Acoustic scenography - sound design for built environments

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ABSTRACT

This paper will show an individual approach towards a design discipline we call “acoustic scenography”. We are founders of a Berlin based service enterprise and active in free art at the same time. In both contexts our work regularly touches a couple of noticeable concepts, approaches and techniques. Additionally we are constantly confronted with questions about ecology, noise pollution and the discourse about the active contribution to an environment that already is filled with a variety of media messages – including sound in a lot of cases. We think that both the distinct definition of our specific field of occupation and the artistic sovereignty are necessary for a self-conscious work approach. In the course of this paper we will portrait our personal development and general approaches by briefly discussing a selection of former works.

INTRODUCTION

“hands on sound” is a Berlin based business venture and collective of sound artists that has been founded by two former sound studies graduates. We unite artistic, scientific and commercial concepts and ideas regarding the design of interactive and reactive sound environments. We bring together knowledge and experience from sound studies, a degree in architecture and education in sound engineering. Our main field of work is the creation of specific sound applications, e.g. sound installations or virtual spaces to communicate brands, ideas and narrative or informational content. We work in a partly commercial environment with projects in a wide range between exhibition design, architectural planning and listening education but also in free and un-commissioned sound art. While not considering ourselves as researchers, we still try to enhance the theoretical and critical discussion about perception of sound and resulting questions of (sound-) ecological indicated use of sound in our practical applications and by giving talks, working in education and actively taking part in the discourse.

When we founded hands on sound in 2009 our main goal was to create a professional environment for our own occupation as designers and artists while developing a conceptual frame for a field of work that we call “acoustic scenography”. While exploring the chances of acoustic communication concepts for built environments in the course of many different projects, we were constantly confronted with a number of topics that consequently reappeared in almost every single work we created. These concepts include the general discussion about
the relevance of designed aural experiences in built environments as well as contentual, artistic and personal ideas and inspirations. Despite the differences, which the constant intersection between self-expression in un-commissioned works and commercial projects evokes, it is evident for us, that the definition of a basic attitude concerning topics as sound ecology [1] and acoustic communication [2] is essential.

ACOUSTIC SCENOGRAPHY

In the course of founding a company we needed a description for the general field of work we were planning to focus our activities on. Our main interest lay in the creation of virtual or artificially constructed environments, such as museums, brand spaces and exhibitions. The design discipline “scenography” is already established and teaches how such environments and spaces are planned and created [3]. A growing number of professional design agencies and artists specialize in this field and are commissioned e.g. by architects, marketing agencies and exhibition planners. “Scenography” incorporates an immense number of different design fields and uses both creative and technological techniques to communicate didactic content, to tell a story or just to entertain in different contexts. We aimed towards the extension of this design field with the focus on the aural experience in above described spaces and environments and thus created the description “acoustic scenography” for our very own field of occupation. Touching points that we identified in the process of working for different customers were the creation of sound sculptures and exhibits, complex sound design concepts for multichannel installations, “ambient sound” and general coordination of acoustic planning, multimedia concepts and architecture. While concepts such as “aural architecture” [4] theoretically discuss the design of aural experiences in built environments we decided to extend the idea of “scenography” to match the focus of our work on conceptual design, creative multimedia applications and the more progressive staging of architecture and spaces. In our experience, “acoustic scenography” not only incorporates a complex field of theoretical approaches towards sound design but also makes extensive use of sophisticated technology and often utilizes techniques such as non-linear audio and procedural sound design. In our experience, the emphasis of an integrative process that considers both the design through electro-acoustic transduction and passive acoustics and takes sound psycho-acoustic questions into account as well is very important.

Picture 1: “Teek“ – sound sculpture at Department Store Berlin, 2011
REAPPEARING TOPICS AND EMPHASIS IN OUR WORK

While the distinction between free artwork and commissioned projects seemed obvious in the beginning of our commercial work, the borders started blurring in the course of multiple projects. The preservation of the individual and personal expression in our work — despite the purpose or intention of the actual installation — gave us the opportunity to naturally develop and touch a number of reappearing topics in our work. The following examples will show three of these fundamental ideas.

Observation and active listening

Despite the contentual focus and the purpose of an installation, project or composition the mere observation of our surroundings plays a vital role for us. Both of us were educated in the premise of sound studies and thus share the sensitivity especially for the acoustic environment. The un-commissioned installation “$y = ax^2$” is an example that shows, how we incorporate a specific place and its essential sounds, and at the same time to give the listener herself/himself a central role in the process. “$y = ax^2$” used parabolic mirrors to reflect and focus site-specific sounds from a traffic crossing in Berlin and enabled the visitor to experience and realize both the acoustic phenomena and the sounds themselves. “$y = ax^2$” was a passive acoustic installation that followed an almost educational approach while still being focused on the mere aesthetic experience in the course of an art exhibition.

Picture 2: “$y = ax^2$” – acoustic installation at Kottbusser Tor Berlin, 2011

Architectural space and acoustics

Since “hands on sound” was founded both on the fundamentals of sound and architecture, the aesthetic implications of architectural space and room acoustics play a major role in the process of developing installations. Geometry, architectural shape and visual impression are factors that we aim to incorporate, to contradict or stage and to use as inspiration. At the same time we follow the idea that sound installations — independent from its artistic focus and actual content — can easily communicate information about e.g. the structure and building material of a space. The installation “pulsing around” as an example acoustically staged a pedestrian undercrossing in Tiflis, Georgia, by emitting transient sounds utilizing an almost radial movement in space using 12 small speakers at the ceiling. The fact, that the installation was shown for two weeks in a public space additionally lead us to the development of a
generative and reactive composition concept that made the installation sensitive for sunlight. Additionally we applied a technique that made the structure of the musical composition change over time through randomized alteration.

**Playfulness and poetry**

The strong subconscious effect sound can evoke always inspired our work and often implicated more narrative and audio-play-like approaches. At the same time the almost contradicting and playful interaction with the human-built environment offered fundamentals for almost antagonistic interventions. The installation “birdhouse music box” combined different techniques in an absurd park setting. A major intention of the installation was to sensitize for interaction with sound by making a swing interactive while relying on a conditioned and well-known mechanism. By moving the swing the visitor could directly trigger and alter a semi-generative composition that recombined fragments of a composition by J. S. Bach. The resulting music was played back through speakers that we hidden in birdhouses and the whole installation was accompanied by a single light bulb hanging in a tree.

Picture 3: “pulsing around“ – sound installation at Tiflis, 2012

Picture 4: “birdhouse music box“ – interactive sound installation at UdK Berlin, 2010
JUSTIFICATION VS. PRAGMATISM

While working on above described installations in free and commercial context we are naturally confronted with questions about the “need” and the justification for sound installations in public space. By working as an enterprise whose main service – if regarded in a simplified way – is the “addition” of sounds to different applications, spaces and buildings the question rises, how we bring our general artistic and commercial approach in correspondence with thoughts and considerations concerning “sound ecology” and an intended design of our acoustic environment.

While being sensible to the human-influenced alteration of the global soundscape, growing problems as noise pollution and the increasing amount of uncontrolled sound design in a variety of applications we try to develop a self-consciousness regarding our work that does not try to justify but at least can explain our occupation. In a world with a constantly growing number of multimedia messages and immense emphasis on advertisement one should on the one hand carefully consider the utilization of the medium sound for communication purposes. Furthermore, one must not subordinate herself/himself to the – legitimately increasing – fear of a noise polluted and acoustically unbearable world.

Over decades of conscious listening researchers and artists gained and collected knowledge about the way our world sounds, how sounds define specific spaces and even how sounds get altered and lost over time. One eventually might be at a point of actively working with this knowledge by shifting conclusion towards solution - or at least towards contribution: By emancipating oneself from the idea, that every “unnecessarily” composed sound is a pollution of the environment that has to be condemned, one can develop a sovereignty in the active contribution to the global soundscape. While often being compared to questionable approaches such as “Muzak” [4] and the equation with concepts such as elevator music in our professional occupation we learned to distance ourselves from such simplifying categories. In contrary we see ourselves more as both contributing and interpreting artists and designers who consciously and carefully shape and create acoustic environments and aural experiences – without being to fearful of the medium itself.

The brief collection of antagonistic examples (e.g. the active listening utilizing parabolic antennas or the use of “hacked” birdhouses with speakers) shows this approach through a basic principle that reappears in our work constantly: The intersections and interactions between the sound of built environments on the one hand, and the built (thus intentionally designed) sound in environments itself: We pick up sounds carefully and think about them as they may imply a vast acoustic saturation of our cities with human-made sounds. We defragment and subtract parts of the global soundscape in order to understand, interpret and even extract messages or meaning. At the same time we pick up environments and find them inspiring. Voids are being filled with fragments by our individual urge to leave a comment and thus contribute to the global soundscape – inevitably but luckily at the same time.

REFERENCES
