

Vibrotactility: Exploring and Prototyping the Aesthetics and Technology of Vibrotactility

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Abstract : This transdisciplinary research weaves together an aesthetic perspective with a technical one to develop human sensitivity for vibration and construct flexible, wearable devices that are miniature, lightweight, and energy efficient. By applying methods from artistic research, performative arts, audio science, nanotechnology, and interaction design, we created working prototypes with actuators that were specifically positioned in various places on the body. The vibrotactile prototypes were tested by our research team, design students, and people with deafblindness and blindness, each with different intentions. Some tests supported connoisseurship for vibrotactile musical expression. Others aimed for precise navigational instructions. Our results and discussion concern problems in establishing standards for vibrotactility because standards minimize diversity and narrow possible ways vibration can be experienced. Human bodies vary significantly in 'where' vibrotactile signals can be sensed and 'how' they awaken emotions. We encourage others to embrace the dynamic exchange between new haptic technology and aesthetic complexity.

Keywords : aesthetics, vibration, music, interaction design, deafblindness

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