>BACKGROUND<
PERSPECTIVE ON UX

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AGENDA

Background

Master Thesis:
Enriched Evaluation - Comparative UX Evaluation in Product Development

- + Objectives
- + Building Blocks
- + Evaluation Framework
- + Method
- + Pilot Study
- + Discussion

OBJECTIVES OF THESIS

1. Literature review of user experience research and related topics in the area of human computer interaction, design and consumer research.

2. Development of a comparative evaluation approach of user experience

   2.1 Consolidation of parallel theories to develop an evaluation framework.

   2.2 Development of a method to assess user experience in product development.

   2.3 Implementation in a pilot study

BUILDING BLOCKS

USER EXPERIENCE EVALUATION

+ User experience evaluation can not account for all possible influencing factors in product development –> temporal and contextual aspects.

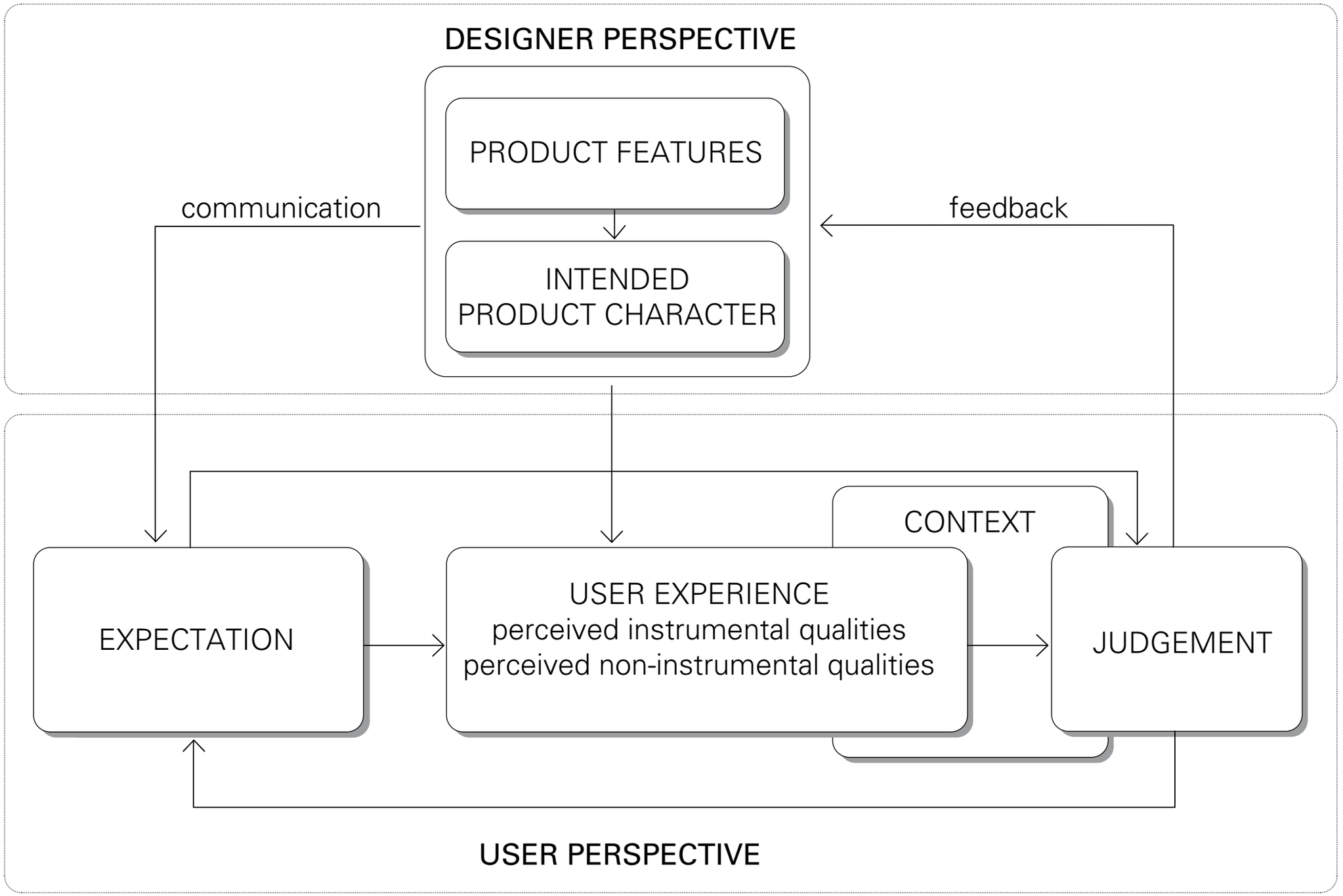
+ Assessment of perceived instrumental and non-instrumental qualities.
–reductionist approach needed to make UX manageable and measurable

+ Quantitative methods allow objective assessment and comparison of subjective data.
– lightweight methods needed for fast paced development processes.

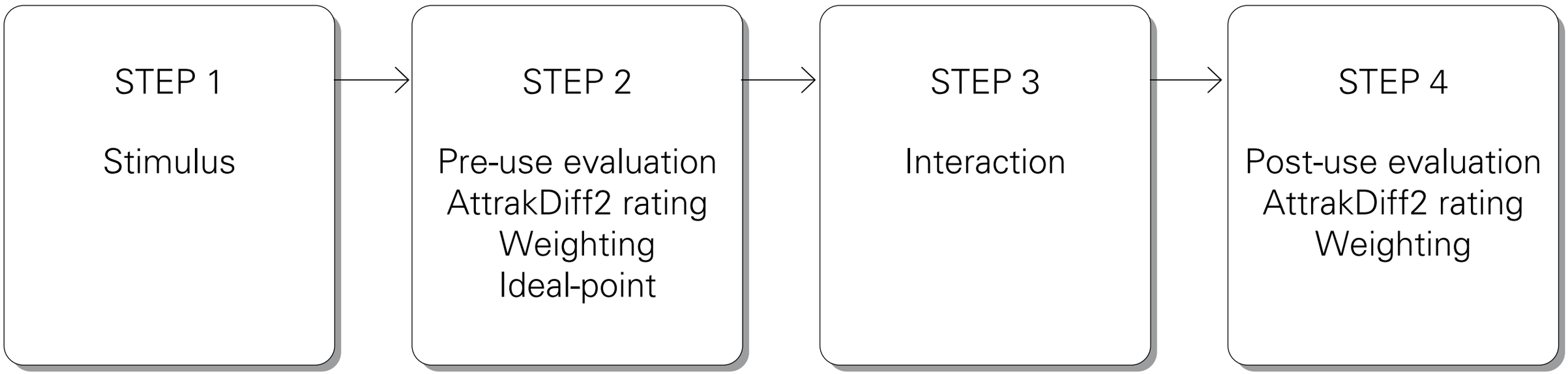
+ Expectations as reference for users‘ judgements on product performance.
—> Expectancy-Disconfirmation model

+ Attitude change as indicator for user experience –> integration of findings from consumer behaviour theory.

EVALUATION FRAMEWORK



METHOD

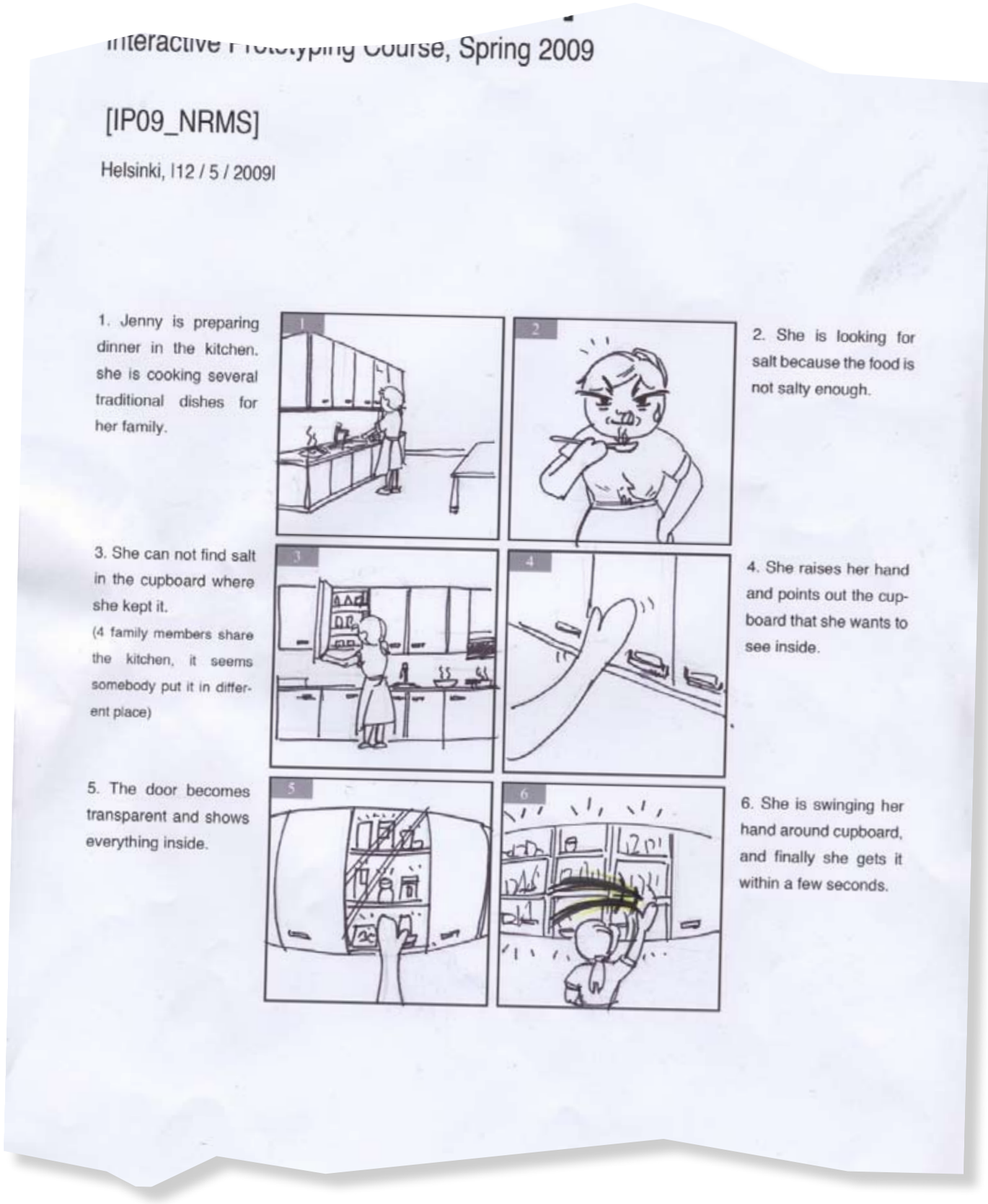

STEP 1
Stimulus
STEP 2
Pre-use evaluation
AttrakDiff2 rating
Weighting
Ideal-point
STEP 3
Interaction
STEP 4
Post-use evaluation
AttrakDiff2 rating
Weighting

METHOD

STEP 1: STIMULUS

+ Usage scenario to illustrate the concept to the user

+ Elicitation of expectations towards the product.



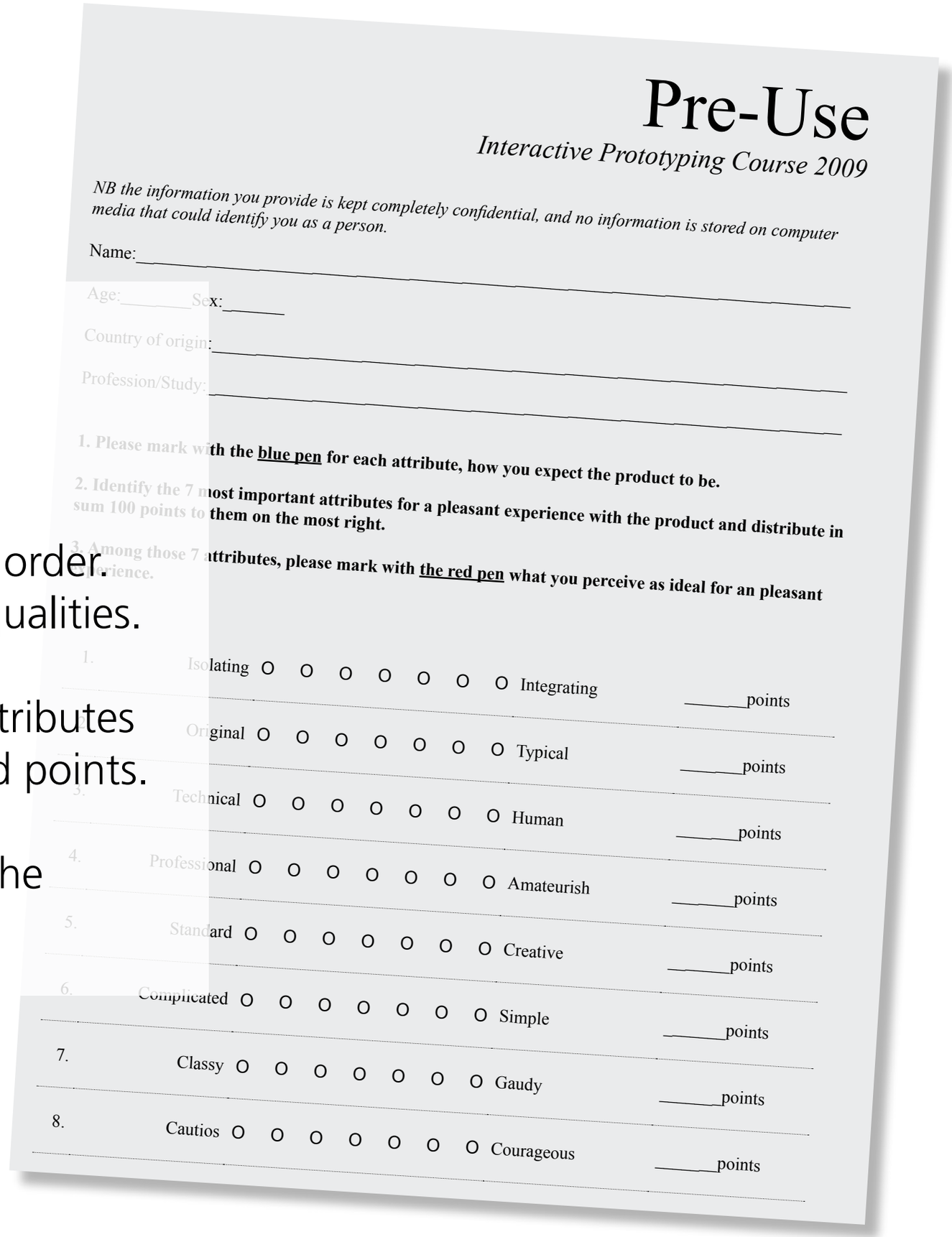
METHOD

STEP 2: PRE-USE EVALUATION

+ Product evaluation based on AttrakDiff2 questionnaire (Hassenzahl et. al 2003).
  - 21 semantic differentials in randomized order.
  - Assessment of pragmatic and hedonic qualities.

+ Identification of the seven most salient attributes and distribution of a total of 100 hundred points.

+ Assessment of the “Ideal-point” among the identified attributes.



Pre-Use

Interactive Prototyping Course 2009

NB the information you provide is kept completely confidential, and no information is stored on computer media that could identify you as a person.

Name:_____

Age:_____Sex:_____

Country of origin:_____

Profession/Study:_____

1. Please mark with the blue pen for each attribute, how you expect the product to be.

2. Identify the 7 most important attributes for a pleasant experience with the product and distribute in sum 100 points to them on the most right.

3. Among those 7 attributes, please mark with the red pen what you perceive as ideal for an pleasant experience.

1.	Isolating O O O O O O O	Integrating	_____points
2.	Original O O O O O O O	Typical	_____points
3.	Technical O O O O O O O	Human	_____points
4.	Professional O O O O O O O	Amateurish	_____points
5.	Standard O O O O O O O	Creative	_____points
6.	Complicated O O O O O O O	Simple	_____points
7.	Classy O O O O O O O	Gaudy	_____points
8.	Cautios O O O O O O O	Courageous	_____points

METHOD

HEDONIC AND PRAGMATIC QUALITY (Hassenzahl 2003)

+ Pragmatic quality: functionality (i.e utility), and access (i.e. usability)

+ Hedonic quality:
  - *Hedonic quality identification:* expression of self through physical objects. Self-expressive function is socially motivated –> basic domain of human motives.
  - Hedonic Quality Stimulation: Products incorporate stimulating qualities that support users in fulfiling psychological needs (i.e. proliferation of knowledge and development)

METHOD

STEP 3: INTERACTION

+ User interacts with the product and completes a set of tasks.

STEP 4: POST-USE EVALUATION

+ AttrakDiff2 rating

+ Identification of the seven most salient attributes and distribution of a total of 100 hundred points

PILOT STUDY

PROTOTYPES

H!Mug

Morph

Smart Cupboard

FlopSticks

PILOT STUDY

PARTICIPANTS

+ Overall 34 participants (15 male, 19 female)
+ Median age: 25
+ Majority students from TaiK (28)
+ 20 questionnaires fully completed
+ Participants received no compensation
+ Sample size differed among evaluated prototypes: H!Mug n=4; Morph n=8; Smart Cupboard n=3; FlopSticks n=4)

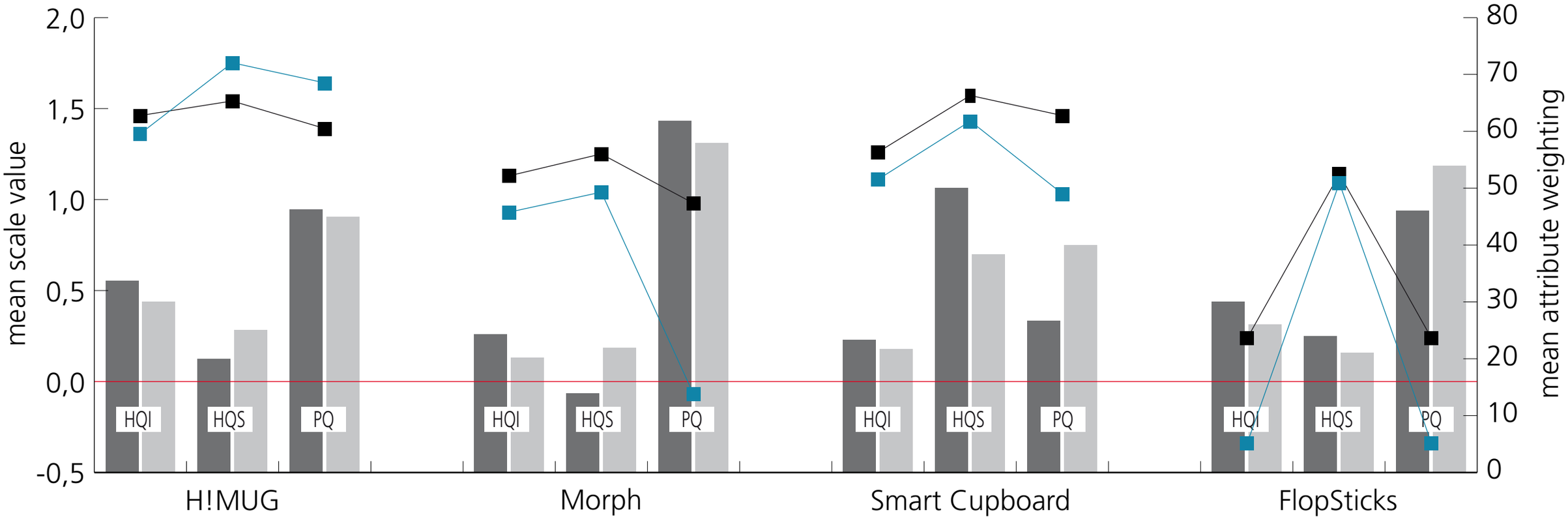
PILOT STUDY

UX VALUE

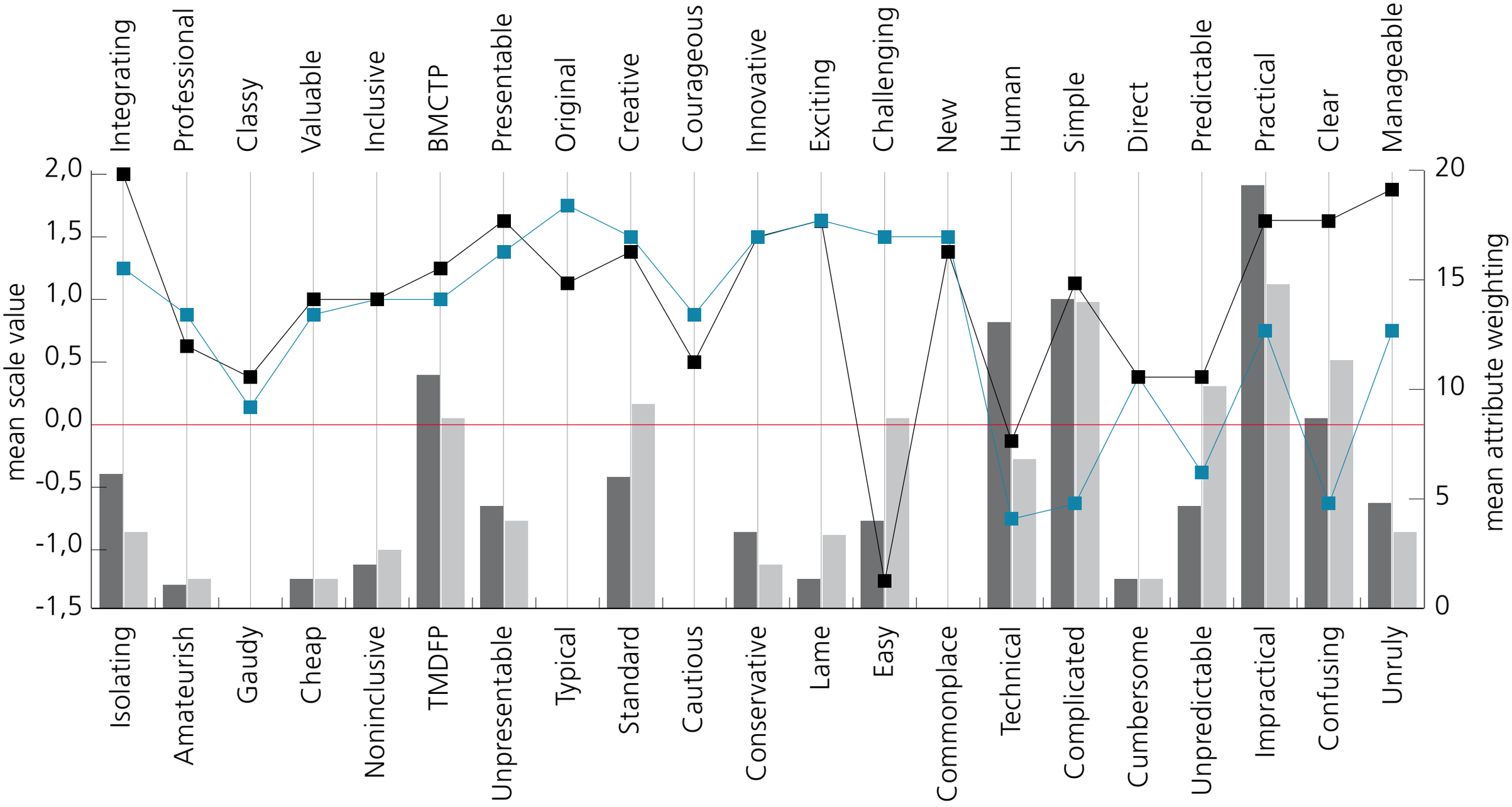
	H!Mug	Morph	Smart Cupboard	Flopsticks
Pre HQI	51,83	45,47	40,67	82,71
Post HQI	49,29	41,64	40,86	86,83
Pre HQS	29,29	24,28	71,43	44,57
Post HQS	31,25	42,97	60,24	40,2
Pre PQ	74,33	124,85	41,14	126,83
Post PQ	61,07	178,14	78,86	180,43
Overall Pre use	**155,45**	**194,6**	**153,24**	**254,11**
Overall Post use	**141,61**	**262,75**	**179,95**	**307,46**
UX value	**13,84**	**-68,14**	**-26,71**	**-53,35**

PILOT STUDY

RESULTS



PILOT STUDY


Integrating
Professional
Classy
Valuable
Inclusive
BMCTP
Presentable
Original
Creative
Courageous
Innovative
Exciting
Challenging
New
Human
Simple
Direct
Predictable
Practical
Clear
Manageable
2,0
1,5
1,0
0,5
0,0
-0,5
-1,0
-1,5
mean scale value
20
15
10
5
0
mean attribute weight
Isolating
Amateurish
Gaudy
Cheap
Noninclusive
TMDFP
Unpresentable
Typical
Standard
Cautious
Conservative
Lame
Easy
Commonplace
Technical
Complicated
Cumbersome
Unpredictable
Impractical
Confusing
Unruly

DISCUSSION

+ Universal metric allows direct comparison, independent of the product domain.

+ Semantic differentials need to be readdressed in further studies.

+ Limitation on preselected dimensions —> can not replace further evaluation methods.

+ Ideal-point approach in future to be left out to reduce amount of tasks.

+ Weighting of dimensions dependent on use context?

+ Empowerment of the user in the development process.

+ Role of stimulus on expectations and retrospective judgements
  –> adjustment of marketing communication.