



Sensoaesthetics: Introducing alternative embodied material expressions in textile and fashion

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Abstract

Fashion is primarily a visual ontology consisting of definitions, theory, and methods that are based on visual language. The workshop *Sensoaesthetics: Introducing alternative embodied material expressions* in textile and fashion is a part of a three-year research project, Sonic Fashion (funded by the Swedish Research Council, 2022-2024). The project aims to expand the discourse of fashion by approaching it from a new and very different—sonic—perspective wherein sound is considered not as a negative aspect, but as a potential source of a new theory and facilitator of the evolution of new methods. The proposed workshop aims to (i) introduce participants to experimental inclusive aesthetics and (ii) expand the vocabularies of material definition - analyzing and defining them by using five experiential levels: functional, sensorial, interpretive, affective and performative. The workshop invites participants from a whole host of design fields and people with a visual impairment to co-create together within sensitizing exercises and sonic design prototyping to develop more inclusive ways of designing, defining, and representing textile and fashion artifacts.

CCS Concepts

• : **Human-centered computing - Interaction Design - Interaction design process and methods - Participatory design**; • **Human-centered computing - Accessibility - Empirical studies in accessibility**;

Keywords

sonic fashion, embodied design ideation, expanded vocabularies, experimental aesthetics, social inclusion

ACM Reference Format:

Emilie Giles and Vidmina Stasiulytė. 2025. *Sensoaesthetics: Introducing alternative embodied material expressions in textile and fashion*. In *Nineteenth International Conference on Tangible, Embedded, and Embodied Interaction (TEI '25)*, March 04–07, 2025, Bordeaux / Talence, France. ACM, New York, NY, USA, 7 pages. <https://doi.org/10.1145/3689050.3708328>

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TEI '25, Bordeaux / Talence, France

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ACM ISBN 979-8-4007-1197-8/25/03

<https://doi.org/10.1145/3689050.3708328>

1 Introduction

The workshop on *Sensoaesthetics* focuses on the cultivation of sensibility and inclusivity in Fashion and Textile design education by introducing the experimental aesthetics and expanded vocabularies. The proposed workshop will be based on the previous workshop *Sensoaesthetics: Introducing alternative embodied material expressions* in textile and fashion that was held with a mixed group of participants: fashion and textile students (MA degree) and people with a visual impairment. The first workshop was organized and led by Dr. Emilie Giles and Dr. Vidmina Stasiulytė. The TEI workshop on *Sensoaesthetics* will build on the previous workshop, with both of these contributing to a paper in the future, as well as expanding the community of people participating in and taking this research approach. We hope that the workshop will open up dialogues that carry on beyond the event itself and contribute towards building more practices between academics and designers and people with a visual impairment who are interested in exploring this field as well. To diversify the area of sonic aesthetics would be of benefit to the wider TEI community, and due to the inclusive element of the workshop, it contributes towards areas within interaction design which explore empowerment, other abilities, participatory approaches, creativity and accessibility.

1.1 Detailed proposal description

The proposed workshop will be based on the previous workshop setup: two introductory sensitizing exercises, a prototyping process, and a presentation with discussion afterward. The workshop will start with sensitizing exercise 1, where participants will be defining the materials with blind-folds in pairs. The sensitizing exercise 1 will introduce the 'Sensory Kit' - a collection of material samples that are selected with regards to sonic expression: they make sounds. The exercise is designed to be performed in pairs for encouraging participants to describe the materials without seeing them: one person takes the material, exploring it while blindfolded, and defines it to another person who is not exploring the material, but instead listening to the experience of their partner.

The sensitizing exercise 2 will introduce the samples of sonic textiles that are from the collection of the 'Sonic Palette' that was developed within the research project *Sonic Fashion*. The analytical definition of Sonic Palette samples will be done by focusing on five experiential levels of materials: functional, sensorial, interpretive, affective and performative [6], that later will be used for ideating process and co-designing. The analytical defining process will be documented by participants using a Miro board.

The workshop activities will continue with the introduction of materials/objects making sounds that will be used for prototyping in groups. The prototyping will take up the most time in the workshop,

where the five groups will co-design together to make a sonic prototype. The workshop will round-up with group presentations and a final discussion.

The workshop will take place in Bordeaux in an on-site format, and as we are proposing to invite a group of individuals who have visual impairments, it would seem to be the most accessible and engaging way to run the workshop. The workshop is also very dependent on tangible materials and co-making, and so an in-person workshop is appropriate for this. Participants will be divided into, preferably, 5 groups that will consist of a mixture of people who are sighted and people with a visual impairment. In total the workshop will be held for a maximum of 25 people with mixed abilities. We have already reached out to organizations of people with visual impairments in France. We will be able to provide translation from English to French and vice versa if needed. Assoc. Prof. Anke Brock and Dr. Christophe Jouffrais are invited as co-organizers and collaborators in this studio workshop and will be significant contributors with their knowledge and experience in the field of VIP.

2 Grounding in theory

The research is built on the fusion of different theoretical approaches to textile materials and its experience. The workshop's theoretical framework is a collision of theory of an experimental aesthetics on sonic fashion, inclusive experience of presenting aesthetics, expanded sensory-material vocabularies, and participatory making and co-designing.

2.1 Sonic Fashion

Fashion is primarily a visual ontology consisting of definitions, theory, and methods that are based on visual language. The workshop is linked to a three-year research project *Sonic Fashion* (funded by the Swedish Research Council, 2022-2024) that aims to expand the discourse of fashion by approaching it from a new and very different—sonic—perspective wherein sound is considered not as a negative aspect but as a potential source of a new theory and facilitator of the evolution of new methods. Nevertheless, the research purpose is to facilitate long-term effect—inclusive fashion education that would consider non-visual aesthetics as a part of the education program. The workshop takes the developed theory and foundations from the doctoral research project *Wearing Sound: Foundations for the Sonic Design* [22] that was done by one of the workshop leaders, Vidmina Stasiulytė. When sound is applied in the field of fashion design, it is usually in the context of smart textiles or soft wearables [1], [3], [25] and used to provide an additional property in the form of digital/artificial sound. The embedding of sound-emitting elements in textiles/garments [15], [17], [19], [20] is used in many research projects. Natural sounds (the sounds that are inherent in the materials) are relatively rarely discussed in relation to fashion. In fashion theory sound is generally presented as an additional part of dress, as in the book *Geisha* [2]. In *Dress Sense: Emotional and Sensory Experiences of the Body and Clothes* [5], Welters [26] dedicates a chapter to Greek dress, focusing not only on the visual but also on the sonic. In a chapter entitled 'The Classification System of Dress', Eicher et al. [4] consider sound to be a component of dress. The text focuses on the sonic properties of dress and several examples are provided, relating largely to the

sounds of steps in different footwear and the sounds of the body itself.

Nick Cave's *Soundsuits* [18] is one of the few fashion design projects that explore the natural sounds of clothing. Here, full-body costumes crafted from twigs, wooden sticks, buttons, ceramic figurines, toys, and other objects work as sound generators. *The Dark Room Fashion Show* [8] by Lars Hallnäs, Hanna Landin, Riika Townsend, Marcus Bergman, and Clemens Thornquist proposes the natural sound of a dress as a material for fashion, and explores the interaction between the fields of experimental fashion design and sonic art. It is a live performance centered on a fashion catwalk that is based not on visual but sonic perception. Another example of natural sounds is a series of 11 short videos that explore the natural sounds of clothing—*The Sound of Clothes: Anechoic* [24] by Show Studio. During this project, 11 costumes produced by different fashion brands were selected and recorded in a studio, and this audio was combined with video material of participants dressing in and interacting with pieces of clothing.

To conclude, the literature review of sonic expression in relation to natural sounds in the field of fashion highlighted a lack of investigation into this plentiful, interesting, and original field. The analysis suggested a problematic gap in the field, which contributed to the conceptual framework for suggesting the nonvisual, time-based aspect of the fashion field based on natural sounds. The concept of sonic expression in the fields of fashion and fashion education edges the research towards non-visibility and sound ontology. In our view, we could rethink visibility and its dominance in fashion, as it is an increasingly contested phenomenon. The discourse on Sonic Fashion does not exist, it is a new discipline to consider for the education in the field of fashion. It is an interdisciplinary research project that merges fashion design, sound phenomenology, and performance art into an experimental and unique discipline—Sonic Fashion—while moving towards the field of sonic fashion in order to develop new design methods, alternative materials and propose fundamental knowledge of this particular field.

2.2 Inclusive experience of aesthetics

In textile design education, material expressions tend to be directed toward visual-tactile sensory domains. Yet, materials are perceived by all senses, as the body's experience is mediated through multiple sensory modalities [14]. The phrase 'materials experience' was first coined by Karana et al. [11], who defined it as the experiences that people have with, and through, the materials of a product. In its original description, material experience consists of three experiential components: aesthetic (sensorial) experience (e.g., we find materials cold, smooth, shiny, etc.), experience of meaning (e.g., we think materials are modern, cozy, etc.), and emotional experience (e.g., materials cause us to feel amazed, surprised, bored, etc.). Giaccardi and Karana [6] extended the original definition of 'materials experience' by adding another experiential component on a performative level. Accordingly, they defined four levels of material experience as: sensorial, interpretative (meanings), affective (emotions), and performative. Each of these components of material experience is highly intertwined, subject-, object-, context-, and time dependent attributes. [6]

Within the first workshop on Sensoaesthetics, the workshop organisers, Stasiulytė and Giles, added the fifth experiential level: functional level. This is linked to the physical material description,

and in this case, the sonic textiles are defined through acoustic function and acoustic description. The extended expressiveness of materials with regards to the multisensory, experience-based, interaction-based and time-based expressions adds new ways of how we can explore and define the materials, especially those that are newly fabricated as a Sonic Palette. The previous workshop documentation is presented in the following pages (see Figure 1, Figure 2, Figure 3, Figure 4, Figure 5).

2.3 Expanded sensory-material vocabulary

Language is a way of verbalizing what we sense [9]. The more words we have to describe the world as we experience it, the more distinctions we can make between differences, the more bodies and social groups are articulated. The more you can describe, the more you can sense, the more you can experience the world [9]. As Latour [13] states: “<...> there is a body, meaning a subject; there is a world, meaning objects; and there is an intermediary, meaning a language, that establishes connections between the world and the subject.” [13] Embodied exploration and group co-defining and co-analysing process will result in the expended vocabulary on material expressions. It will encourage to engage in a creative exploration: collective creativity [21] and co-design is seen as a process of joint inquiry and imagination [23] for exploring alternative vocabularies.

2.4 Participatory making and sonic textiles

Within design fields there has been a movement towards researchers designing with participants, not just for them, but with them. Empowerment plays an important part of this as discussed in the work of Hurst and Tobias [10] and Meissner et al. [16]. Participatory making with participants of diverse abilities has been explored increasingly within the field of HCI, but combining this with areas which include textile making has been less explored. Giles

[7] worked with makers who all had a visual impairment to design and create interactive e-textile wall-hangings which conveyed self-expression and personal narrative, whilst Kenning and Treadaway [12] have worked with dementia patients and their loved ones/careers to co-create blankets that had personalised elements in them which could be explored by the maker. Both of these examples of textile-based research use smart textiles to bring the work to life and to give interactive engagement which focuses on sound and touch. There are visual elements too, but the other senses play a big role in the work. Both Kenning and Treadaway and Giles take a participatory approach which aims for a sense of empowerment for the maker/user at the center of the work. The workshop proposed by Stasiulytė and Giles also takes a participatory approach and builds on the under-explored area of working with people with a visual impairment to be their own maker with textiles and sounds.

3 Materials to be explored

The materials that will be used during the workshop are: (1) Sensory Kit – the collected sounding materials for the sensitizing exercise (provided by the workshop leaders, see: Figure 6, (2) Sonic Palette – samples from the sonic textile collection (provided by the workshop leaders, see: Figure 7, (3) collection of sounding materials for prototyping (provided by the workshop leaders/brought by participants). Regarding the later, participants will be invited to bring any simple everyday used material that they consider interesting in sonic aspect, such as paper, metal sponges, wooden sticks, etc.

4 Learning Goals

The proposed workshop aims to (i) introduce participants to experiential inclusive aesthetics for designing and representing textile and fashion artifacts and (ii) expand the vocabularies of material definition - analyzing and defining them by using five experiential levels: functional, sensorial, performative, affective and interpretive.

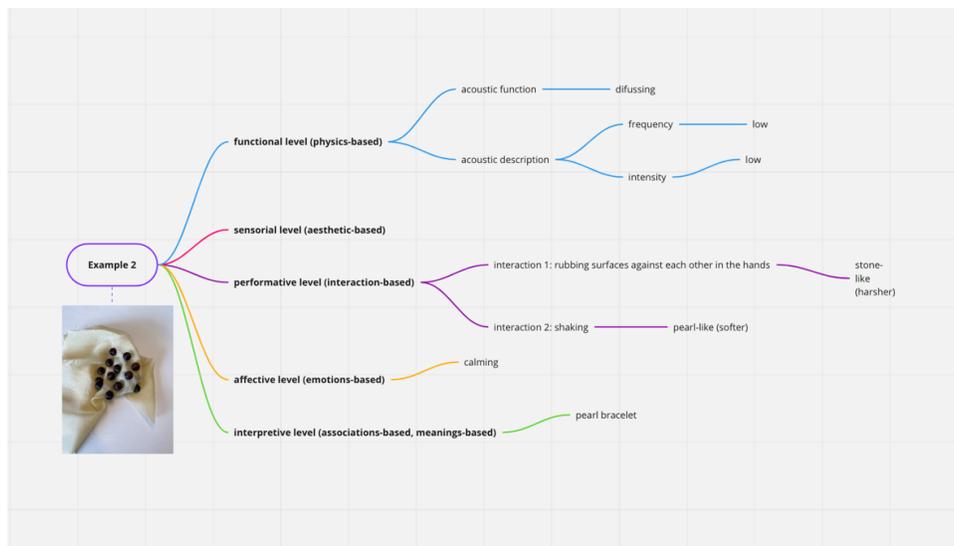


Figure 1: Exploring and defining sonic textiles using different experiential levels within the previous workshop at the Swedish School of Textiles. Photograph by Vidmina Stasiulytė.

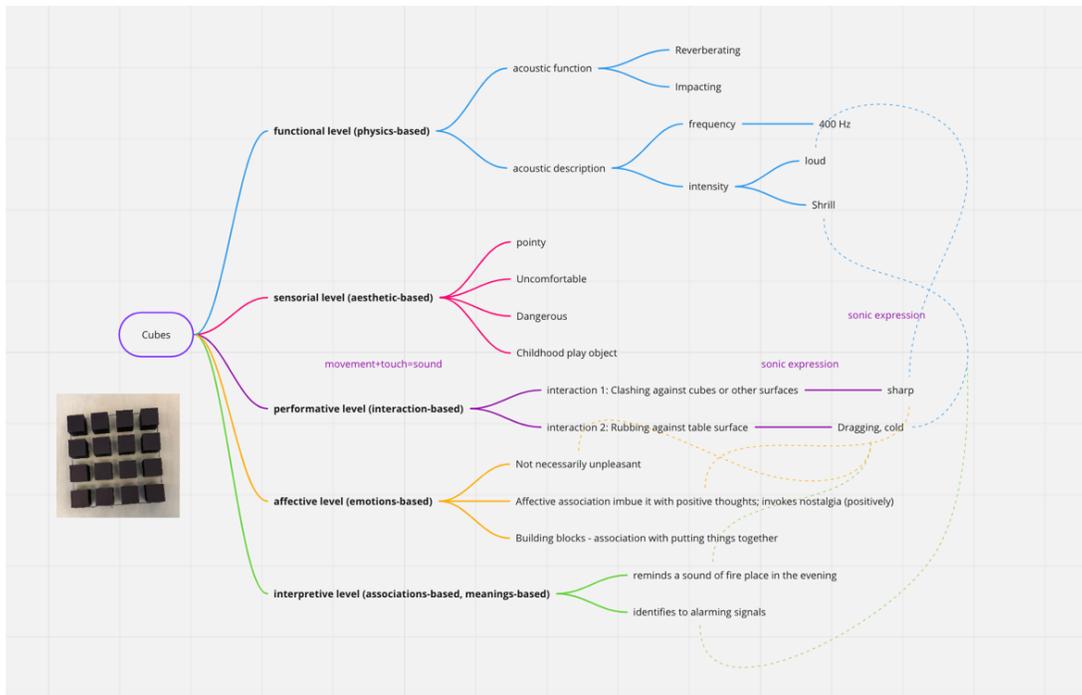


Figure 2: Exploring and defining sonic textiles using different experiential levels within the previous workshop at the Swedish School of Textiles. Photograph by Vidmina Stasiulytė.

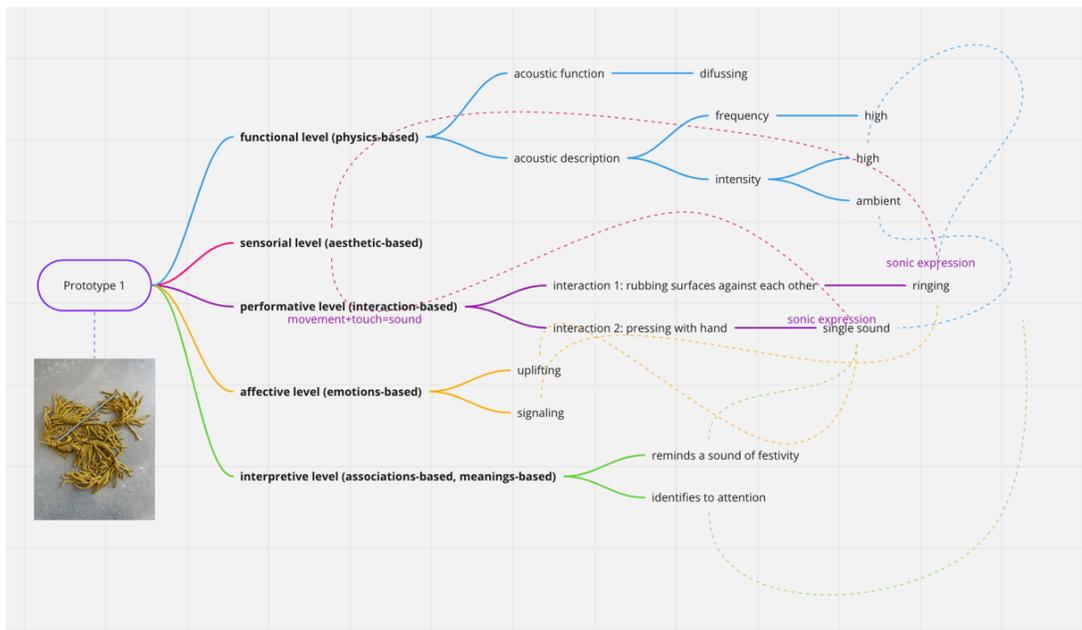


Figure 3: Designing and defining sonic design prototypes using different experiential levels within the previous workshop at the Swedish School of Textiles. Photograph by Vidmina Stasiulytė.

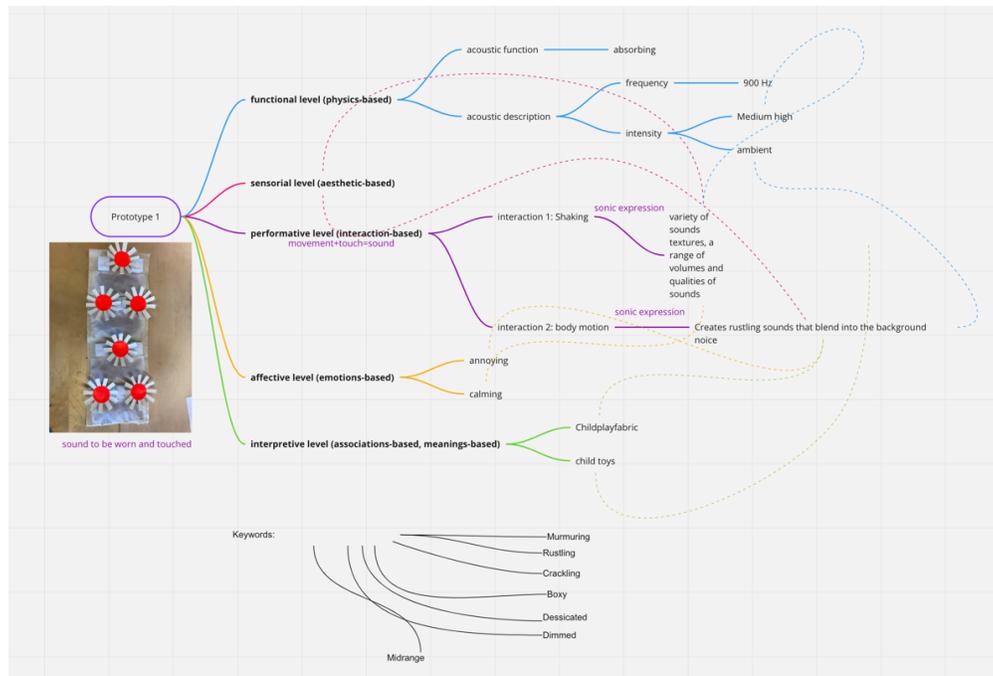


Figure 4: Designing and defining sonic design prototypes using different experiential levels within the previous workshop at the Swedish School of Textiles. Photograph by Vidmina Stasiulytė



Figure 5: Results – sonic design prototypes – from the previous workshop at the Swedish School of Textiles. Photograph by Vidmina Stasiulytė.

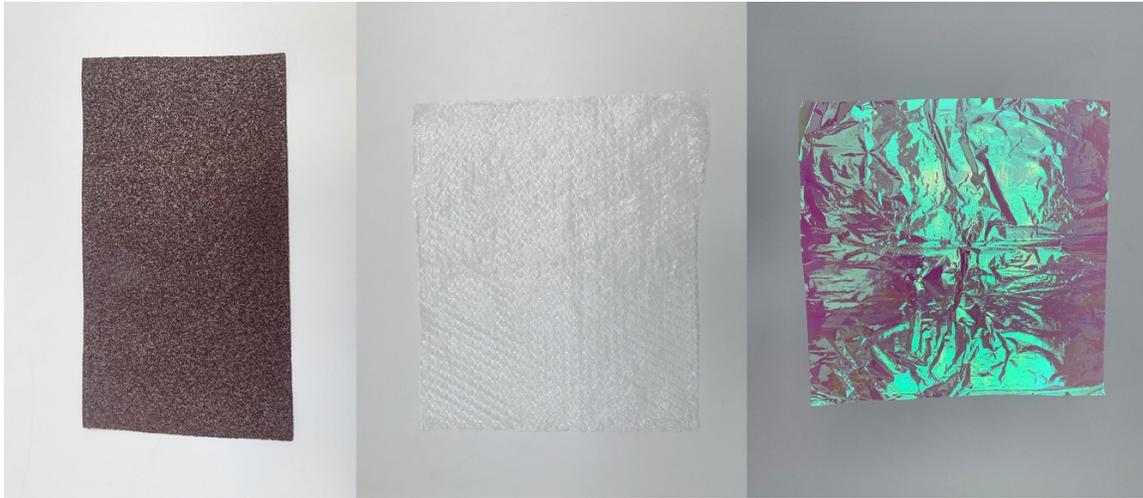


Figure 6: Examples of materials making sound from the Sensory Kit. Photograph by Vidmina Stasiulytė.



Figure 7: Sonic textile examples from the Sonic Palette. Photograph by Vidmina Stasiulytė.

5 Schedule

9:00 am - 9:45 am Introductions;
 9:45 am – 10:15 am Activity 1/Sensitizing exercise;
 10:15 am – 10:30 am Coffee break;
 10:30 am – 11:00 am Activity 2/Exploring 3D printed samples with blind-folds;
 11:00 am – 11:30 am Introducing materials and questions, dividing into groups;
 12:00 pm – 1:00 pm Groups begin sketching/prototyping, etc.;
 1:00 pm – 2:00 pm Lunch break;
 2:00 pm – 4:00 pm Prototyping and preparing for presentations;
 4:00 pm – 5:00 pm Presenting projects.

Acknowledgments

The research is funded by the Swedish Research Council, grant no: 2021-01399.

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