

Thinkering for Design and Emotions Research

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Abstract: Prototyping not only helps demonstrate new concepts and show design vision but also aids quick turn-around concept validation and usability tests. This workshop is about investigating “Thinkering” as a methodology to support design research in emotions. As we all know, designers generally *think* while *doing* and *talk* through their *concepts* - be it sketches, physical models or virtual interaction visualizations. So *Thinkering* (tinkering while thinking) is a method that suggests using this innate as well as learned aptitude of designers for design research. This workshop proposes use of *Thinkering* as a possible method to explore the opportunities and challenges.

Key words: *Thinkering, User Experience Research methods, Prototyping, Research through Design.*

1. Introduction

As we all know, designers generally *think* while *doing* and *talk* through their *concepts* - be it sketches, physical models or virtual interaction visualizations [8]. *Thinkering* is a method that suggests using this innate as well as learned behavior of designers. We hope to enable designers with a method that will enable them to carry out design research which will involve quick prototyping and study of emotional reactions from consumers to the demonstrated design concepts. We are specifically targeting product or service *Thinkering* in this workshop such that the utility of this method can be tested and hopefully established. We want to get the academic, design practitioners and students’ perspectives on this topic by providing a venue in which to share stories or perspectives from existing practices and collaboratively create the Thinkering process. This we hope will provide clues as to what framework Thinkering should have in order to be part of design process as well as research.

2. Role of Prototyping and Experience Research

Research into the emotional responses of people to various products and services and the frameworks for understanding these experiences has been widely researched. We believe that focus on just the product (or service) and its users, elicits just interaction issues. These contribute to what is popularly called usability research. Adding the element of understanding emotions that occur before, during and after the said interaction contribute to what is known to us as user experience research. Norman in his book Emotional Design [9] refers to three types of emotional responses when it comes to interaction experience with a product. He calls them the Visceral, Behavioral and the Reflective emotional response. According to Forlizzi and Battarbee [1, 4], there are three types of experiences that can occur when one interacts with a product or service, namely Experience, An Experience and a Co-Experience. Their ‘experience’ is similar to the visceral emotional reaction as described by Norman [12] and occurs when one is interacting with a product or service and is automated and continuous. An

Experience, according to Forlizzi et al, has a start and an end point and inspires a behavioral and emotional change when the experience is occurring and/or when it is being retold. Co-Experience [1] on the other hand occurs in a social context where two or more people might be interacting with a product or service and co-constructing meaning and thus emotional experience. This framework is quite useful to analyze and understand emotions evoked by design of products or services. But what is eluding is how to go about design research that will help create these emotions in the product (or service) currently under design process. Desmet [2, 3] and Hassenzahl [6, 7, 8] on the other hand, suggest ways of designing products to affect emotional responses and how to measure those emotional responses. They too talk about responses ‘during’ as well as ‘after’ the product experience. Most of the times, these academic researches use extensive prototyping and large field or in-lab studies with users, which takes quite a bit of time and effort. Both of which are a luxury that design practitioners simply cannot afford.

3. Why Thinkering?

Thinkering, coined by Michael Ondaatje in his novel *The English Patient* [13], is about generating, developing, and iterating concepts in the mind while tinkering with something physical (doing a physical act). This word since then has become an ideal means to describe a designer’s way of doing things [8]. The literature shows that a lot of work has been done and is also ongoing in terms of emotions in user experience research. But there still appears to be a need for actionable methodology and/or a prescriptive process which will help everyday designers to make progress on pragmatic projects. Designers need to meet their obligations to clients and usually in a short time. Hence, we strongly believe that Thinkering is one of the tools and/or a method that will help designers. Thinkering, by virtue of being intuitive, can be used for quick creation of artifacts which can then be used for quick evaluation. Furthermore, this process could easily be done iteratively yielding in better product/service designs. Along with physical products this method can also be useful for design of interaction in services. Along with pragmatic industry use, *Thinkering* can be equally useful for academic design research where various protocols could be used to elicit the designers’ way of thinking.

4. Goal of Workshop

In this workshop, we are interested in bringing together design researchers, design practitioners, and other professionals from related fields of HCI, social science, computer science etc...to explore opportunities and challenges in using Thinkering as a method for design research for products and/or services. This workshop will provide a venue in which to share stories or perspectives from existing practices and an opportunity to discuss and create *Thinkering* method and process.

The workshop aims to address the following questions:

- What role does Thinkering play in design process?
- Where in design research process can Thinkering come to play?
- How can Thinkering be employed as a research mechanism to understand emotions and study user experiences?
- What methods, tools, and artifacts enable Thinkering in design research?

At the end of the workshop, we hope to be able to parse on to the community:

- Understanding of different practices around Thinkering that exist today

- Opportunities and challenges of using Thinkering as a method for design research in emotions
- Directions for framework for Thinkering as a method
- Initiation of a multidisciplinary research community focused on Thinkering as a design research method
- Also, possibly a research agenda for future work in Thinkering and Design & Emotions Research.

5. Structure of Workshop

5.1. Prior to the Workshop

Workshop organizers plan to invite participants to submit position papers describing their interest in the workshop. These position papers can be of three types:

- Design case/story involving Thinkering.
- Innovative Thinkering methods/tools
- Perspective on frameworks for Thinkering

The call for proposals will be distributed through relevant mailing lists. Organizers will also set up and maintain a website through which the accepted papers will be made available on-line. From the submissions, organizers will choose between 10-12 workshop participants. All participants will be asked to read the accepted papers and discuss the papers before the workshop through an online [moderated] discussion forum.

5.2. At the Workshop

The one day workshop will be divided into four parts:

{Morning}

1. *Introduction*

Individual Presentation of Positions/Stories

Break

2. *Discussion Session*

Research Methods

Identification of opportunities and challenges

Application for Design and Emotion

Lunch

{Afternoon}

3. *Discussion of Results*

Summarization of discussions

Break

4. *Develop a shared understanding*

Innovation and development of **Thinkering** methodology

Directions for moving forward

End of Workshop

5.3. After the Workshop

The organizers plan to present the results of the workshop through three portals:

1. Poster – the results of the workshop will be presented to the conference attendees via a poster

2. Through the web – the results of the workshop will be published on the website after the conference
3. The organizers will also work towards publishing the results in international journals/publications

6. About the Organizers

Santosh Basapur – Santosh is a Senior Staff HCI Researcher in the Experiences Research Lab of Motorola's Applied Research Center. His current research is in next generation TV user experiences including social communication and plain old TV entertainment. He is also interested in design and development of applications/services that promote healthcare and wellness programs. Santosh is a member of SIGCHI, HFES and IXDA. He has published in peer-reviewed papers in international conferences like HFES, CHI, EuroITV, IASDR, HCII, and Pervasive Health.

Anijo Mathew – Anijo is an Assistant Professor at the Institute of Design (ID) at Illinois Institute of Technology (IIT) in Chicago. Anijo's research interests include interactive (computer mediated) spaces, immersive/responsive environments, environmental behavior, prototyping and HCI in the design process. His research falls within two broad categories - one a scholarship of pedagogy: looking at various methods and design mechanisms for the process of design, and the other a scholarship of research: evaluating new semantic appropriations of the built environment (place) as enabled by new technologies.

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