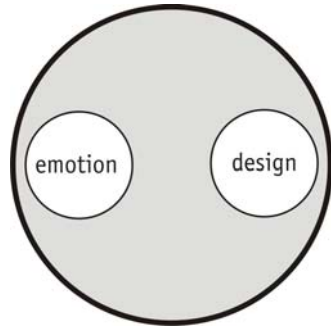


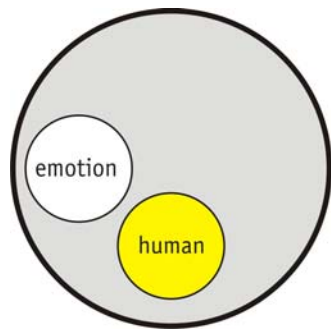
TU Delft



pieter desmet - delft university of technology
department of industrial design



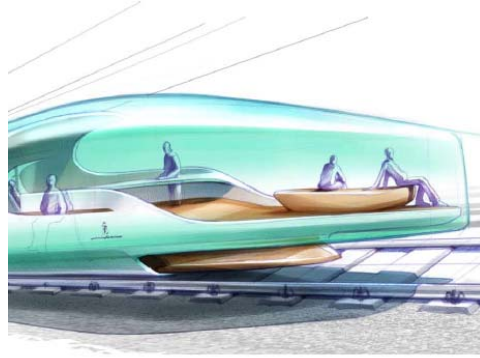
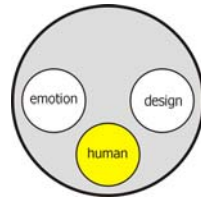
Emotion is part of human nature.



Emotion is part of human nature.

Although we tend to believe that we experience emotions (only) in response to significant events in our lives, in reality we are constantly in some emotional state.

In many – if not most – of these daily emotions, there is some involvement of a designed product / service / environment.



Emotion is Well-being

The effect of the daily experienced pleasant and unpleasant emotions outweighs the effects of seemingly important factors like age, gender, education, beauty, health and material wealth.

In fact, these emotions are, besides general life satisfaction, the main determinants of subjective well-being



Emotion is Motivation

emotions move us:
they initiate behaviour and motivate
decisions - also those involved in
consumer behaviour.



Emotion is Motivation

affective responses strongly
influence

- purchase intent
- price willingness
- in-store purchase behavior
- post-purchase satisfaction
- brand relationships
- re-purchase decisions



Emotion is Subjective

Emotions are subjective:

As there are no one-to-one relationships between design, the emotional impact of a product can never be predicted from the product design alone.

And yet,

Emotions somehow also seem lawful because we do share some emotional responses.



Pleasure Approach

Patrick Jordan (2000)

Four sources of product pleasure:

- Physio pleasure
- Psycho pleasure
- Socio pleasure
- Ideo pleasure



Pleasure Approach

Patrick Jordan (2000)

physio-pleasure

pleasures directly derived from the sensory organs (such as touch, taste, and smell).

example

a mobile phone can generate physio-pleasure because of its soft touch and elegant appearance.



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enjoyment derived from relationships with others. This type of pleasure is relevant for those products that facilitate social interactions.

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products that attract comments (like a piece of jewelry), or act as a focal point for social gatherings (like a coffee machine).



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is related to people's cognitive reactions and has to do with the cognitive demands of using products.

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a text processor that is easy to operate provides a higher level of psycho-pleasure than one that is cumbersome and illogical



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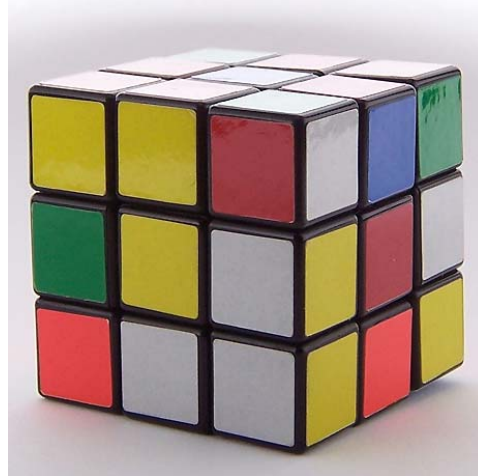
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Pleasure Approach

Patrick Jordan (2000)

ideo-pleasure

is related with the values that the products embody.

example

a product made from bio-degradable materials, for example, might be seen as embodying the value of environmental responsibility.



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Products can be a source of pleasure

However, pleasure as a concept is too narrow to describe the wide variety of emotions that can be experienced in response to consumer products.

- Inspired by aesthetic technology



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- Inspired by aesthetic technology
- Melancholy in response to childhood teddy bear



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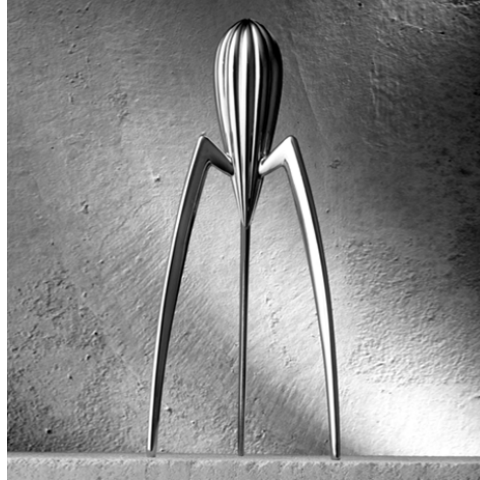
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- Inspired by aesthetic technology
- Melancholy in response to childhood teddy bear
- Thrill of riding a motorcycle
- Irritation for non-usability – delight for cultural value



Measuring Emotions

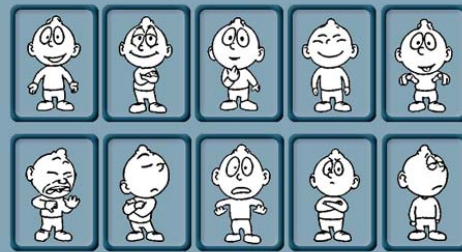
Only self report is suitable for measuring the subtle and mixed emotions elicited by product design

PrEmo

fourteen emotions are represented by animated characters.

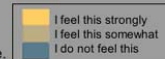
respondents use scales to report to what extent they feel each of these fourteen emotions.

- measures product relevant emotions.
- language & culture independent.



Use the characters to report your feelings about the service (taste and presentation). Click on a character to rate it. You have to rate all 10 characters.

Use the three colours to report to what extent you feel the feeling expressed by the character with your feeling towards the service.



Design application.
Design for emotional consistency

participants

40 Dutch women, head of household

stimuli

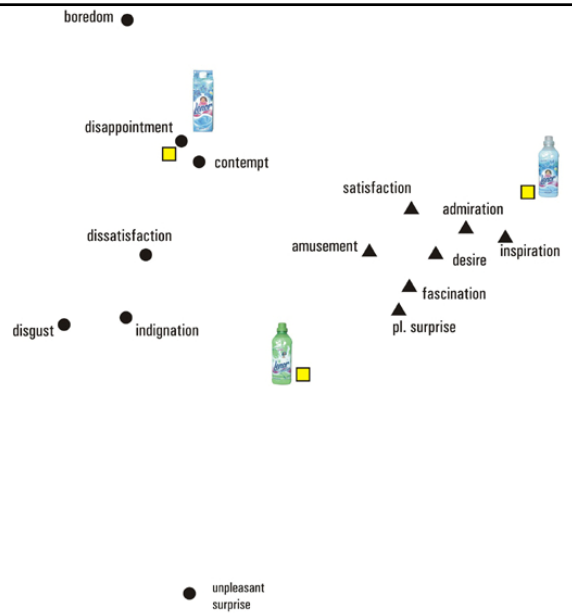
three fabric conditioner packages

question

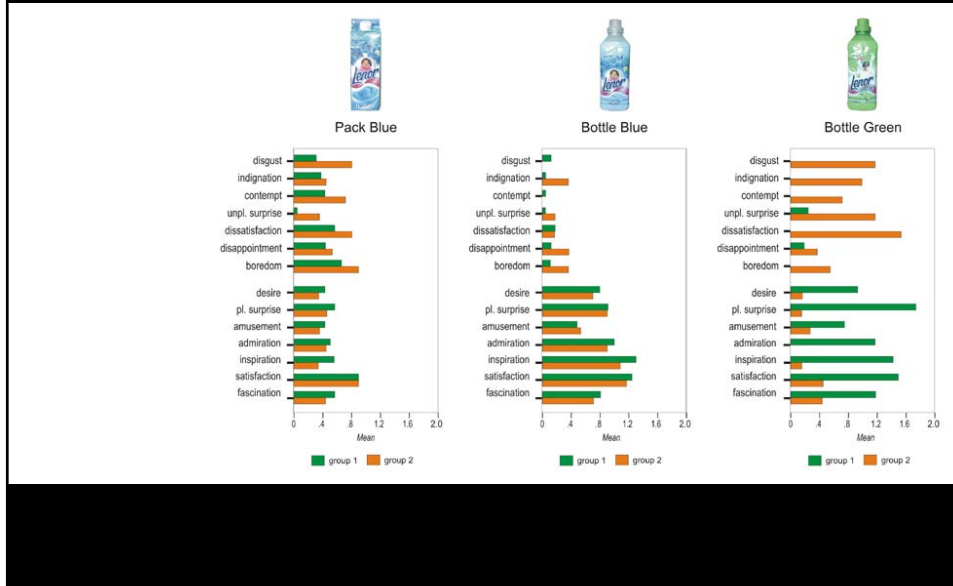
what is the emotional impact of the blue and green bottle as compared to the response to the blue pack?



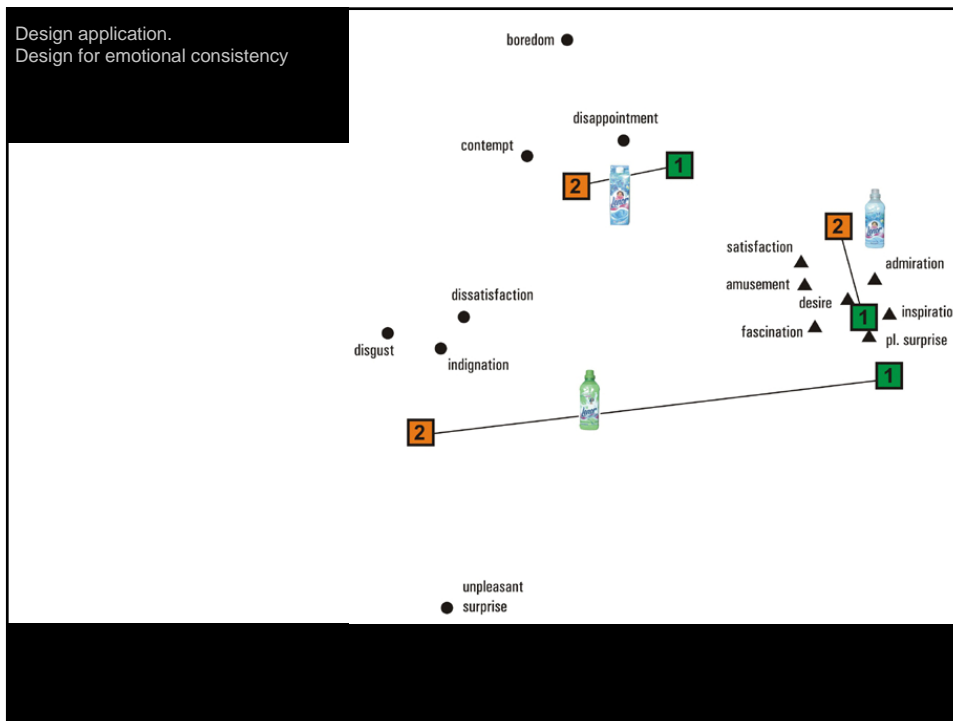
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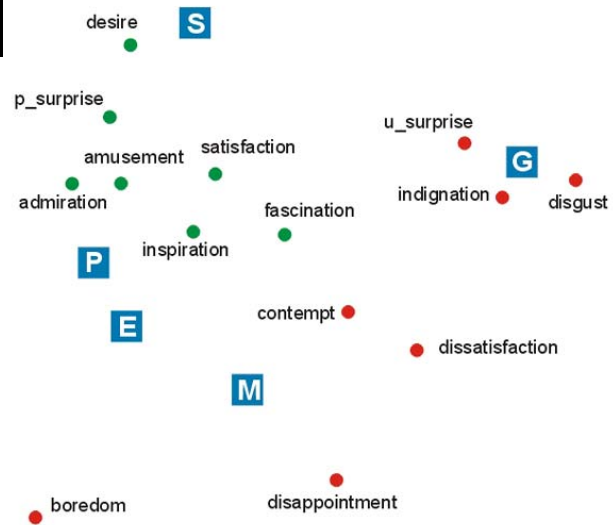
five fabric conditioner fragrances

research questions

can PrEmo discriminate responses to fragrances?
which of the fragrances is most inspirational?



Design application.
Design for emotional consistency



What is an emotion?

We all experience emotions; but can we define it?



What is an emotion?

Emotion is a compounded phenomenon:

- Subjective feeling*
- Expression*
- Physical arousal*
- Action tendency*

None of the elements is, but together they are, an emotion.



What is an emotion?

“the felt tendency toward anything intuitively appraised as good (beneficial), or away from anything intuitively appraised as bad (harmful).“

Magda Arnold (1960).

- Motivation
- Evaluation



Motivation

Cognition

Understanding the world.

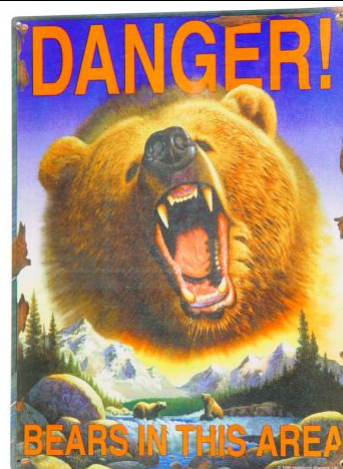
Emotion

Reacting to the world.

Emotions have an adaptive function.

Action tendency:

Every emotion has a behavioural component that helps us to survive.



Motivation

Cognition

Understanding the world.

Emotion

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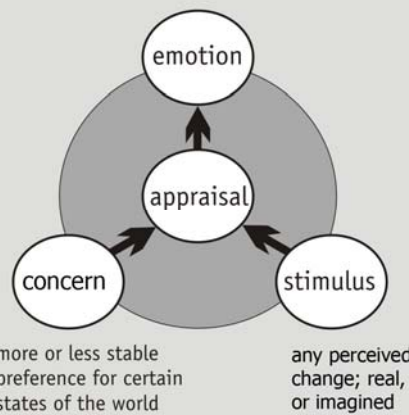
or: that helps us to guide, protect, or fulfill our concerns



Evaluation: each emotion is the outcome of an appraisal, that is, a sense evaluation of the event's significance for the person's well-being.

Emotions are not elicited by events but by the relational meaning of these events.

Appraisal connects events to concerns: events only elicit emotions if they are appraised as relevant for one's concerns.



Product appraisal

Three levels of human concerns

goals (event focus)
what we would like to achieve or see happen.



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how we expect things and people to behave.



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Seven to seventeen...
DAISY will make it a Christmas to remember

Whether you're just starting out... or great... Model 100 shoots 170 pellets. In 1/10, there's no... Model 104 Steep-Crest has steel pump action... 400 lbs. About \$14.95... 600 lbs. About \$7.95

Product appraisal

Three levels of human concerns

goals (event focus)
what we would like to achieve or see happen.

standards (behavior focus)
how we expect things and people to behave.

attitudes (object focus)
dispositional likings for sensorial stimulations or ideas.



Product appraisal

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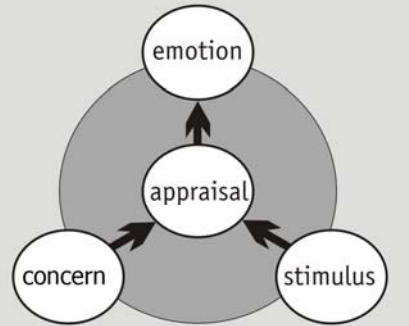
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how we expect things and people to behave.

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Product appraisal

Three product stimulus levels



more or less stable preference for certain states of the world

any perceived change; real, or imagined

Product appraisal

Three product stimulus levels

perceiving the product
seeing, touching, smelling, tasting products.



Product appraisal

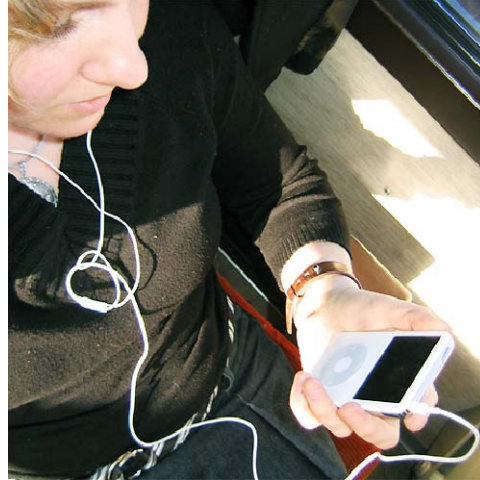
Three product stimulus levels

perceiving the product

seeing, touching, smelling, tasting products.

using the product

action-reaction episodes involved in using products (behaviour of the product).



Product appraisal

Three product stimulus levels

perceiving the product

seeing, touching, smelling, tasting products.

using the product


action-reaction episodes involved in using products (behaviour of the product).

consequence of using the product

consequences of using or owning products.



Nine sources of product emotion



	attitudes	goals	standards
product	Enjoying the rounded shape of the product	Desiring for owning a route navigator of a particular brand	Admiring the designer for making an innovative design
usage	Enjoying the gestures required for selecting a route	Frustrated for not being able to connect music player	Being angry with the product for not finding signal
consequence	Enjoying the sense of freedom experienced because of the device	Satisfied by being able to reach destination efficiently	Being proud of my new established flexibility

Nine sources of product emotion

Appraisal of 'intrinsic pleasantness'

Stimulus:
product as object

Concern:
attitude (I like elegance)

Emotion:
delighted by the fragile quality of a porcelain vase.



Nine sources of product emotion

Appraisal of 'motive consistency'

Stimulus:
product usage

Concern:
goal (I want to store a telephone number)

Emotion:
frustrated when getting confused by complicated interfaces.



Nine sources of product emotion

Appraisal of 'legitimacy'

Stimulus:
consequence of usage

Concern:
standard (camping should be a natural experience)

Emotion:
contempt for people who clutter together on the camping side.



Position: because the process of emotion is lawful, designers can influence the emotional impact of their designs

Concern type	Children	Parents
Standards: wheelchairs should	<ul style="list-style-type: none"> - not be childish - be comfortable 	<ul style="list-style-type: none"> - not be stigmatising - enable sport activities
Attitudes: I like wheelchairs that look	<ul style="list-style-type: none"> - cheerful - colourful - that is not prototypical - that is fast and sportive 	<ul style="list-style-type: none"> - stylish - clear and simple - to be light and manoeuvrable - to be tough
Goals: I want a wheelchair	<ul style="list-style-type: none"> - that make me look independent - that can be driven without hindrance 	<ul style="list-style-type: none"> - that facilitates comfortable pushing - to be able to easily pass obstructions - that can be transported easily

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Design for emotion

Understanding how the users' goals, standards, and attitudes resonate with the object, using the object, and the consequences of using the object.

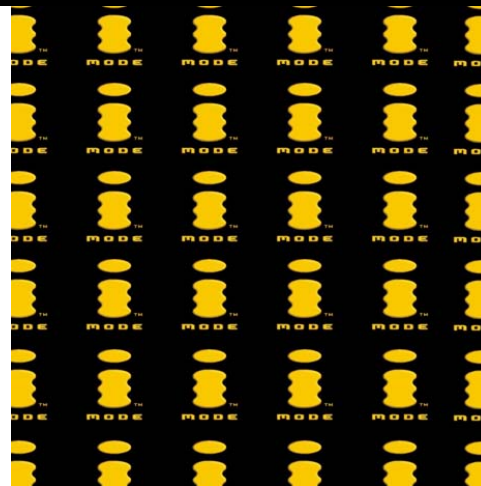


Mobile phone design application

Telecom i-mode

Design a mobile telephone that:

Creates a visual identity for the i-mode service
&
Evokes WOW



Mobile phone design application
Step 1: emotional benchmark

participants

Dutch young people (20 - 30 of age)
own mobile telephone
use for calling > 5
use for SMS > 2

stimuli

eight mobile phones
new to the market
expected to elicit wow



Mobile phone design application
Step 1: emotional benchmark

Mean ratings; WOW index

								
surprise	2.54	2.23	2.37	1.86	1.89	1.66	1.66	1.46
desire	2.03	2.20	1.57	1.57	1.40	1.46	1.29	1.26
fascination	2.14	2.06	1.86	1.63	1.51	1.51	1.40	1.29
WOW	2.32	2.16	1.93	1.69	1.60	1.54	1.45	1.34

Mobile phone design application
Step 2: appraisal profiles

participants

10 Dutch students
did not participate in Study 1
own mobile telephone
use for calling > 5
use for sms > 2

method

group discussion

stimuli

mobile phones
correspondence map

goals - event related
"what I would like to see happen"



standards - behavior related
"how people and things should behave"



attitudes - object related
"what (aspects of objects) I like"

Mobile phone design application
Step 2: appraisal profiles

> concern themes

I want a telephone that is
manageable
practical
reliable

a telephone should be
of high quality
logical
consistent

I like telephones that are
multifaceted
unique
luxurious

goals - event related
"what I would like to see happen"



standards - behavior related
"how people and things should behave"



attitudes - object related
"what (aspects of objects) I like"

Mobile phone design application
Step 3: new design

- > product character
- > design exploration
- > iterative modeling
- > final concept development
- > prototype building



Mobile phone design application
Step 3: new design
Formulating product character as a first step in the design process



**impetuous
self-willed**



**benificent
sophisticated**



**sincere
balanced**



Mobile phone design application
Step 3: new design



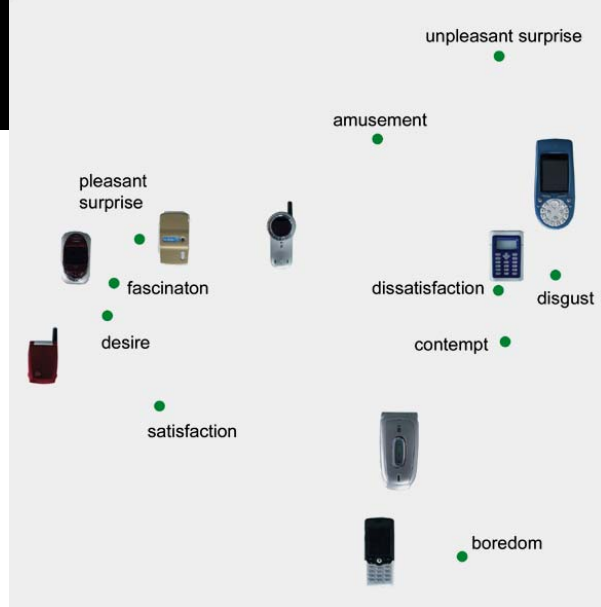
Mobile phone design application
Step 4: evaluation study

Stimuli

- Eight mobile phones
- visual prototypes
- six models from Study 1
- two new models



Mobile phone design application
Step 4: evaluation study



Mobile phone design application
Step 4: evaluation study

Mean ratings; WOW index

								
surprise	2.57	2.40	2.07	1.97	1.57	1.80	1.53	1.37
desire	2.03	1.97	2.17	1.83	1.50	1.27	1.40	1.50
fascination	1.87	2.17	1.93	1.83	1.47	1.37	1.37	1.40
WOW	2.16	2.15	2.06	1.88	1.51	1.48	1.43	1.42

Design for Emotion

Using a structured approach to 'design for emotion' facilitates discussion and enables the design team to support their design decisions.



Design for Emotion

understand, master, and play with the various layers of emotional meaning drawn from the product.



Design for Emotion

understand, master, and play with the various layers of emotional meaning drawn from the product.

In experiencing art, paradoxical emotions are the ones that we seek, that is positive and negative emotions simultaneously.

Note that it is not assumed that to serve humans' well-being, designers should create products that elicit *only* pleasant emotions. Instead, it can be rewarding to investigate the possibilities of designing paradoxical emotions because this may result in products that are unique, innovative, rich, challenging – and, therefore, desirable.

