

# User Experience over Time

## Overview

The way we experience and evaluate interactive products develops over time. An exploratory study aimed at understanding how users form evaluative judgments during the first experiences with a product as well as after four weeks of use. *Goodness*, an evaluative judgment related to the overall satisfaction with the product, was largely formed on the basis of pragmatic aspects (i.e. utility and usability) during the first experiences; after four weeks of use identification (i.e. what the products expresses about its owner) became a dominant aspect of how good a product is. Surprisingly, *beauty* judgments were largely affected by stimulation (e.g. novelty) during the first experiences. Over time stimulation lost its power to make the product beautiful in the users' eyes.

## The study

- 10 subjects (4 female)
- uWand, a novel pointing device for Interactive TV context
- 4 weeks of use
- 2 measurements, 1<sup>st</sup> week—4<sup>th</sup> week
- Attrakdiff 2 Questionnaire
  - *Pragmatic* (e.g. simple, clear, predictable)
  - *Stimulation* (e.g. exciting, original, innovative)
  - *Identification* (e.g. presentable, classy, professional)

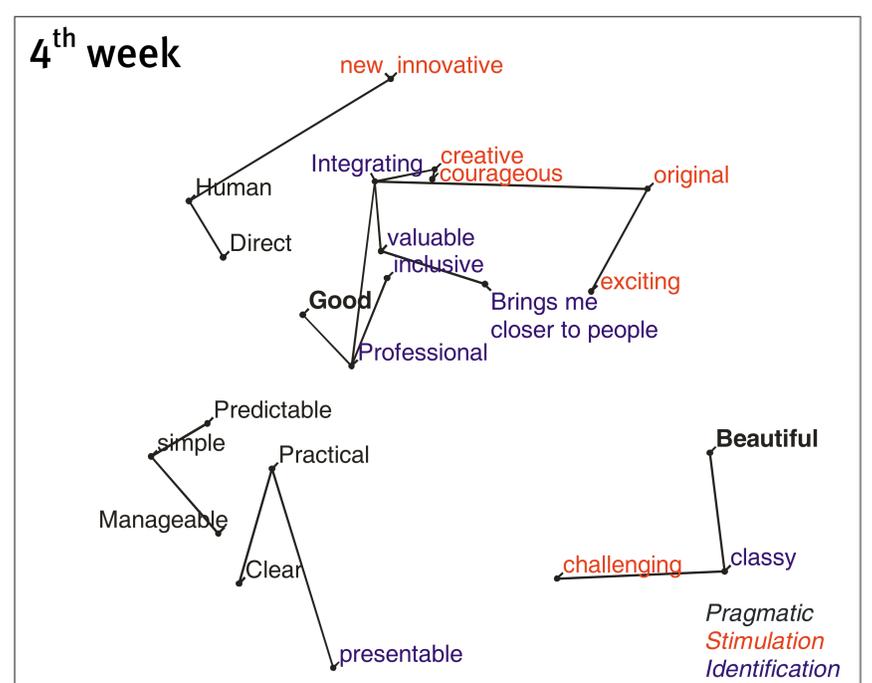
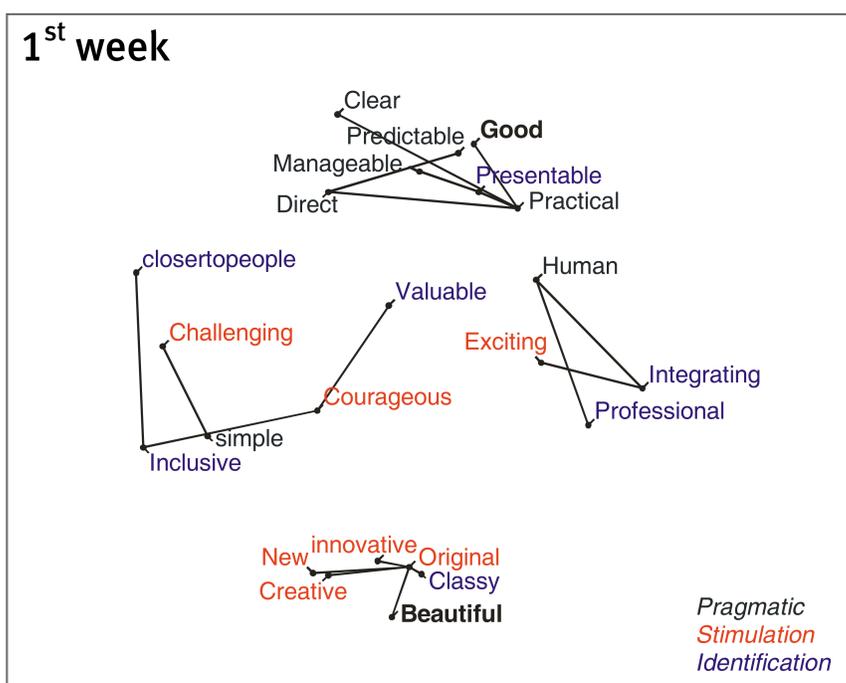


Figure 1 2D view on the 3-dimensional visualization of distances between quality attributes, beauty and goodness. Users' perceptions during the 1<sup>st</sup> week of use (left) and after 4 weeks of use (right).

**Analysis** Distances  $D_{ij} = 1 - |R_{ij}|$  between the individual attributes  $i$  and  $j$  was derived from the correlation  $R_{ij}$  between the ratings on the two attributes. The obtained distances were subsequently visualized in three dimensions (Stress value  $S=0.19$  1<sup>st</sup> week;  $S=0.15$  4<sup>th</sup> week) using the Multidimensional Scaling tool XGms. Hierarchical clustering (with minimum variance) was applied to the predicted distances in the three-dimensional space.

**Conclusion** As far as goodness judgments are concerned, we partially replicated Hassenzahl's (2004) results. During the first experiences pragmatic aspects were the most prominent determinants of goodness. Here, users are still exploring the functionality of the product, trying out new things and experiencing usability problems. As people get used to using the product they learn to handle usability

problems; at the same time they restrain themselves only to part of the product's functionality that is most attractive to them. The value of the product is now derived on a different basis, being ownership-based rather than usage-based. Social aspects (i.e. identification) became more prominent here.

For beauty judgments however, the results seemed more divergent. While Hassenzahl (2004) found identification to be the major determinant of beauty judgments, we found stimulation to be even more prominent than identification in the first experiences.

The question remains: is beauty solely an appearance-based judgment, largely affected by the products' ability to communicate a favorable image about its owner, as Hassenzahl (2004) suggested, or does it encompass other aspects of the products, e.g. its perceived novelty or a stimulating interaction?