castle. The noise can't be located because it wanders with the animal, because it lives inside of him. Not even his highly-trained ear can help him in this case. While the animal walks around destroying his own burrow, as Gene Hackmann destroys his flat in The Conversation, the reader has time to think: the animal won't find anything since the guard he feels on his back is, as in Foucault's interpretation of Bentham, only imagined.

If Kafka had written the text in the 1990s or even after, the sound which didn't stop would be the inner voice of the serviceworker that tells him to provide permanent improvement of his business-biographical work. It would not be an exterior, which is fighting to get in, but the sheer "terror of the immanence". Kafka's animal would be an *animal laborans,* which is lost in its own positivness, in its productive eagerness, which the society of control has planted in us.

5. Sonification in the society of control

Now, the question is what all this has to tell us about sonification: On the one hand, I have tried to explain that the history of getting information through acoustic channels is not at all glorious. Eavesdropping has been used as a hostile measure, driven by mistrust and paranoia. However, mentioning only this as an argument against methods of sonification would be unfair. More considerable is the approach of sonification to contemporary society. Here we enter into the field of the insidious influence of individuals and their self-control as a symbol of advancement and productivity, whose roots, as I have mentioned, are found in the Enlightenment and which extends subtly into the field of research we are talking about: The ICAD community's goal is to make the use of data productive. In fact, technology is developed in every area of the field.

Sound technicians report on optimised feedback from machines, experts in logistics listen and act upon problems with supply, psychologists present new perspectives on receptive behaviour, and chemists and astronomers also listen clearer now than last year. We're moving forward, and the situation would be really desperate if that weren't the case. But in other words, we can say: The community maintains a modernist understanding of innovation and, maybe, holds an insufficiently reflected tendency on general optimisation - in a situation, where the pressurised EGO falls into the trap of the voices that speak to, in and through it. Because sonification is always designed sound, the field of research must debate the fact that currently great efforts are being made to create strategies for imperceptible control through sound-design. So far, sonification has no explicit commercial interest. But what is a clear objective in sound-design could appear, at least, as a side-effect in sonification.

The impossibility of escaping external subliminal influence and internal latent control is a characteristic of our present world. Sound is a participant in achieving this, being the major means of producing an imperceptible effect. The insinuations within the panacoustic realm are even more difficult to define than the visual form of an ideal prison. Summarising: The so-called "acoustic turn" has a reverse side that even in an argument for the advance of sonification should not remain unheard. This can only happen if the current delicate but crucial question – die *Gretchenfrage* – is permitted in the sonification-discourse: Tell me, how do you feel about capitalism?

Thanks for listening!