

# Healing Soundscapes



a study of the effect of sound and music in a medical environment

A co-operation between: Hamburg University of Music and Theater, University of Hamburg, University Hospital Hamburg-Eppendorf, Medical School Hamburg and GROVES Sound Communications (partner from the private sector)

## Healing Soundscape: a study of the effect of sound and music in a medical environment.

A co-operation between:

Prof. Dr. Georg Hajdu, Hamburg University of Music and Theater  
Prof. Dr. Clemens Wöllner, University of Hamburg  
Prof. Dr. Eckhard Weymann, Hamburg University of Music and Theater  
Prof. Dr. Sebastian Debus, University Hospital Hamburg-Eppendorf,  
Prof. Dr. Jan Sonntag, Medical School Hamburg,  
Prof. Frank Böhme, Hamburg University of Music and Theater  
John Groves, GROVES Sound Communications (partner from the private sector).

## 1. Introduction and Prehistory

Sounds and music are an integral part of life in all cultures of the world (Brown & Jordania, 2013). They are also used as "prescription drugs for a number of years and in various human cultures" (Spahn et al., 2015). (DMtG) is researched and practiced. In modern music therapy, "the targeted use of music within the therapeutic relationship to the restoration, maintenance and promotion of mental, physical and mental health" (DMtG) is researched and practiced. In music psychology research, the health-promoting effects of listening to music and actively playing music have been empirically investigated (see MacDonald et al., 2012). Cognitive approaches also emphasize positive effects of music on non-musical areas (eg Schellenberg, 2016). It is a good idea to use the music in a well-being manner.

In the hospital, the environmental qualities to which people are exposed can decisively influence their well-being and their ability to function. The patients are in an unusual and unintended situation, their autonomy and intimacy are limited. This is often accompanied by pain and worry about health. The external conditions should contribute as far as possible to recovery. The concept of the "healing environment" (Stichler, 2001) focuses on environmental factors in hospitals such as space, light, nature, acoustics, sound, etc., but also organizational and communication cultures. These environmental qualities affect both patients and employees alike. They can be experienced as conducive or stressful.

In addition to lighting and color design, audibly perceived influences (sounds, music) are atmospherically highly effective - regardless of whether they are unintentionally or deliberately designed, whether they are consciously perceived or remain unnoticed. They directly affect the well-being of the people in the room. Empirical studies show the effects of sounds and music in the background, depending on other environmental variables, situational conditions and the comprehension of the persons involved (North & Hargreaves, 2008).

Within the scope of the university co-operation between HfMT and the University Hospital Hamburg-Eppendorf (UKE) The training of music therapists and the research in this area, Prof. Debus (Cardiac Center, UKE) and Prof. Weymann (Institute for Music Therapy, HfMT) developed the idea of strengthening the environmental impacts of patients and hospital staff attention. The acoustical-atmospheric ambient conditions in selected hospital rooms are to be investigated. Through the installation of a specifically developed interactive soundscape (freely translated as "sound landscape", cf. Schafer, 1977), an electronic sound composition, attempts are to be made to achieve atmophononic improvements. To this end, Prof. Hajdu (Center for Microtonal Music and Multimedia, HfMT) and his students were brought into the boat. Prof. Wöllner (Systematic Musicology / Music Psychology, UHH) will collaborate with staff and students on the measurement of the effects of the intervention. Other partners are listed below.

In addition to the multi-perspectival orientation of the topic, the specificity of this project proposal lies in its interdisciplinary: across content boundaries contents in different event formats of students and teachers are jointly developed, applications are tested and evaluated.

## 2. Theme and concept

The core of this music-psycho-artistic art research project is theoretical reflection, empirical research and artistic productions within the framework of interdisciplinary seminars, workshops and exercises. The results of these courses should be applied in practice and empirically evaluated.

The objectives of the project are:

(Keywords: sound ecology, sound art) Development and technical realization of interactive electronic sound compositions and their installation And experimentation in concrete fields of practice (keyword: multimedial composition) Collecting and evaluating experiences with interdisciplinary event formats that deal with relevant questions beyond subject-bound boundaries. Collecting practical experience with an art-research format Research-learning: adapting methods from previous studies and application in a concrete situation reflection About the research project and documentation of the work steps (keyword: research reflexivity)

The auditory and atmospheric-aesthetic ambient qualities in selected waiting rooms in the UKE are at first studied both atmospheric and acoustically. For this, atmospheric analyzes and measurements are carried out in the rooms and first creative ideas for the soundscape to be composed are developed. The composers work closely with the music therapists on this basis for each room specifically interactive soundscapes. In qualitative and quantitative investigations with the participants (patients, staff), the aim is to investigate whether this intervention could positively influence the atmosphere in the relevant rooms in the sense of a healing environment. Is it possible, for example, that the modification of the acoustical environmental qualities has a stress-reducing effect? Are there conscious or unconscious effects on well-being?

The scientific challenge will be to examine the soundscapes specially designed for these purposes in order to make them reproducible and verifiable in their effect. The results of the evaluation studies can be incorporated into the implementation, possibly leading to a further increase in the effects.

In addition, the work steps of the project are documented and reflected in regular meetings. In the final phase, a video documentation is to be produced from these materials, which provides insights into the project, the persons involved, the effects and research results. If possible, this documentation should be freely available on the Internet.

## 3. Events, participants and target groups

A central and innovative aspect of this four-semester project is interdisciplinary access to the topic, which is based on the didactic concept. Central lectures are jointly planned and implemented. In the fourth semester, a lecture series will present the findings in a comprehensive manner and bring them into a fruitful exchange with experts from Germany and abroad.

The project is characterized by a high degree of student co-responsibility and participation. In contrast to conventional teaching courses, it is conducted in the form of a working group or project group, in which the students participate as full-fledged members.

In addition, the students and employees who carry out the project in the narrower sense of the term should also attend lectures. For example, music therapists acquire knowledge about theories, methods and techniques of electronic sound design; Composers are working on aesthetic, ethical, therapeutic questions

about the acoustic environment; Students of musicology are familiar with basic questions of music therapy and requirements in a specific field of application. There have been no interdisciplinary events between music therapy and multimedial composition at the HfMT. The integration of systematic musicology with a focus on music psychology and medicine has been the basis for this collaboration. Aspects of interdisciplinary and their importance are continuously evaluated under high-risk ideals.

The main target groups of the courses are students and doctoral students of the above mentioned areas. In addition, all the students of the HfMT (elective modules) and the UHH (elective department of the department of culture) will be able to attend courses of the project.

It is possible and desirable to carry out scientific housework, BA, MA and dissertation work within the framework of the project. The mentoring of this work by the professors and staff involved is regarded as an essential part of the project work.

The project is supported by staff members and students of the Institute of Music Therapy and of the Multi-medial Composition Working Group of HfMT as well as by staff and students of Systematic Musicology (UHH). It is supported by Prof. Dr. Sebastian Debus and other staff members and students of the University Clinic Eppendorf (UKE). In regular project meetings the work is coordinated by Prof. Dr. Eckhard Weymann. For the coordination of the project, but also for public relations, participation in lectures, organization of a ring lecture, etc., a scientific staff (8 hours / week) is to be established for a period of two years.

For individual events, science and practice references, further partners will be added. Prof. Dr. Jan Sonntag (MSH), Prof. Frank Böhme (HfMT), co-initiator Prof. Dr. Sebastian Debus (UKE), and John Groves (as an associate partner from the private sector.)

**Translated from the German posting**

[https://www.unserenhochschulen.de/projekte/unseren-hochschulen-2016/gewinner-2016-healing-soundscape.html?tx\\_hkschuelerlogin\\_pi2%5Bantrag%5D=50&tx\\_hkschuelerlogin\\_pi2%5Baction%5D=publicDetail&tx\\_hkschuelerlogin\\_pi2%5Bcontroller%5D=Hschulantrag&cHash=9fe8a2aa88f2d24301c813a329c2309f](https://www.unserenhochschulen.de/projekte/unseren-hochschulen-2016/gewinner-2016-healing-soundscape.html?tx_hkschuelerlogin_pi2%5Bantrag%5D=50&tx_hkschuelerlogin_pi2%5Baction%5D=publicDetail&tx_hkschuelerlogin_pi2%5Bcontroller%5D=Hschulantrag&cHash=9fe8a2aa88f2d24301c813a329c2309f)

GROVES  
SOUND BRANDING