

# Designing and testing for emotion

## Lesson Learnt

- High levels of informational load for users triggers subjective evaluations, which are like to be the feelings of agitation or embarrassment rather than the feeling of calmness. Decide which you are designing for and adjust the information load accordingly.
- When users consciously alter their emotions, especially during a think aloud, it gives them leverage over problem solving and aids task completion. For example, "in order to try and understand whether the interface contained a specific feature, one user articulated confusion and annoyance."
- Cognitive artifacts augment the performance of our minds for certain tasks. Similarly, affective artifacts are artifacts which represent or elicit emotions that assist with product interaction. For example, is a user's concern about his new phone is that "It takes so long to find a number, the phone is humiliating to use", then the affective artifact is competitive pride. Performing regular social tasks should be elegant.
- Designing for envy involves giving your interface sleek non-obvious controls, that are also so simple they are impossible to forget. This gives the owner control and know-how that the other stake holders don't have, but wish they did.
- If designing for control and power, is desirable, it can be done by replicating the interaction between sliding a battery pack in a power drill, or sliding a clip into a handgun.
- Discovering the emotional context that a product is designed can lead to insights. For example, if you are designing a music player to be used while exercise, the user's focus is on their body. Therefore, make the interface tightly coupled with the body, installing it in the clothes and using gestures for control.
- We are, as designers, pieces of the knowledge creation process. Other pieces of this process are the designs we create and the communication we exchange. The better an organization uses its designers depends on the efficiency, the effectiveness and the competence of the designers.

## Bibliography with Summaries

Essay	Summary
Zimmerman, John. <i>Exploring the Role of Emotion in the Interaction Design of Digital Music Players</i> , Designing Pleasurable Products and Interfaces, 2003	This paper describes an exercise conducted with three separate teams of student's build three different types of digital music players. One of the stereotypes was a digital player design to "invoke envy" to one the stereo's they designed, by making the controls non obvious so the user feels in control. Another handheld digital player, works with special hardware. It uses is rod shaped memory cartridges that the user must slide into the player, like inserting a battery into a driver drill, giving the user the feeling of power and control.
Oh, W. and Khong, P. W. <i>Competitive Advantage through Pleasurable Products</i> , Designing Pleasurable Products And Interfaces, 2003	Designing pleasurable products not only creates products with a high market demand, but also, by the very structure of the designing for human factors, increases working productivity and satisfaction. This paper explains how the knowledge creation process creates more satisfactory roles for workers and how introducing pleasurable products into the design process affects better design.
Spillers, F. <i>Emotion as a Cognitive Artifact and the Design Implications for Products that are Perceived as Pleasurable</i> , Design and Pleasure, 2004	Spiller observes the way that emotions manifest themselves in users and their environments. These manifestations of emotions are what he calls emotional artifacts. Through observing these emotional artifacts, designers can discover indications about the reception and potential success of their design.
Katov, M., Nomura, N. and Kuniaki, I. <i>The Visual Information Load as a Parameter for Designing Pleasurable Environment</i> , Designing Pleasurable Products And Interfaces, 2003	Information load parameter, which is proposed in this paper, measure of how much meaning is represented by the pixels in the photograph. They generate artificial photographs of a room and adjust the number of sofas, rug patterns, etc. to create pictures of scenes with different information loads. Then they ask, "Which interior is more interesting? Which interior is more comfortable? Which interior is more relaxing?" The interiors in the middle were the most calming.
De Lera, E., Garreta, M. <i>Ten Emotion Heuristics: Guidelines for assessing the user's affective dimension easily and cost-effectively</i> , 2007.	(excerpts from the paper): "Most interface evaluation efforts focus on cognitive and subjective aspects, neglecting the affective dimension (...) Feedback surveys or questionnaires provide only partial and often unreliable data, especially considering that users tend to give a positive evaluation to avoid blaming the person who developed the application or simply to minimize the time spent on the evaluation (...) The analysis of this affective dimension in empirical user-centered design (UCD) methods helps us ensure that our users will be engaged and motivated while using our systems." <b>Ten emotion heuristics</b> "This observational technique [the one proposed in this paper] does not replace the current and most common methods used during a UCD process, but complements the objective and subjective data gathered (...) facial expressions are central in the area of emotional research (...) using facial expressions as a tool to evaluate the emotional dimension is a cross-cultural tool. (...) We correlated the emotional cues identified with an emotional state and ensuring that these could be easily identified and measured during a user evaluation. A total of 10 emotional cues were selected. Better than any body parts, our faces reveal emotions, opinions, and moods (...) [the ten emotion heuristics proposed by the paper are:] 1. Frowning (...) can be a sign of a necessity to concentrate, displeasure or of perceived lack of clarity. 2. Brow Raising (...) should also be considered a negative expressive reaction (...) is a sign of uncertainty, disbelief, surprise and exasperation 3. Gazing Away (...) from the screen may be perceived as a sign of deception. 4. Smiling (...) is a sign of satisfaction. The user may have encountered an element of joy during the evaluation process. 5. Compressing the Lip (...) should be perceived as a sign of frustration and confusion (...) reflects anxious feelings, nervousness, and emotional concerns. 6. Moving the Mouth (...) is associated with a sign of being lost and of uncertainty. 7. Expressing Vocally (...) as well as the volume of the expression, the tone or quality of the expression may be signs of frustration or deception. 8. Hand Touching the Face (...) is a sign of confusion and uncertainty, generally a sign of the user being lost or tired. 9. Drawing Back on the Chair (...) negative or refusing emotions. By drawing back the chair, he / she [the user] may be showing a desire to get away from the present situation. 10. (...) Leaning forward and showing a sunken chest may be a sign of depression and frustration with the task at hand (...) the user might be encountering difficulties but instead of showing refusal, leaning forward is a sign of attentiveness, of "getting closer".