

THESIS FOR THE DEGREE OF LICENTIATE IN PHILOSOPHY  
IN HUMAN TECHNOLOGY DESIGN

# TEXTILE SOUND DESIGN

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## **Abstract**

This thesis aims at developing conceptual and methodological tools in order to adapt sound within the textile design area. Occupational groups working with sound are to a large extent problem driven. Accordingly, textile designers working with sound- affecting properties of textiles concentrate on their dampening qualities. The ambition with this research project is to make suggestions how textile designers can work practically with textile sound design, in a more nuanced way.

The overall aim of the thesis is to develop a vocabulary to make textile designers able to express the sound affecting qualities of textiles in a language full of nuances.

As a starting-point the thesis briefly describes commonly used methods and processes used to describe the expressiveness of a design, followed by a more thoroughly analyze of the textile design process illustrated by a practical example. These studies constitute a foundation to make it possible to see in what way these methods and processes will be affected when sound is added as new design tool. By studies of two sound design models, the first attempts to develop a vocabulary concerning how to describe sound affecting qualities of a textile are developed. Research focusing on language issues, especially on the development of conceptual tools done at the research institute CRESSON, provides descriptive sound concepts, “sound effects”, embracing the interaction between human and his sound environment. These concepts are followed by a model of how to describe just a sound or “sound object” in “itself” (not in relation to anything else), developed by Pierre Schaeffer. These theoretical models have been complemented with empirical studies in form of a survey, named LISTEN. Interviews were performed from a phenomenological perspective. A number of informants were asked to tell about the sound environment and single sounds occurring at their working places. The interviews were interpreted from a phenomenographic perspective. A number of design projects are finally presented as practical examples of different ways to work with textiles and sound.

The theoretical models provided by Schaeffer have been used to make the first systematic attempts to describe sound environments; sounds and textiles sound affecting properties.

Since the model presented by Schaeffer is developed to be used within musical composition the concepts have to be additionally modified to be a useful tool within the textile design area. The thesis presents just the first attempts to use this model. The next step to take in the research project is to adjust the theoretical systems of CRESSON and Schaeffer to suit the special area of textile design. The interactive ideas of a sound-affecting textile will also be a subject of further development.

## **Keywords**

Textile design, Textile sound design, acoustics, The Cresson institute, Pierre Schaeffer, phenomenology, phenomenography, sound absorbing textiles, interactive textile design, sound environment

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