

FROM PERCEPTUAL TO SOCIAL: FURNITURE, INTERACTIVITY AND SOCIAL DYNAMICS

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ABSTRACT

As information and communication technologies become increasingly ubiquitous, designers face a myriad of new design opportunities. Consequently, users engage with both new but also known artifacts with augmented functionalities. One category of known artifacts is furniture with embedded electronics.

Furniture has unique characteristics. For example, we interact in different ways with electronic hand-held objects and on-screen interfaces, furniture and spaces simply because the scales are different and different sensory stimuli may be engaged. Furniture is not necessarily personalized and frequently exists in public spaces. We often share the use of objects such as furniture, personalizing them temporarily. The use of furniture, in a way, brings us to a halt; we can be stuck (with someone else) while sitting at a table. Unlike consumer electronics products, furniture is inherently stable: while a broken cell phone is useless, dysfunctional electronics in a table do not necessarily impede the table's core use. Finally, furniture can engage us beyond perception, which this proposal illustrates through numerous examples.

Existing interactive furniture, more specifically functional objects with *simple affordances*, is often designed with superficial definitions of "interaction" because they only engage the users at the perceptual level (i.e. visual, tactile or acoustic). However, the potential exists to engage users beyond perception, in meaningful interactions that encourage a variety of emotional and social responses that range from positive to negative (anxiety, discovery, laughter, intimacy, competition, etc.). I will demonstrate my claim by:

1) designing and building five examples of tables with which users interact along different points of the perceptual – social continuum, and 2) obtaining user feedback about the interactive nature of their experience with this new genre of furniture.

Observations of human-human interaction at tables "as they are" (without electronics) will precede the designs of augmented tables. The observations will attempt to reveal surface-level (perceptual) phenomena when tables are in use. Next, I will include selected existing and relevant examples of my work to illustrate different kinds of interaction on the perceptual – social continuum. The findings from this study will inform the concept design phase. Five of the concept designs of augmented tables will be selected and fully developed. Each of them will be user-tested.

In the conclusion of my dissertation I will generalize the findings from the table projects to other artifacts in our environments.