Experiential Design – Rethinking relations between people, objects and environments

• Paper / Proposal Title:
Touch-Emotion lexicon enabling design for wellbeing

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• Abstract (300 words):
Emotional wellbeing plays a key part in the all-round health and wellbeing of an individual. Emotions occur as a response to external or internal stimuli; when memory is evoked or when the individual perceives situations or objects through their basic senses of vision, hearing, smell, taste and touch. Research on product/ material experience suggests that often the interaction of the hand with the surface of a material evokes a multi-sensory experience connected to the physical properties of a material. This could, along with sensations and perceptions, also affect the emotional experience. This study focuses on haptic sensations, proposing the development of an emotion lexicon designed to capture the range of emotions evoked through the touch of various materials, with a view on how materials can be approached in a design process for better wellbeing. The collection of experimental materials used in this study represent a range of everyday textures loosely categorised into sensorial groups with bi-polar attributes of smooth vs. rough, dry vs. sticky, warm vs. cold and soft vs. hard. Selected
materials were presented to participants to touch whilst hidden from their view. Based on the dimensional model of emotion in psychology and subjective responses to each material, it was found that rough and sticky materials elicited unpleasant/ activated emotions whereas smooth and dry materials elicited pleasant/ deactivated emotions. Hard and cold materials elicited unpleasant/ deactivated emotions while soft and warm materials elicited pleasant/ deactivated emotions. It was interesting to note subjective emotional adjectives describing each material when the sense of touch was isolated. This highly significant and interdisciplinary data in regard to emotional categorisation of materials and development of Touch-Emotion lexicon is relevant to a variety of diverse disciplines of psychology, design, material science and health.

• Author(s) Biography (200 words each):

Author:

Ms. Rashmita Bardalai
Position: PhD Candidate
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Rashmita’s research focuses on using intelligent materials to alleviate negative emotions as a way of enhancing the quality of life. Her interests lie in emotions, materials and haptic surfaces and how environment and product design help shape these experiences. Rashmita’s career as a textile designer has encompassed human centered design involving craft research and analysis of micro-macro industries, fusion of traditional craft with modern materials and miscellany of material explorations in old and new manufacturing techniques. As an industrial automotive textile designer, she has developed novel functional fabrics for the automotive industry, researched into new yarns and material finishes, was involved in collaborative research and design projects, involved in measurement and evaluation of performance attributes, liaised and collaborated with local and overseas cross-disciplinary teams and researched global trend forecasting and translation. Her expertise and industry experience cover functional design, textile materials, and design industry in Australia. Her background, skills and experience in both a human centered/ social background as well as the industrial and automotive field has led her to this point in her career - a research project that investigates the touch of materials with emotion.

Co-author

Professor Olga Troynikov
Olga's research informs her teaching, is applied and interdisciplinary, focused on the nexus of functional materials, intelligent garments and human-centred engineering. This field of research uniquely combines functional materials science and technology, materials engineering, human physiology and ergonomics. Much of Olga's research is undertaken in cross-disciplinary collaboration with RMIT colleagues and research platforms, as well as with national and international institutions such as RWTH Aachen University, Germany; Technical University of Munich; the University of Sheffield; The Norwegian University of Science and Technology, as well as other leading institutions. Olga collaborates with public and industry partners in Australia and internationally on technology-based ventures, resulting in rapid application and commercialisation of research outcomes. She is skilled at solving complex problems in diverse industrial landscapes, especially in technology-rich industries linked to materials and health. Her expertise and extensive academic, government and industry networks help her to anticipate future directions in disruptive technologies and establish best practice in their adoption and commercialisation.

Co-author

Dr. Robin Laycock
Position: Lecturer
College / Portfolio: Applied Health Cluster
School / Department: Psychology

Dr Laycock's main research focus is on understanding the neural mechanisms underlying visual attention and object recognition, and also in how these may be impaired in some neurodevelopmental and psychiatric conditions (e.g., dyslexia, autism spectrum disorders, schizophrenia/schizotypy).

Dr Laycock has also looked more recently at how anxiety and acute stress can influence perception, as well as exploring the relationship between conscious and non-conscious visual processing (e.g., what role do direct sub-cortical pathways to the amygdala contribute to non-conscious processing in those on the autism spectrum?)