

Defining User Experience

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User Experience Definition

A person's perceptions and responses that result from the use and/or anticipated use of a product, system or service

ISO FDIS 9241-210 (2009)

Contents



Why UX

Why UX is important for companies

What is UX

Different viewpoints to UX

How to get hold on the vague UX

UX in practice

Designing and evaluating UX (basics)



Eras of Livelihood



Hunting, gathering



Agriculture



Industry



Information



Experience

- Based on Rolf Jensen, Dream company

Experience

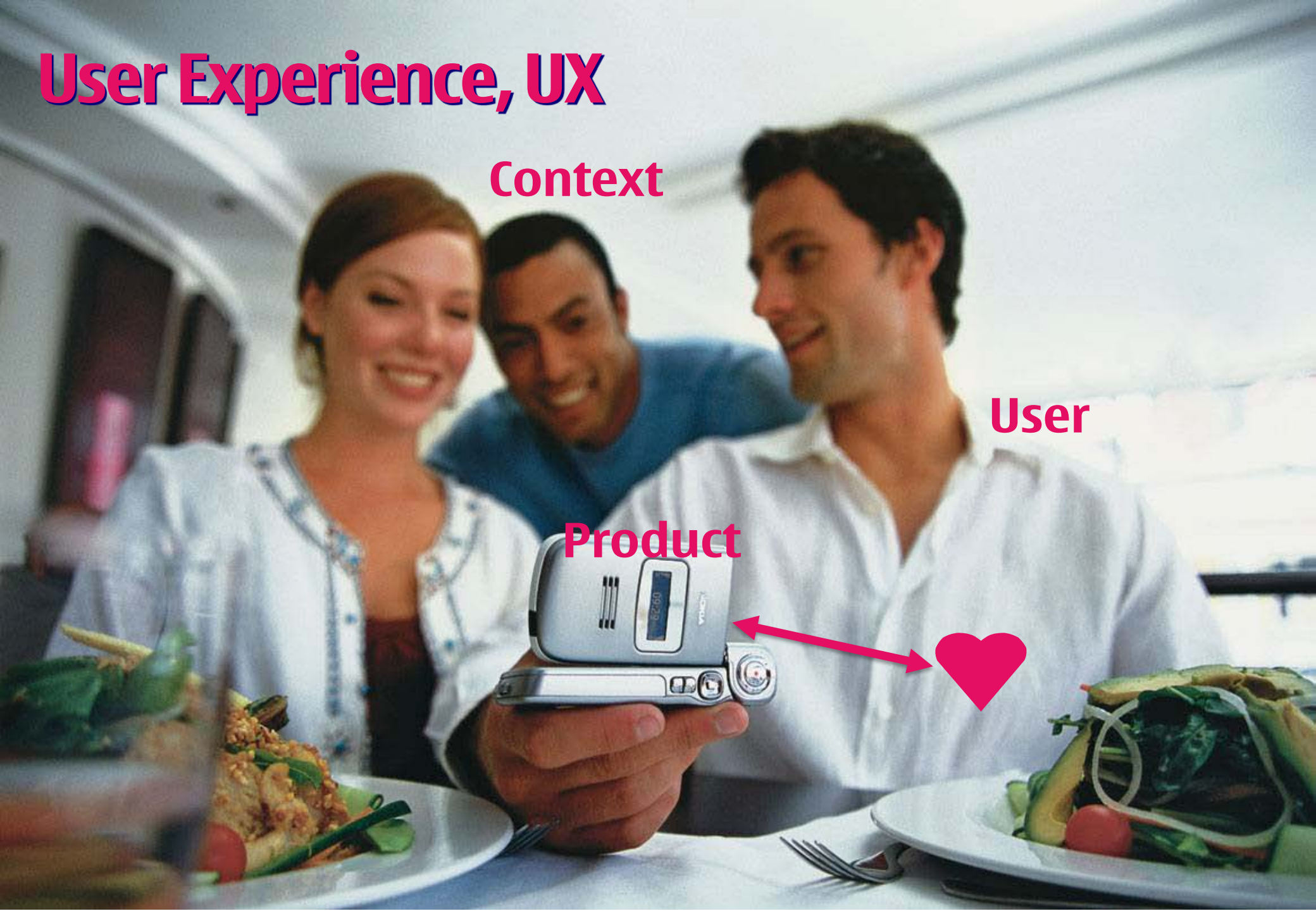


User Experience, UX

Context

User

Product



Maturing industry sectors focus in experiences



Utility



Usability



Experiences

Pine, J. & Gilmore, J. H. (1999). *The Experience Economy: Working is Theatre & Every Business a Stage*.

Seidel, M., Loch, C., Chahil, S. (2005). Quo Vadis, Automotiven Industry? A Vision of Possible Industry Transformations. *European Management Journal*, Vol. 23, No. 4, pp. 439–449, 2005

Nokia Corporation (2005). *Inspired Human Technology*. White paper.

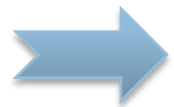
Consequences of good UX for a company

Loyalty

People buy also the next product from the same company / brand

Recommendation

People recommend the product to others



Continuous success

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What UX is about?

HCI

Usability

Pricing

**Economics,
Marketing**

Context

Need

Trust

Brand
image

Exceeding
expectations

Utility

Delight

Value

User interface

User

Attitude

Emotional
bonding

Pleasure

Aesthetics

Co-Experience

Emotions

Coolness

Fun

Behaviour

Design

Novelty

Meaning

Psychology
Social, Cognitive,
Behavioural

Multiple perspectives, Multiple definitions

HCI

“A consequence of a **user**'s internal state, the characteristics of the designed **system** and the **context** within which the interaction occurs”
(Hassenzahl & Tractinsky 2006)

The **quality** of experience a person has when interacting with a specific **design**.
(Uxnet, online)

Design

Economics, Marketing

All aspects of the end-user's interaction with the **company**, its services, and its products
(Nielsen Norman Group)

The entire set of **affects** that is elicited by the interaction between a user and a product including ... (aesthetic experience) ... (experience of meaning) ... (emotional experience)
(Desmet & Hekkert 2007)

Psychology Social, Cognitive, Behavioural

Similarities in UX definitions

HCI

“A consequence of a **user**’s internal state, the characteristics of the designed system and the context within which the **interaction** occurs”
(Hassenzahl & Tractinsky 2006)

The quality of experience a **person** has when **interacting** with a specific design.
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Design

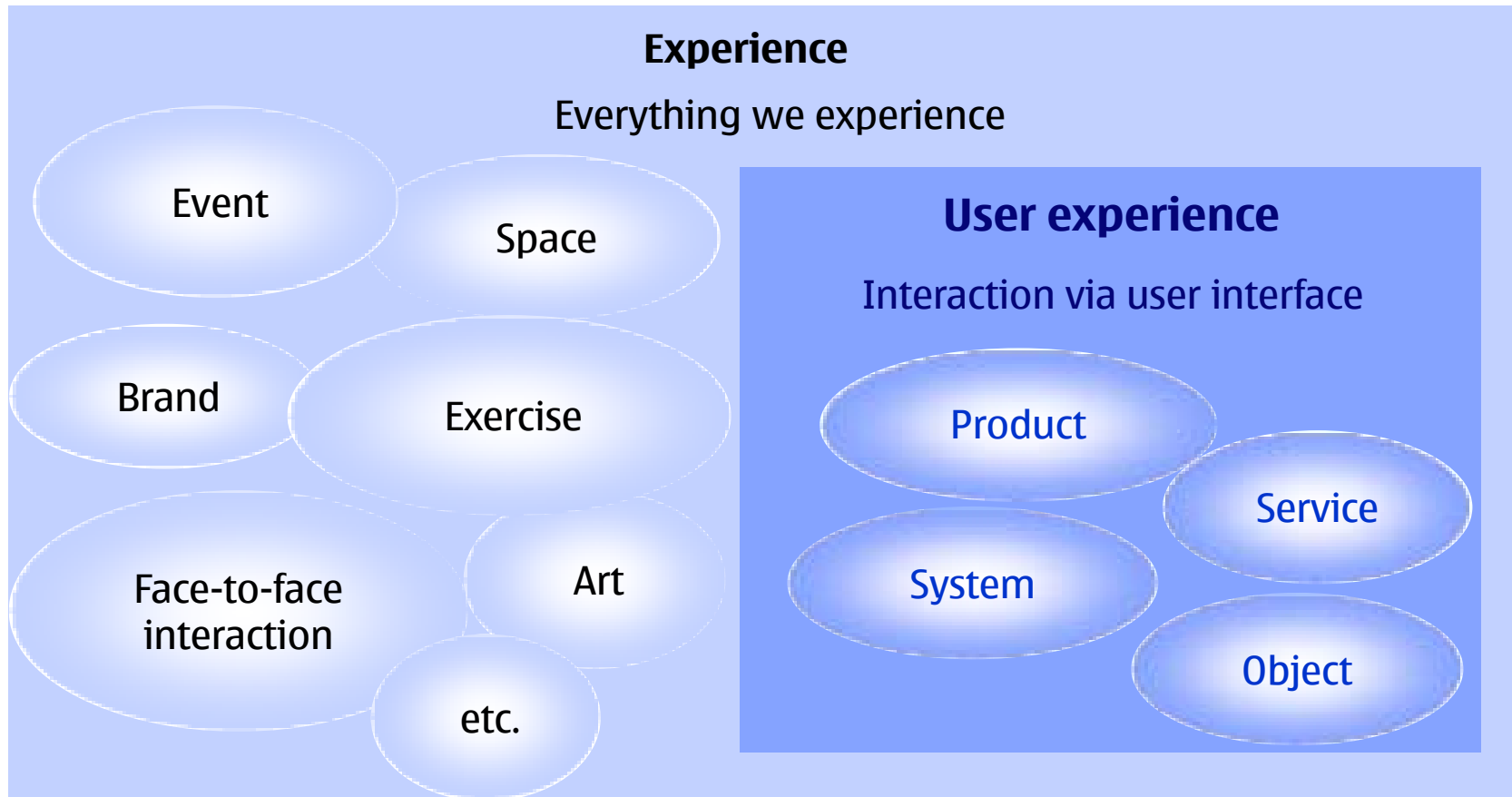
Economics, Marketing

All aspects of the end-**user**'s **interaction** with the company, its services, and its products
(Nielsen Norman Group)

The entire set of affects that is elicited by the **interaction** between a **user** and a product including ... (aesthetic experience) ... (experience of meaning) ... (emotional experience)
(Desmet & Hekkert 2007)

Psychology Social, Cognitive, Behavioural

UX vs. Experience



Law, E., Roto, V., Hassenzahl, M., Vermeeren, A., Kort, J.:
Understanding, Scoping and Defining User Experience: A Survey Approach.
Proc. Human Factors in Computing Systems, CHI'09. April 4-9, 2009, Boston, MA, USA (2009)

UX: how one feels about using a product

Context

User

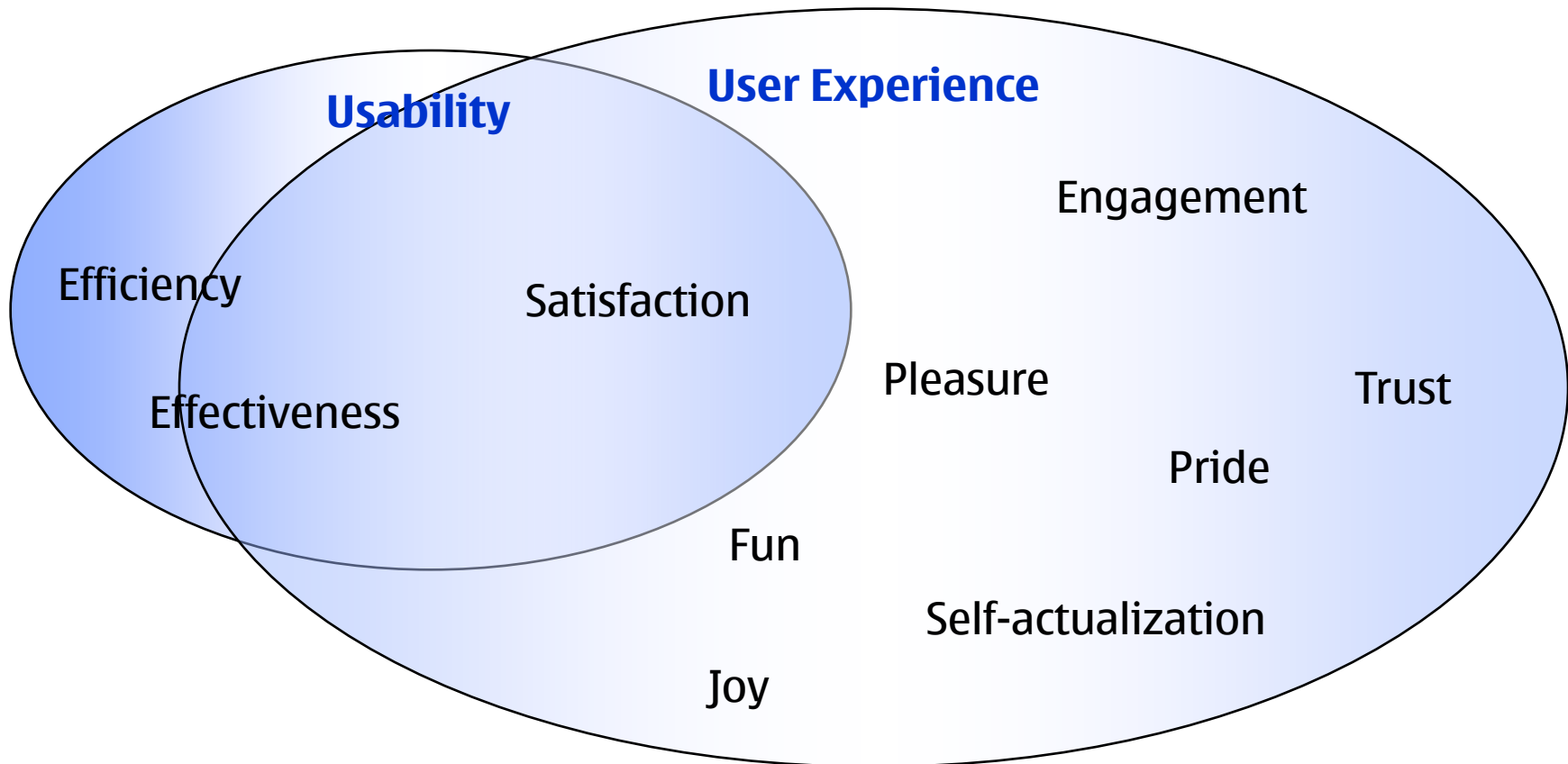
Product



NOKIA

UX vs. Usability

- Usability rose from the need to make employees more efficient
- Objective efficiency measures (number of clicks) do not tell **how users feel**

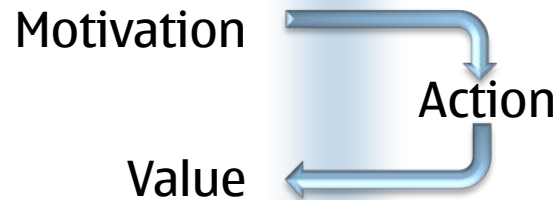


Note: Debate on the relation between usability and UX still ongoing, this is my perspective

Be-goals and Do-goals

Want good UX? Fulfill both be-goals and do-goals!

Be-goals		Do-goals
Maintain good relationship with mom	↔	Call mom
Get stimulation for a boring moment	↔	Play a game
Grow competent	↔	Take a course
Secure belongings	↔	Turn on home security system
Keep fit	↔	Choose a salad for lunch



Functional and Emotional model of UX

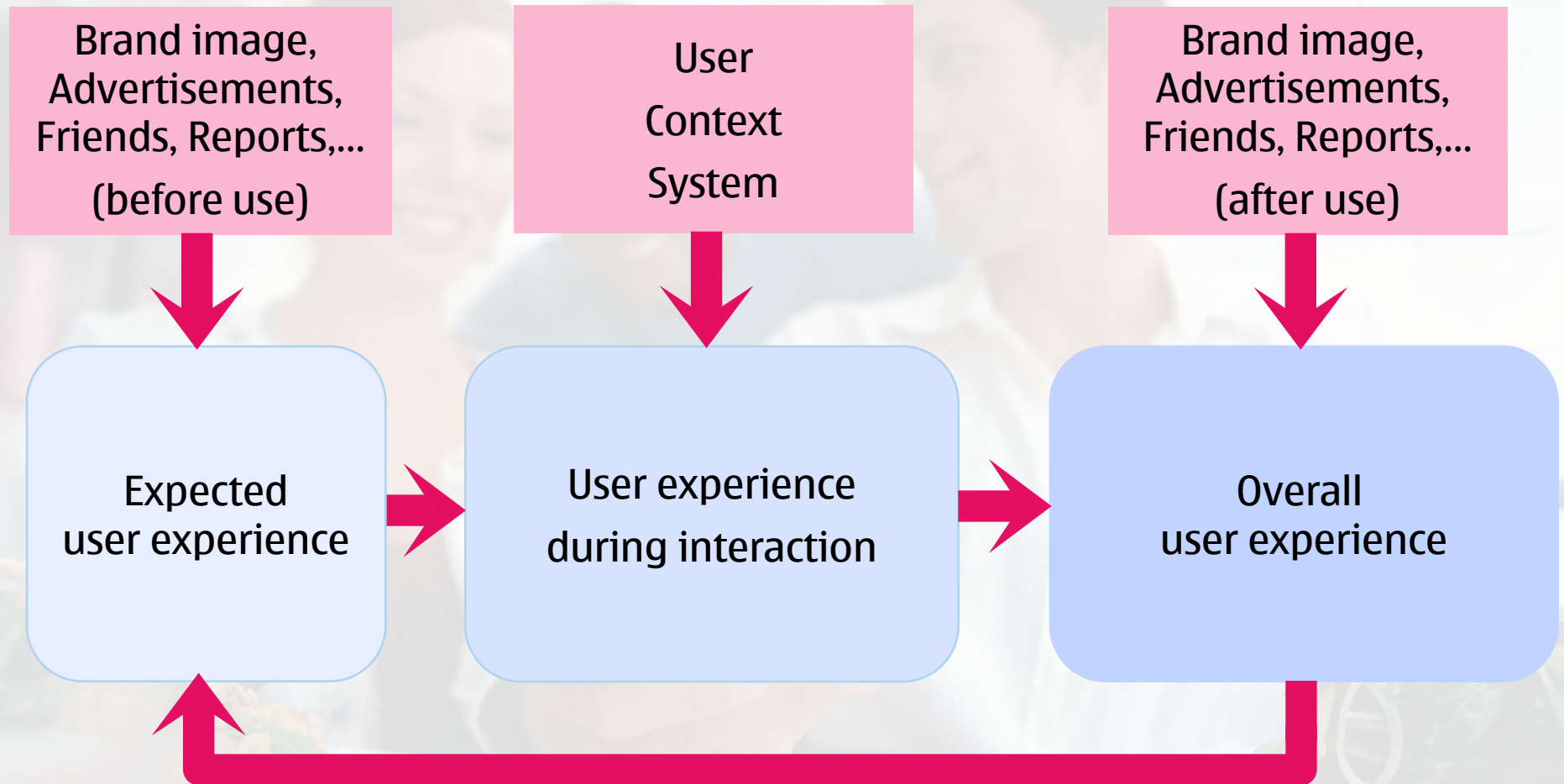
Functional
(Pragmatic,
Instrumental)

Emotional
(Hedonic,
Experiential)



Based on pragmatic and hedonic model of UX (e.g. Marc Hassenzahl)

UX changes over time



UX is granular

User experience
during interaction

Overall
user experience

Granularity
level

Moment

Episode

Long-term

During interaction

After interaction

After a period of use

E.g.

Key click

Use case

Relationship

What we
can learn

Easy to find, press?
Pleasurable tactile,
visual, auditory
feedback?

Goal achieved?
Enjoyment?

Good product for
the user?

Roto, V. (2008) Temporal and Granular Nature of User Experience.
The Nordic Conference on Experience. Vaasa, Finland, November 26-28, 2008.

NOKIA

UX is granular

User experience
during interaction

Overall
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Granularity
level:

Moment

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What is UX:

Affect

Feelings

Attitude

Emotion

Reflections

**Emotional
bonding**

Metrics:

Joy, anger

Satisfaction,
delight

Worth, Loyalty

What is UX – What did we learn

7 UX Theses

1. UX is about how a person **feels** about **using** a system
2. UX is subjective
3. UX is affected by User, System, Context
4. UX has functional and emotional side
5. UX is good if both Be-goals and Do-goals are fulfilled
6. UX changes over time
7. UX can be investigated on different granularity levels

User Experience Definition

ISO FDIS 9241-210 (2009)

Subjective UX

A person's perceptions and responses that result from the use and/or anticipated use of a product, system or service

UX focuses on use

What service?

Not restaurant, but support and training for the product

User experience includes all the users' emotions, beliefs, preferences, perceptions, physical and psychological responses, behaviours and accomplishments that occur **before, during and after use.**

Temporal UX

Usability, when interpreted from the perspective of the users' personal goals, can include the kind of perceptual and emotional aspects typically associated with user experience. Usability criteria can be used to assess **aspects** of user experience.

Usability is part of UX

User experience is a consequence of: brand image, presentation, functionality, system performance, interactive behaviour, and assistive capabilities of the interactive **system**; the **user's** internal and physical state resulting from prior experiences, attitudes, skills and personality; and the **context** of use.

Factors affecting UX

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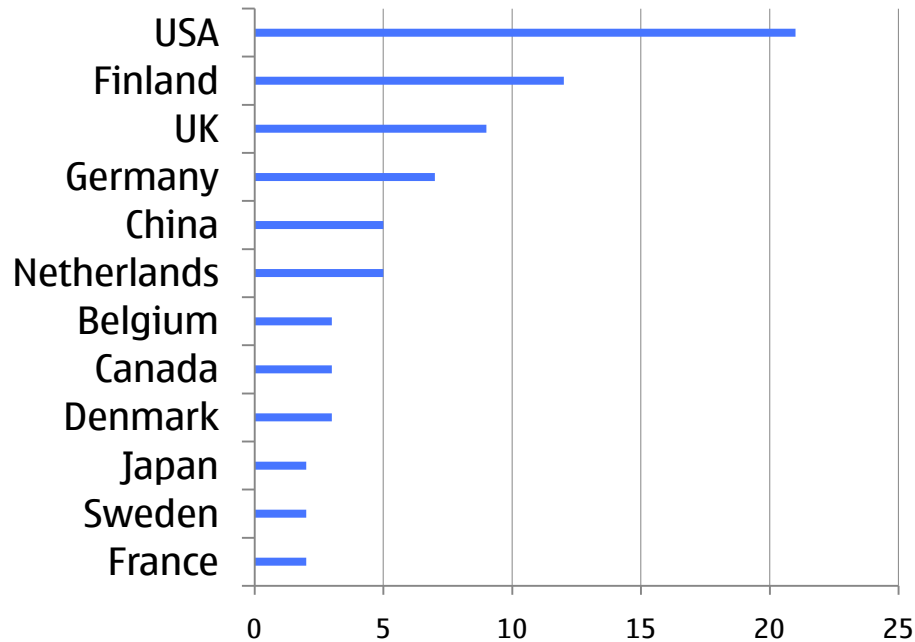
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Active UX countries – Research vs. Practice

Quiz: Which countries are the most active in the UX field?

Scientific papers published with
"User experience" in the title



Source: ACM & IEEE Digital Libraries (2008 – Aug 2009)

Low number of papers (58 altogether) – low reliability

Who google "User experience"



Source: Google Trends (Sept 2008 – Aug 2009)

Note: E.g. China uses Baidu instead of Google

What is needed for UX work in practice?

- ✓ 1. Shared understanding on what UX means
- 2. Methods for design & evaluation
- 3. Evaluation metrics

Methods

- Basic principle: User-Centered Design works for UX as well
- Special concerns for UX :
 1. UX is about how a person **feels** about using a system, so observations are often not enough
 2. UX is subjective, so select the participants carefully
 3. UX is affected by User, System, Context, so be careful with your conclusions
 4. UX has functional and emotional side, focus on emotional (beyond frustration)
 5. UX is good if both Be-goals and Do-goals are fulfilled, focus on be-goals first
 6. UX changes over time, so design the whole journey from first ads to disposal
 7. UX can be investigated on different granularity levels, so choose the method accordingly

Methods for UX Evaluation

What and why you want to evaluate

Momentary or long term

Formative (to improve) or summative (to get a score)

Moment

During interaction

Episode

After interaction

Long-term

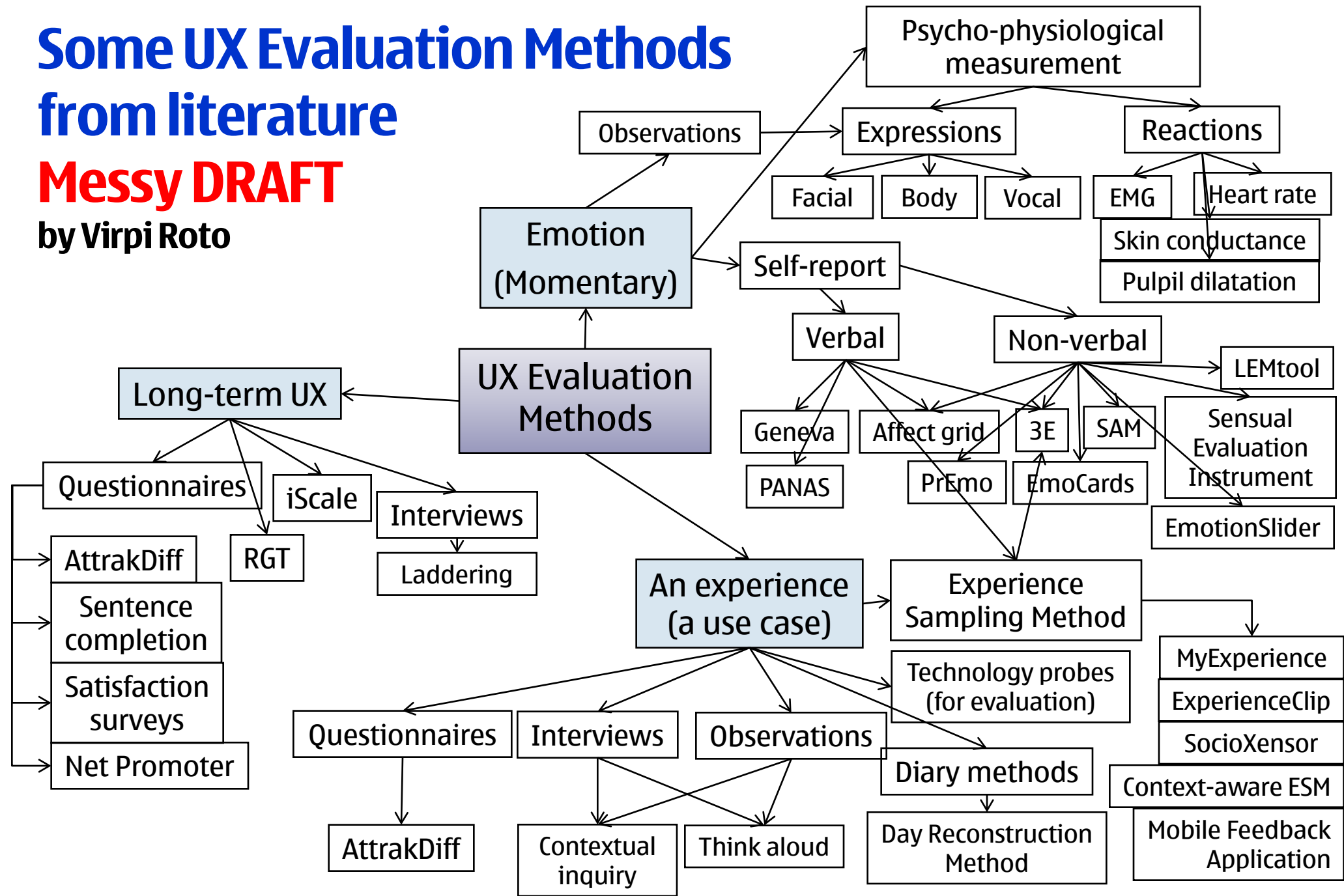
After a period of use



Some UX Evaluation Methods from literature

Messy DRAFT

by Virpi Roto



What is needed for UX work in practice?

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- 3. Evaluation metrics

Designing for good UX

What does good UX mean?



UX targets
Elements of UX

UX elements (1/2)

Donald Norman in *Emotional Design*

A successful product engages users on 3 levels:

1. Visceral: Attractive
2. Behavioral: Functional and usable
3. Reflective: High in prestige

Patrick Jordan in *Designing Pleasurable Products*

A successful product provides users

1. Functionality
2. Usability
3. Pleasure: physio~, socio~, psycho~, ideo~

UX elements (2/2)

Marc Hassenzahl in *The Thing and I*

1. Pragmatic manipulation: utility and usability
2. Hedonic – stimulation: novelty, new activities
3. Hedonic – identification: personal, status symbol
4. Hedonic – evocation: memories

Kort, Vermeeren, and Fokker in *Conceptualizing and Measuring UX*

UX designers should take care of 3 areas:

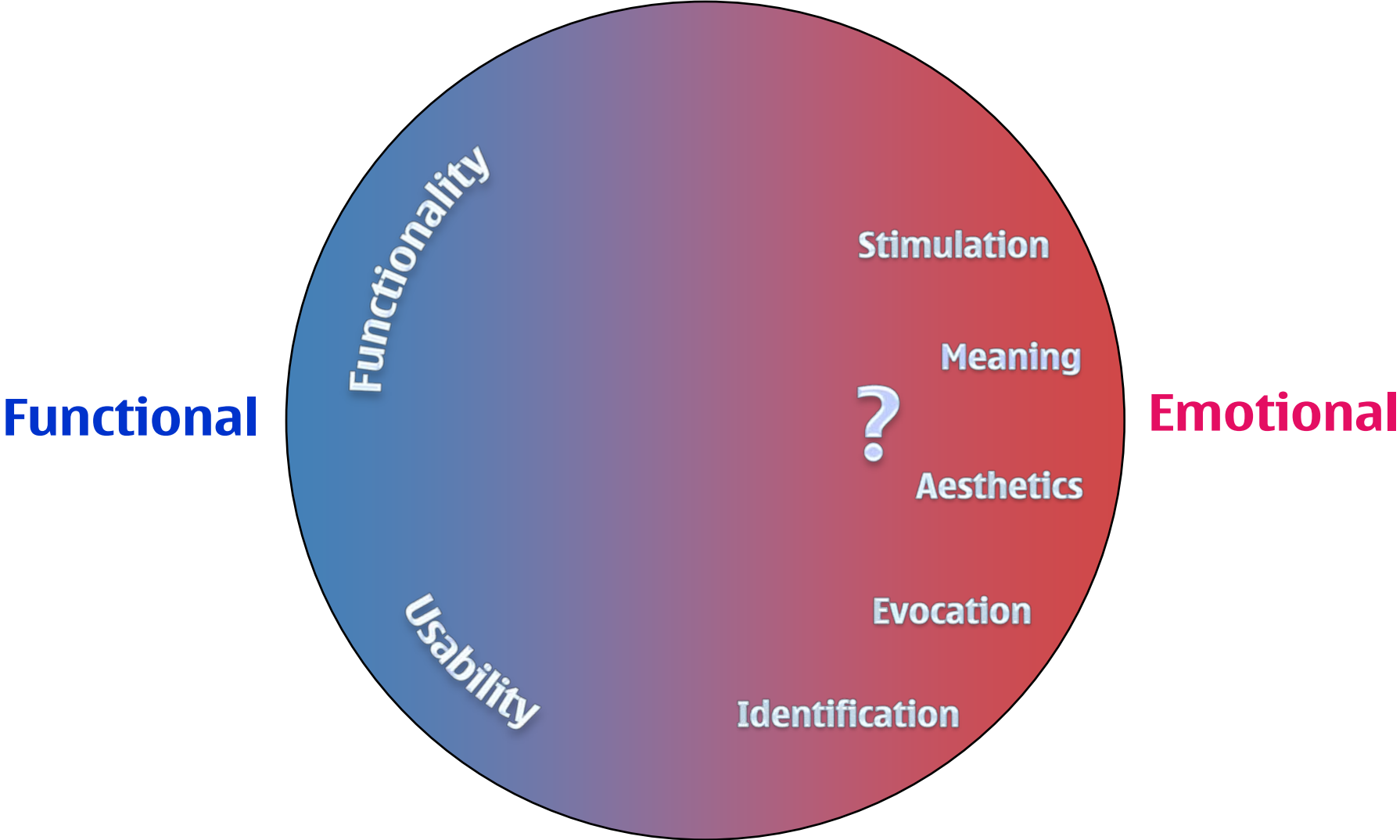
1. Compositional: Pragmatic
2. Aesthetic: Delighting our sensory modalities
3. Meaning: Symbolic value

UX Elements – Summary from literature

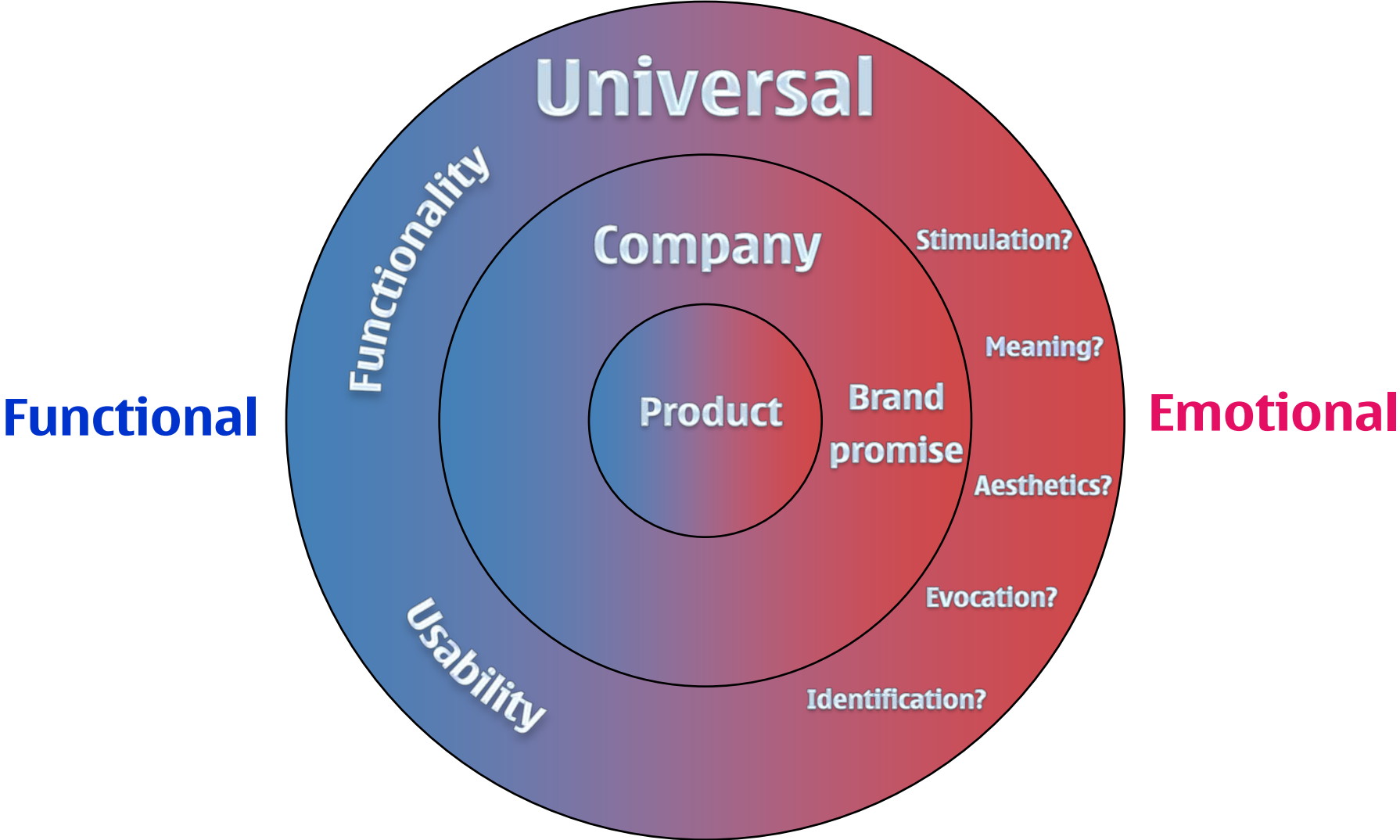
- Division to Pragmatic – Emotional (Utilitarian – Hedonic) found often
- Good level of agreement on Pragmatic elements
- More variation on emotional side

Pragmatic / Functional	Emotional / Experiential
Utility, functionality, compositional	Reflects one's identity: Identification, How do I look in the eyes of others, Socio-pleasure
Usability	Memories: Evocation, Reflection, Meaning
	Visceral, Attractive, Aesthetic, Physio-pleasure
	Stimulation
	Meaning, Ideo-pleasure

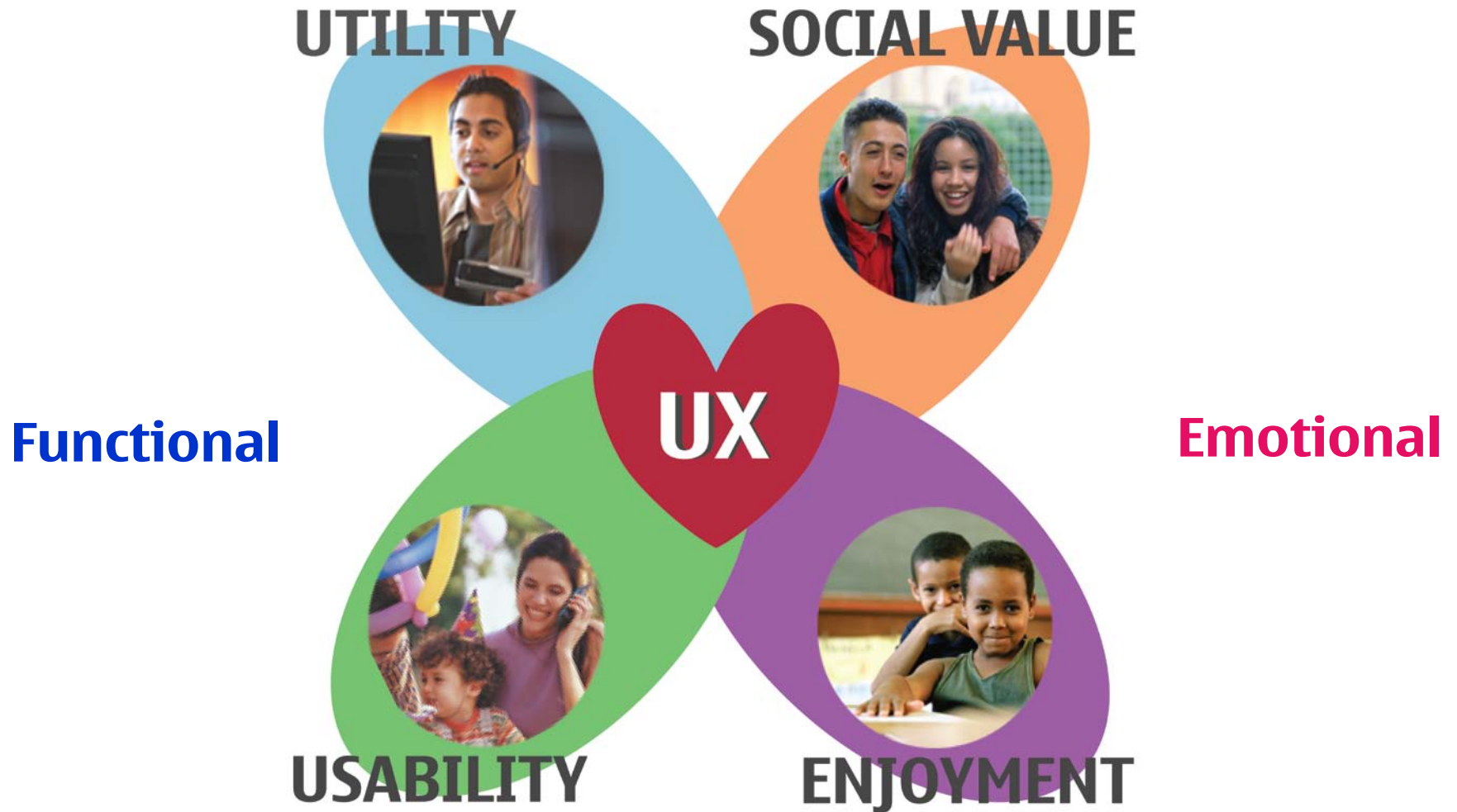
UX Elements to guide design



UX Elements on different levels



Nokia UX elements



Roto, V., Rautava, M.: User Experience Elements and Brand Promise. International Engagability & Design Conference (Idec4), in conjunction with NordiCHI'08 conference. October 19, 2008, Lund, Sweden.

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Thank You!

