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SOUND OF A FACTORY / FACTORY OF SOUNDS

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Abstract

During the first visit to a former factory, the overriding experience is one of silence. The Vairet-Baudot ceramics workshops in the French county of Ciry-le-Noble closed in 1967. Left intact with all the machinery in place, these buildings have benefitted from the protection of the Creusot Ecomuseum. During the summer of 2004, this "sonic oxymoron" provided the basis of an acoustic experiment.

An octaphonic sound-system allowed us to create a sonic image of considerable depth for the visitor moving in the space. As we were developing this project, we attempted to arrive at a better understanding of the interest or value that the "sounding" of an historical space, deprived of its former sonic ambiance, might represent. I would classify the results of this research / action based according to 3 preoccupations which guided this sonic experiment :

1) What position to adopt with respect to the project? Two choices might seem obvious. The first would be to "recreate" the sound of the place, replaying the sounds of another time, the acoustic synchronies of the now still machines; the second would be to "enliven" the space with an artistic creation. We finally adopted a third approach which was simply one of "sounding the spaces". Attentive listening allowed us to define effective ways of producing sonic qualities which evoked the transformation of raw clay into brick and thus something of the "memory" of the place.

2) The visitors' experiences were analyzed according to four categories: "listening in

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movement", "dissected listening", "visual listening" and "embodied listening".

3) Might the business of putting sound to this silent – though not mute ! - heritage space not be something like putting sound to images in cinema? Can one create "soundtracks" for certain spaces we inhabit ? Certain tools used in cinema proved to be useful in describing the relation between sound and the factory space.

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THE SILENT FACTORY – A SONIC OXYMORON!

In our imagination, a factory is a world of noise.
Noise from materials being worked on, noise from working machines, noise from things being moved. We do not speak to each other, we shout, we whistle, we touch, we signal, we talk with our hands. And when the noise of the machines stops, that usually means something serious, an accident, a strike, a layoff… These images, probably outdated, perhaps false, often exaggerated, make it difficult to conceive that factories are not only a world of noise but in fact a world of communication, of significant sounds which are part of an identity. So the silent factory, not functioning, abandoned, by its very size, its materials and its machines, by the absence of activity, is an unexpected world of silence. A world at a standstill, a pause in time, a pause on a still image.



« La briqueterie » - 2004

The Vairet-Baudot ceramics workshops in the French county of Ciry-le-Noble, in Saône et Loire, is one of these places. Built at the end of the 19th century, the factory was active for more than 70 years, transforming clay into bricks and tiles. It closed definitively in 1967. Left intact, with most of its machinery, lying fallow, crumbling in places, it was bought by the Creusot Ecomuseum which began to restore it in 1995. It is now part of the industrial heritage of the region, with tours and exhibitions held throughout the summer.

UBIQUITOUS SOUNDING BRICKS…

In the context of european project (www.archartproject.net), the Creusot Ecomuseum asked the Cresson laboratory to work on the sonic aspect of Ciry-le-Noble.
We know how to restore what is built, what we see. It is not easy, but we can do it. It requires know-how, knowledge of history, geography, society and - maybe most of all - a position, an approach. But when it comes to sonic restoration, we are sorely lacking in theoretical elements as well as precedents. What does it mean to give back a sonic dimension to built heritage, and what is more to industrial heritage ? Without wanting to or being able to answer this very broad question, we can at least point to two approaches, which we will consider as 2 extremes among many possible options :

- To « replay » the site through historical simulation: this would mean recreating

the sounds of the period and placing them in the space either through recorded sound and speakers or by mechanical or human production. Finding and reproducing the sounds of the past. Yes… but unless we have period recordings – which would be precious but extremely rare – that amounts to creating a sonic fiction. A more or less realistic, more or less accurate fiction, but a fiction which would attempt to replay the past according to our knowledge and images of it.

- To « play against », or « play with » the site through artistic creation: this would mean enlivening the site by using it as a container in which to place a sound installation, a work of art. The artist is free to create, to find more or less close resonnance with the site and its historical dimension.

A middle ground might be simply to « play the site », to « sound it » by giving it a sonic dimension which is neither an acoustic synchronization with the stopped machines, nor a creation ex-nihilo , interesting as that may be. Sounding the site means first of all to listen to it, to hear it sound or to make it sound, through its materials, its particular spaces and configurations. To capture sounds in situ in order to rework them. Sonic traces. Sonic imprints. Sounding the site is also to narrate it. By its history: the transformation of the incoming clay to the outgoing brick, the story of the people who knew it when it was in operation… But also by the present: the training in the adult education centre, the tour guides… and sounds recorded in a nearby modern brick factory.

This experiment to « put sound to » the ceramics factory was done in the Spring of 2004 and ran all through the summer. Richard Atienza, Nicolas Lounis and Julien Mc Oisans created what they called « un cheminement identitaire » - a sound installation which encompassed the whole of the site, taking into account the characteristics of each space, including exterior spaces. It is a multitrack composition for eight loudspeakers, broadcasting sounds recorded in situ, then mixed and composed.

Ubiquity reigns.

The underlying principal of this soundscape plays on the idea of ubiquity on several levels. « By nature, sound has an intrinsic tendency toward ubiquity – in fact it is impossible to limit or materialize the placement of a sound » [1]. Here, the visitor is in a situation of acousmatic listening. He hears the sound without seeing its source. He sees no action which could produce sound, nor are there any loudspeakers in his field of vision. The sound is there, but if we know or think we know from which general direction it is coming, most often we cannot pinpoint its source. Spatial ubiquity, since we do not know where the sounds come from. They may be coming from the room in which we are standing, from the room next door, from outside, but they may also have been recorded in another space altogether, as is the case for the sounds recorded in the modern factory and reintroduced here. But ubiquity is also temporal in a sense, as we never know if the sounds are direct or delayed, if they are witnesses of the past or signs of the present. « Des fantômes sensoriels » or sensory ghosts, as Michel Chion would say. To these ubiquities is often added ambiguity as to

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the origins and the causes of the sounds we hear. The site offers spaces without activity, silent machines, but our mental image of them is so full of sound that the actuals sounds we hear, coming from various, unlocalized sources, are but one component of the visitor's soundscape (Cf. Gilles Deleuze on cinema, for whom the sound track of a film is only one component of its soundscape).

THE LISTENERS SPEAK

A study was done by gathering the comments of listeners or visitors to the brick factory [2]. By analyzing these visits through a reasoned typology, we became aware of the relationship between the site, the sounds and the visitor. Four types of listening were identified: listening in motion, dissected listening, visual listening and embodied listening.

Listening in motion

While following the route defined by the researcher, the listener describes what he sees, what he hears, what he feels. He makes comments, value judgements, while putting his memory to work. The initial instruction was as follows: «Sound installations have been created on this site. We will follow a route together which follows the order of the visit, during which you will describe what you hear. You can also specify where it is happening, what you feel, what ambiance is created.» This could not be done with visitors taking a guided tour. For them, we opted for individual interviews after the tour. The personnel of the Ecomuseum and the participants in the adult training sessions also agreed to participate. I every case, the interview was done after the visit had been completed. We then analyzed the various comments which had been gathered. A few categories of comments emerged, among which were the general categories of classification of sound, very close to the 4 ways of hearing described by Pierre Schaeffer [3]. They allow us to address the question of the different ways of perceiving sound through dissected listening, in this heritage site. We will also see the relationship between sound and space through «visual listening» and the relationship between sound and the body through «embodied listening» in this heritage site.

Dissected listening

How is sound material perceived? Three of the four ways of hearing proposed by P. Schaeffer appear in the perception of sound in this heritage site: «ouïr» - harkening, «entendre» - hearing, «écouter» - listening. We labelled a fourth way: «projeter» - projecting. For «ouïr» or harkening, sound is perceived as raw sonic material. In the historical or heritage context, this corresponds to a perception of background noise. It is described as «dull», «low», «heavy», even «deadened», something undefinable. On the whole, the background sound was described as «a rumbling», «a humming», «snoring»… The temporality of this background sound is cyclical, with a regular rhythm. For «entendre» or hearing, the sounds are qualified and imply a selectivity

through attentive listening. The listeners are able to qualify the object. Hearing in this heritage site means perceiving a «noise» whose rhythm varies. The temporality of the soundscape is dynamic. It is characterized by sounds which evoke motion: things that roll, that bang, that hit… The various sounds evoked relate to work in a factory, a building site or a workshop, but also, less frequently, to the sea. For «écouter» or listening, the sounds contain hints which allow the signals to be named. Through the sound of the materials, the listeners perceive everyday sounds from their own environment as well as those of the site. As for the digital sound material, it evokes various types of sources. Some of these sounds blend in with the perception of «live» sound: they come from the machines or the materials characteristic of the brick factory. Other sound events mentioned are more foreign to this type of environment: listeners spoke of an audio installation, a celebration, even a hospital or an aquatic world. The temporality of the sound signals is the event. The listener's personal experience comes into play as he identifies the sound source by calling up references to things he remembers, other than those he actually sees. For «projeter» or projecting, the sound element triggers the imagination of the listener. He tries to qualify the sound and elaborates an idea in order to grasp it. He makes a mental construct from the causal gesture which produces the sound and describes a series of gestures linked to an action, through the simultaneity of sounds which evoke different materials. In this type of listening, the temporality is that of accumulation. Listening attentively to the sequence of sounds allows a scenario to emerge.

Visual listening

Sound and space are closely linked, whether by the image of the machines we have before us or the overall space of the brick factory. The «here» space links visual and sound perception. Live sounds are identified through our knowledge of the place. As for digital sounds, the perceived image reinforces the virtual nature of the installation. Here there is a physical contradiction between the image and the sound. The visitors mention a discrepancy between the sound object and the image before them, like a semantic contradiction. The image here serves to confirm the identification of the sound. The attention is centered on the content of the space. The «nearby» space links the moving receptor and the immobile source. Whether inside or outside, the visitors perceive distance through the sounds. Listening allows one to distinguish the various sound objects placed throughout the space, and sometimes also to identify them and situate oneself in relation to them. The porosity between the interior and the exterior is due in part to the placement of the speakers in the space, but also to the fact that all the spaces are open, with no means of closing them. Situating the sound in the space helps the perception of one's mobility. Here two mobilities intersect: that of the visitor and that of the sound material (the same sound repeated in different places). This method of visual listening relates more to the playful relationship between the sound and its container. It permits an appreciation of the whole expanse of the site as well as of the built architectural volume. The «elsewhere» space is a heterotopia. The on-site survey reveals other spaces [4]. A few minutes of listening can transport the listener to another space. The space mentioned by the visitors which is closest to the

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current function of the factory is a building site. For some the space becomes a medium for an artistic installation, for other it projects them into another intangible dimension through «phantom sounds» or «phantom voices». The space mentioned which is farthest from the factory is the metallic hull of a boat at the bottom of the sea. Finally, the visitor can detach himself completely from all types of spaces and attach himself solely to the sound material itself. It reveals organic life; the image is that of a heartbeat. Here we reach the edge of immateriality. This type of visual listening disassociates itself from the function of the place, which becomes «a box», a free, multidimensional volume. The space contains all space.

Embodied listening

Embodied listening underlines the impact of sound on the body. «The body transported» in chronological time occurs through listening in motion, it shifts from one time to another along the route. The weight of the past, through the architecture itself and its content, the presence of the machines, helps bring about this temporal immersion. Nowadays, the presence of workmen doing restoration, the nearby road, give sonic clues which bring us back to our own time. This journey juxtaposes past and present. Certain sound objects seem particular to the past, while others reflect the modern world. The transported body reveals the listener as receptor. «The moving body» corresponds to the way the sound installation works as something to be listened to while moving through it. The place and the visitor interact. In fact, the sound matter piques the curiosity of the listener and acts as a call or an invitation. Sound has a sensory-motor effect. The body is a receptor. Moving in space, moving away from the sound source dims the sound matter. Conversely, moving closer creates a crescendo. The body is an actor, acting on the sound matter. This matter undergoes a change, passing from one sound object to another through the dynamic of movement. «The inhabited body»: in the sonic tour, the listener puts himself in a completely receptive mode. From that point, the sound penetrates his innermost self: «It vibrates in me, in my body, I feel like there is a vibration». There is a compatibility between the sound and the body. The sounds are perceived as «pleasant», «soft», «restful». Placing sounds in the factory helps the listener immerse himself in the ambiance while avoiding being aggressive or didactic.

A « CHRONOGRAPHIC » SOUNDING

What tools do we have to describe the work of sounding a space ?
Can we make a comparison between this sound experiment, which involved sounding a scenographed and silent (but not mute) space for visitors, and putting sounds to images in the cinema ? One of the persons who has most contributed to the theory of sound in cinema is Michel Chion [5]. What conceptual tools does he suggest for the cinema which could apply to this type of intervention ? (In the text which follows, the terminology suggested by M. Chion is in quotations.)

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Like in cinema, we are dealing here with sounds which are mainly acousmatic. There is of course the ambiant sound («le son-territoire» or territorial sound as Chion would say), the birds, the wind, a bit of traffic on the road, but unless we deliberately listen for it, these sounds are not heard (this corresponds to Pierre Schaeffer's «ouïr»). But here the situation is a bit different from the cinema, where in general sounds are clearly identified with their causes, or so we think !

What really happens? First of all, we have «audio-vision» perceptions which we are accustomed to in the cinema but which we also find in situ. This is a «value-added phenomenom of projection which, when associated with the image, seems to come naturally out of it». Sound brings duration to a visual which in and of itself has none.

We then have effects of spatial magnetism («aimantation spatiale»). The sound is attracted by the image. The sound has its physical source in one place, but we associate it with another, with a machine, a specific zone, from which it in fact does not come. This spatial magnetism often lasts a very short time and then is quickly contradicted, creating a kind of schizophrenic perception between the visual image and the sound image. What M. Chion calls « une perception audio-divisuel », an audio-dividual perception, where, for instance, the sound we hear makes us that much more sensitive to sounds we do not hear but which the image suggests. Sensitive also at times to suggested background sounds, «which the image suggests but which we do not hear, whereas other sounds associated with the scene are audible.» There is no sonic frame for sounds. When the sounds are not framed by an image (a vision) which fixes them, anchors them, relates them to a finite object in space or, on the contrary, by excluding them fixes their existence on another, invisible scene or in an adjoining space off-camera, they are present without a frame, surrounding and becoming a spatial quality, not an object or a signal. Even if there is no sonic frame, that does not mean that the visitor does not distinguish different fields of sound. Here again, the tools of the cinema are valuable for this installation. We can identify :

- Off-camera sound: sound whose source is not visible on the screen (or for us, in the field of vision), but which is supposed to exist in the place and time of the situation which is represented (for example the sound of steps on a staircase which we do not see but which seems to be in the space above us.) This can be called an active off-camera sound if it brings about a reaction from the visitor (making him come forward, stop abruptly, etc.), whereas a passive off-camera sound, creating more of a sound environment, will generally not bring about a noticeable interraction with the visitor.
- «In» sound : When the source of the sound is in the field of vision. The field of sound can be perceived in this installation only when the loudspeaker has been spotted by the visitor.
- «Off» sound: When the source of the sound is not on-screen, but is supposed to belong to a time or place, real or imaginary, other than what we seen. Here, this would correspond to moments when we hear a voice describing the place.

But unlike cinema, the fields here are not fixed once and for all. Certain sounds shift from one field to another according to the position of the visitor in the space and according to his movements.

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Causal listening is unsettled here. The type of listening which focuses, through sound, on any clues which might inform the listener as to its cause. The survey shows how important it can be to the visitor to find a cause, an interpretation for a sound. The absence of direct causality often leads to a kind of audiovisual dissonance, a contradiction between the momentary sound and the momentary image, between a seemingly realistic sonic ambiance and the context in which it is heard. The visitor often searches within the sound for clues which will allow him to determine its material nature or the cause of the gesture which produces it. And so causal listening projected onto an image leads to numerous audio-visual effects in this installation which plays on the narrative ambiguity of the acousmatic sound :

- effects of meaning, atmosphere, content
- effects of rendering and materials (materializing sonic signs) creating sensations of energy, texture, speed, volume, temperature, etc.
- scenographic effects having to do with the construction of an imaginary space (especially by using extension and suspension, in and out of field, off-camera)
- effects to do with time and the construction of temporal phrasing (synchronization, repetition, segues, appearing and disappearing…)

But the visitor is not always in a mode of causal listening. He can quickly put himself into limited listening mode («écoute réduite» according to P. Schaeffer). This means «a deliberate suspension of cause and sense, and perhaps even effect, to focus on sound in and of itself, on its sensory qualities of height and rhythm, but also texture, matter, form and weight».

Finally, there remains semantic listening, «l'écoute sémantique» (P. Schaeffer), when one is dealing with a coded sonic signal. For instance, simply listening when a person describes the site of the brick factory.

The presence of the guide encouraging semantic listening, as well as the emergence of a non-localized sound source, can generate situations not of audio-vision but rather of visual-audition, perception which is deliberately focused on hearing. It is hearing accompanied, strengthened, helped - or, on the contrary, deformed, interfered with, in any case transformed - by a visual context which can project on it certain perceptions. In this experiment, we are in the presence of an audiovisual scenography, a type of intervention which, while chronographic, can be experienced in many ways, depending on the visitor who has relatively little effect or activity in his soundscape but who can make choices and visit it as he would play a DVD rather than as he would watch a movie in a cinema.

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