User Experience Design

TDDD53 & 729A88

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Housekeeping

- You should have:
  - read the assignments
  - started sketching
  - divided the articles among the group members
- Target experience
- Still some problems getting everyone into Lisam
  - The groups have been updated on the website – let me know if something is still not right

Agenda

- History
- User experience (UX)
- Designing UX

History

- Man-Machine Communication
- Cognitive ergonomics

Fokker D.VII - 1917

Supermarine Spitfire - 1939-1945

History

- Man-Machine Communication
- Cognitive ergonomics
- Man-Machine Interface
- User interface (70-talet)
- Human-Computer Interaction (HCI) (80-talet)
  - A discipline concerned with the design, evaluation and implementation of interactive computing systems for human use and with the study of major phenomena surrounding them. (ACM)

History

- Early on, the instructions for computers were written by women, because it was believed that the hardware was the most important aspect of computing.
- Ada Lovelace
- Grace Hopper

By Antoine Claudet[1]

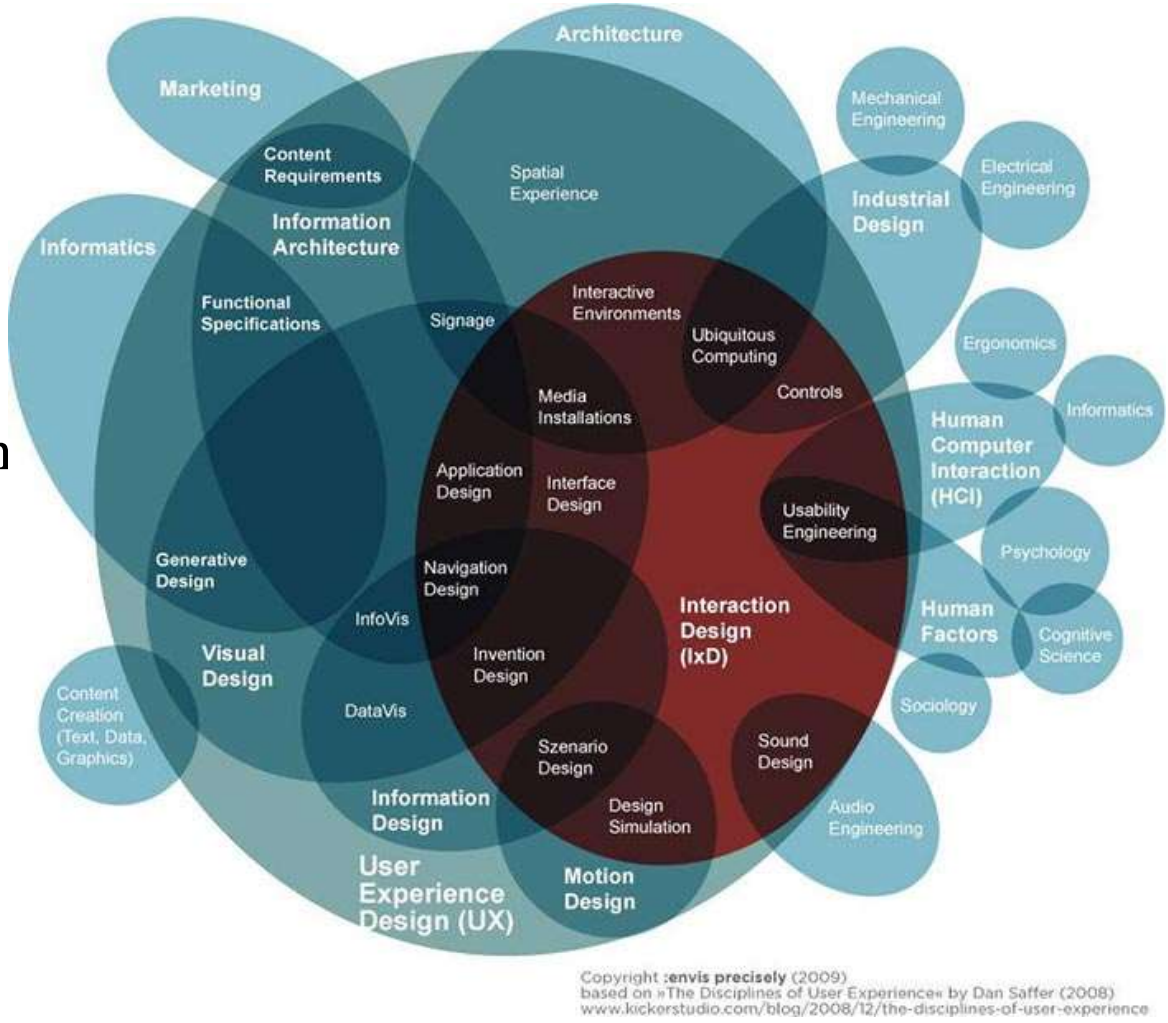
By James S. Davis

History

- Human-Computer Interaction (HCI)
  - Includes:
    - Psychology
    - Ergonomics
    - Linguistics
    - System analysis
    - Programming
    - … etcetera

History

- Timeline
  - ~ 1975 Usability
  - ~ 1985 HCI
  - ~ 1990 Interaction design
  - ~ 1995 UX design



History

- User Experience (ISO 9241-210:2010)
  - Person's perceptions and responses resulting from the use and/or anticipated use of a product, system or service
  - Multi-disciplinary approach
  - UX as a key to success
    - Shifts focus from usability to experience
    - Business logic

History

- The first iPhone

(2007)

- Marketing can only create expectations
- UX have to deliver on the expectations

The Register®
Biting the hand that feeds IT

Why the Apple phone will fail, and fail badly

It's the Pippin all over again

23 Dec 2006 at 05:02, Bill Ray

Comment The hype is reaching fever-pitch, and the odds are still stacked that Apple will announce a device combining the functionality of an iPod and a mobile phone in January next year, but whether such a device will actually sell is another question.

There seems little question that an Apple phone product will be launched in 2007, and that it will work with the iTunes service and have a very pretty industrial design and a smooth interface. Strapping an iPod to a mobile phone is not a great technical challenge, which makes it all the more remarkable that Motorola did it so badly with their ROKR handset. Maintaining the features which made the iPod so popular in a mobile phone will be much more of a challenge.

The iPod brought with it amazing industrial design, a well designed interface, and a new usage paradigm. Portable music players already existed, but the iPod was better looking and easier to use. It also came with the promise that you didn't just carry music with you, you carried *all* your music with you. That factor alone changed the way portable music was perceived, and was central to the adoption of the iPod.

The iPod has moved away from that paradigm, with the Nano and Shuffle only able to store the most diminutive music collection, and recent rumours suggest that an Apple phone will have 8GB of flash-based storage; comparable with the Nano. But it was that function which sold the concept to many people, with the style and simplicity of use keeping them hooked.

It is important not to underestimate the importance of the iPod industrial design, or its scope. I recently had to sit in a pub as two iPod fans reminisced about feelings when opening their first iPod box, and their overwhelming admiration not for the product, but for the box in which it came. It was sickening, but demonstrated the loyalty iPod fans feel, and the expectations that will need to be met.

Most read


UK research network Janet under ongoing and persistent DDoS attack


Microsoft Lumia 950 and 950XL: Clear thoughts of Continuum with a snazzy camera


Donald Trump wants Bill Gates to 'close the Internet', Jeff Bezos to pay tax

Windows Phone won't

History

- First iPod

(2001)

- A result of many successful failures
- Infrastructure in place

(2000)

History

CHI '95 MOSAIC OF CREATIVITY • May 7-11 1995 Organization Overviews

What You See, Some of What's in the Future, And How We Go About Doing It: HI at Apple Computer

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ABSTRACT

In this organizational overview we cover some of the critical aspects of human interface research and application at Apple or, as we prefer to call it, the "User Experience." We cover what we do, where we are going (as much as we are permitted to say in public), and how we are organized. Some of our innovations in the product process and in the transfer of research from the laboratories to product should be of special interest to the HCI community.

cover some of the critical aspects of human interface research and application at Apple or, as we prefer to call it, the "User Experience." Much of the success and failures of HI at Apple — as elsewhere — depend upon organizational factors, so we discuss the structure of HI at Apple and its role in the product process. Some of our innovations in the product process and in the transfer of research from the laboratories to product should be of special interest to the HCI community.

The role of HI within the product process is certainly not perfect within Apple, and the quality varies within divisions and from product to product. But the company is sensitive to and supportive of the needs of human interface work, and continual changes are being made in the product process. The structure will probably never be perfect, but it will be instructive to review Apple's process and some of its major successes and failures.

We show examples of the role of HI in research and

lucts that had considerable user experience from the very product conception — *OpenDoc* *Guide* — will be discussed and demonstrated, phasis on the impact that HI had on the product possible, we will discuss some of the new s soon to come from Apple.

nstrate the complexity of the product design y discussing illustrative examples, including a al, but incredibly complex issue: determining the nd function of the on-off switch for Apple's . We describe the role of the "User Experience s Office", which works across the divisions, harmonize the human interface and industrial cess across the divisions of Apple and ATG. This introduced a new procedure for products, which the creation of a "User Experience Requirements " (UERD). We discuss the UERD's impact on ct cycle and, most importantly, the positive attitude it has created within the engineering and marketing community toward human interface.

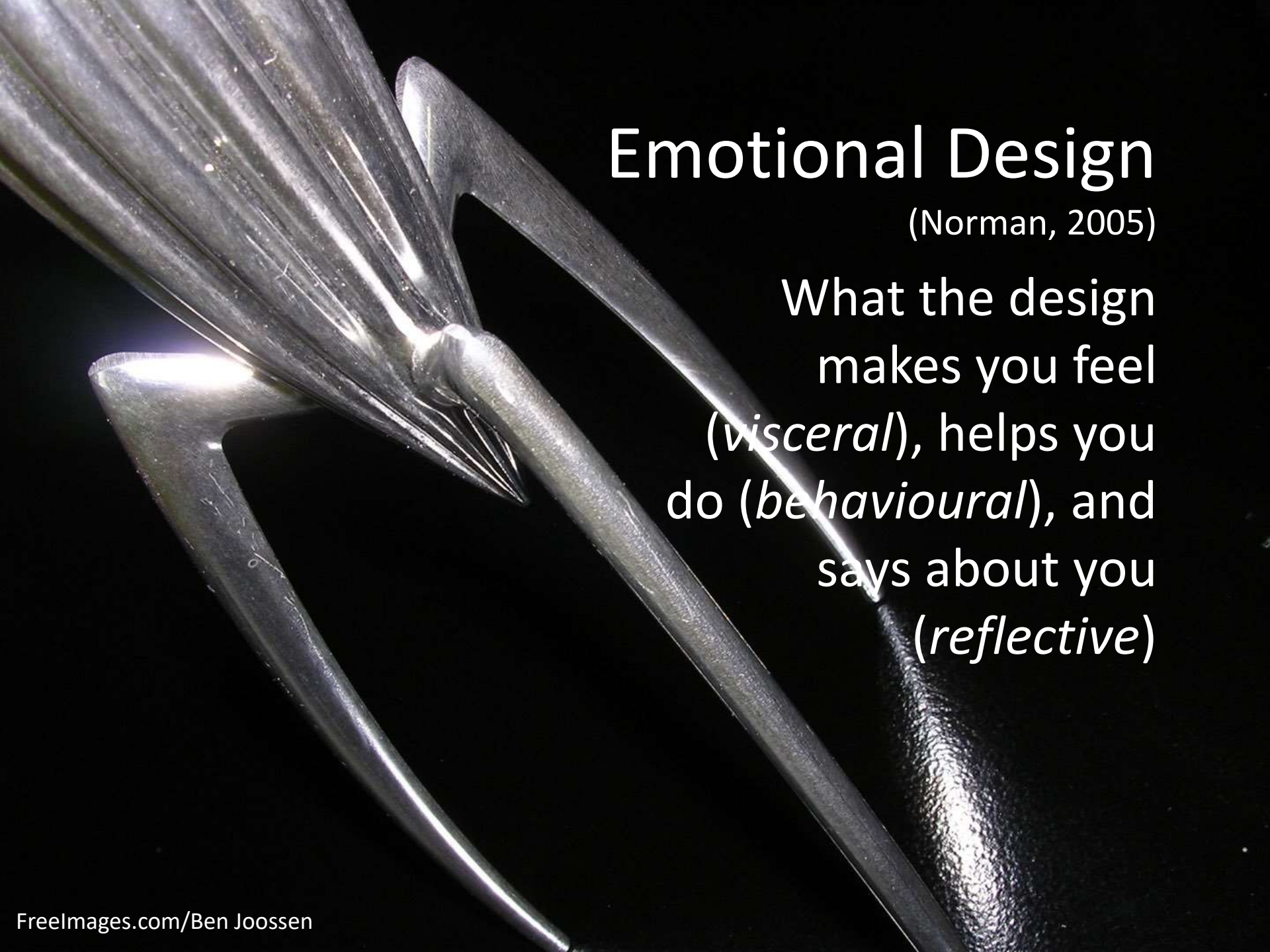
APPLE'S ORGANIZATIONAL STRUCTURE

Apple is made up of four different product divisions, Claris, and the Advanced Technology Group (ATG), which is the research arm. The largest human interface group working in the product groups is within AppleSoft, the software arm of Apple. This group, the Human Interface Design Center, also provides HI support for Apple PC, the home of the hardware side of Apple — the desktop Macs, entry-level Macs, portables, and imaging (printers, displays, and cameras). Apple's industrial design group is organizationally located within Apple PC, and it works closely with the HI groups throughout the company. In addition, there are HI groups in Apple Business Systems, Personal Interactive Electronics, and Claris.

Considerable research on HCI-related topics takes place within ATG, some of which will be discussed in the

User Experience (design)

- Theories and models
  - UX is connected our feelings and emotions
  - … as opposed to other similar fields
  - We are always sensing, but these are special experiences we are talking about
  - Different suggestions about what experience is, in relation to artefacts/products/services/systems



Emotional Design

(Norman, 2005)

What the design makes you feel (*visceral*), helps you do (*behavioural*), and says about you (*reflective*)

FreeImages.com/Ben Joossen

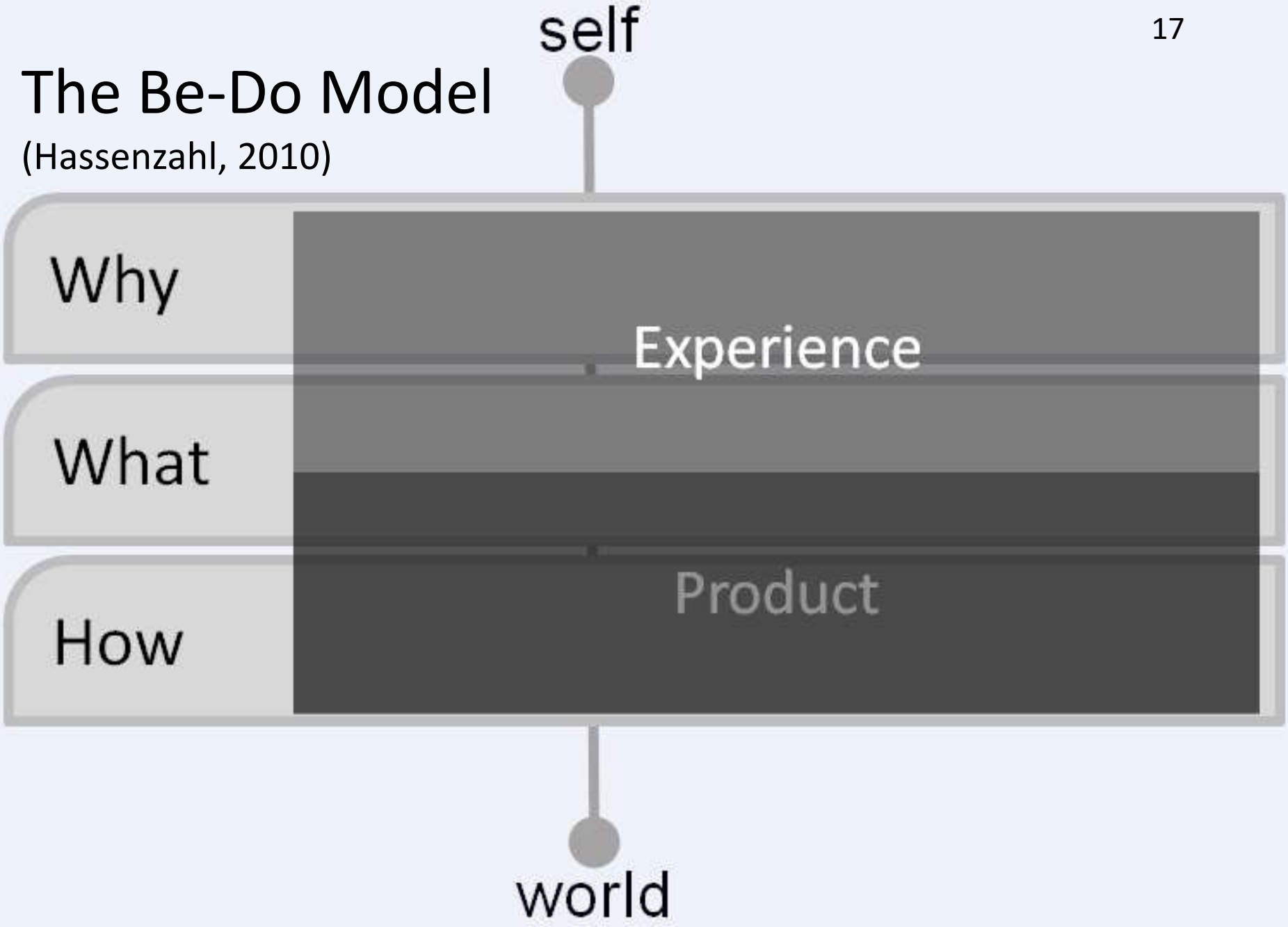
The Four Pleasures
(Jordan, 2002)

- Physio-pleasure
- Psycho-pleasure
- Socio-pleasure
- Idea-Pleasure

FreeImages.com/marlene paradis

The Be-Do Model

(Hassenzahl, 2010)



Co-experience (Battarbee & Koskinen, 2005)

Meanings of individual experiences emerge and change as they become part of social interaction.

User Experience

”experience is the irreducible totality of people acting, sensing, thinking, feeling and meaning-making including their preception and sensation of the artifact in context”

John Dewey (in McCarthy & Wright, 2004)

Four Threads of Experience

(Wright & McCarthy, 2003; McCarthy & Wright, 2004)

- Sensual
- Emotional
- Compositional
- Spatio-temporal

User Experience (design)

- Can an experience be designed?
- What would you need to design to make sure the experience would always be the same?

User Experience

- Based pm *interpretive phenomenological analysis* (Arvola, 2014):
  - What *things* (relations, processes, places, events, material, documtent, rules, values, principles) were important for the experience?
  - How were those aspects experienced in the situation/context where an activity took place?
  - What consequences did the experience have for you?

PACT

People	Activities	Contexts	Technologies
Physical differences	Temporal aspects	Physical environment	Input
Ergonomics	Cooperation	Social context	Output
Psychological differences	Complexity	Organizational context	Communication
Mental models	Safety-critical		Content
Social differences	The nature of the context		

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User Experience

- … as a source of information

Provotyper – *”provoking discrepancies in the concrete, everyday practice to call forth what is usually taken for granted.” (Mogensen, 1992)*

  - *Emphasis on experiencing something*
  - *The experience must provoke*

Provotypes

Twist-Vase

Render-Lamp

(Boer & Donovan, 2012)

- In design there is always a tension between different values, ambitions, wishes, fears and needs

User Experience

- Critical design

"Critical Design is 'critical' in the sense that it takes a critical stance towards underlying assumptions and values within society and seeks to raise reflection on these through design." (Boer & Donovan, 2012)

- Critical design

User Experience

- Immidiate reactions vs. reflected

- Advantages of designing for experiences

User Experience

Philips Wake-Up light

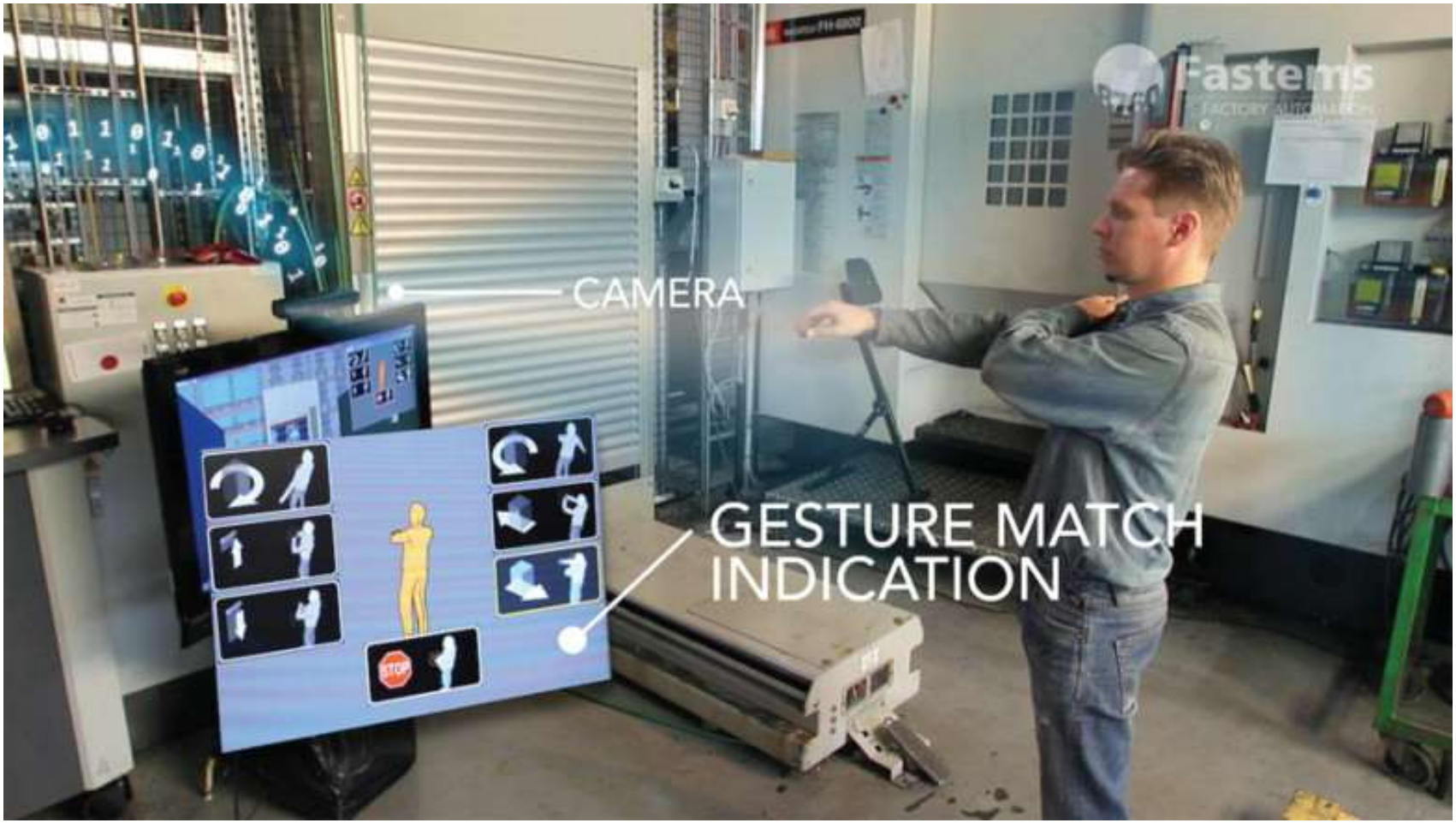
User Experience

- Advantages of designing for experience:
  - guiding & framing,
  - inspiring,
  - evaluating and
  - communicating

  (Kaasinen et al,. 2015)

The UX goals defined for the gesture-based concept were:

1: Using the system feels like magic.
2: Sense of control over the system.



The UX goals for the Remote Operator Station:

1: Feeling of safe operation

2: Sense of control

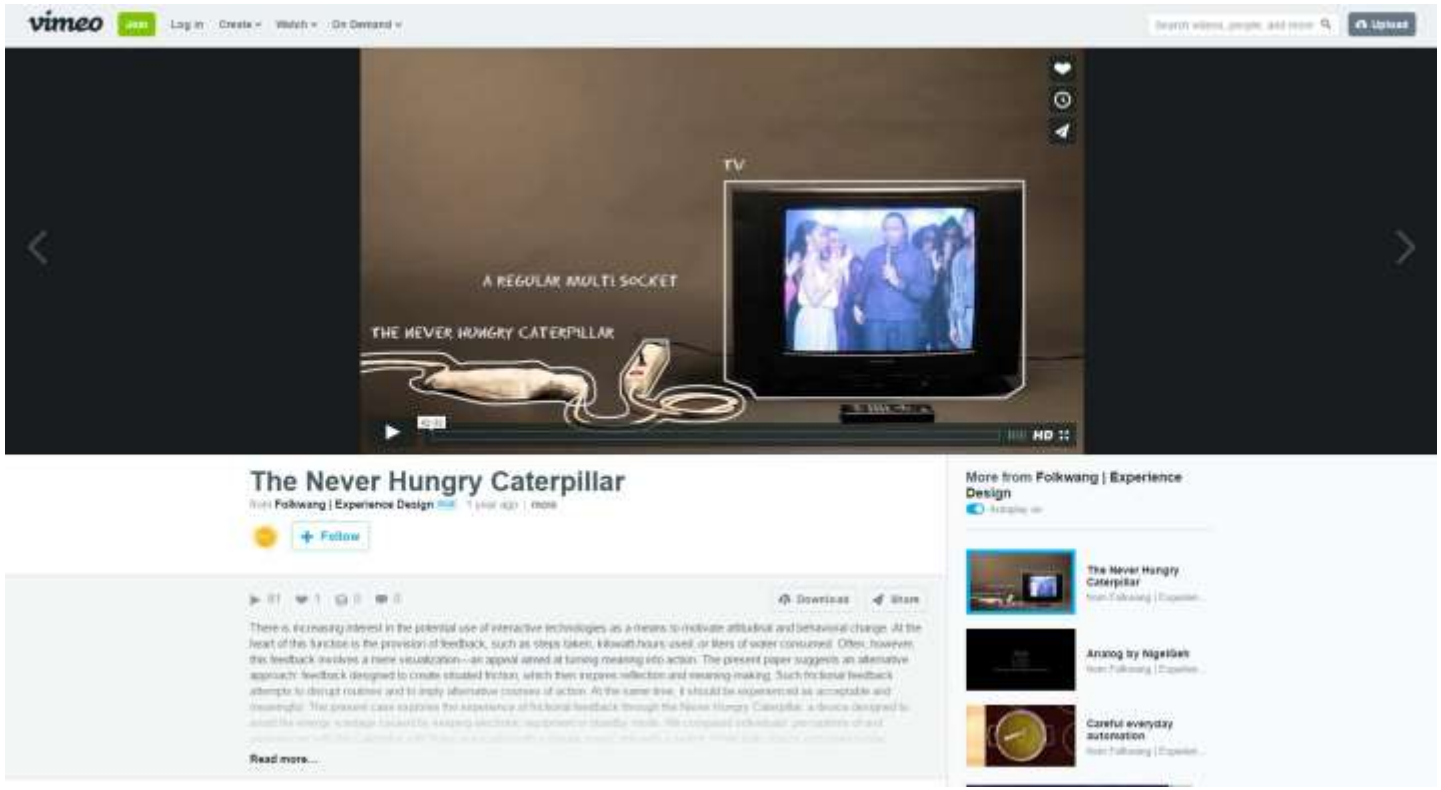
3: Feeling of presence

4: Experience of fluent co-operation.

User Experience

- Advantages of designing for experience
  - Experiences as goals help us put words on what we want to achieve.
  - Creates frames for what a system should do
    - Leads to/ can be combined with utilitarian/pragmatic goals
  - Theoretical
    - You don't get stuck in the details
    - Emotional reactions powerful arguments

- Annoying, but in a nice way.



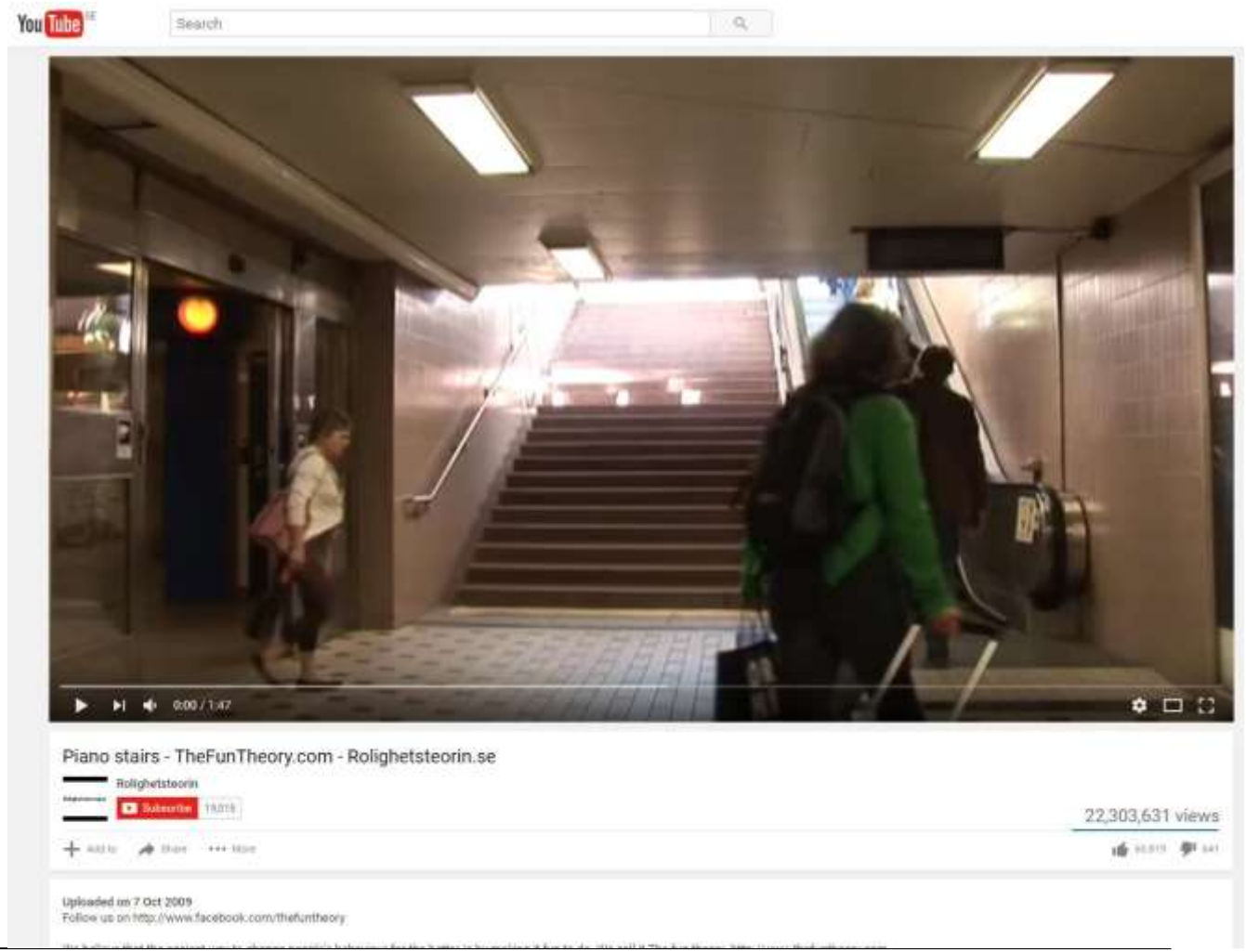
(Laschke, Diefenbach, & Hassenzahl, 2015)

User Experience

- Why playful experiences?
  - Because there is an empirical framework to start with - PLEX

- Can be motivational

Fun theory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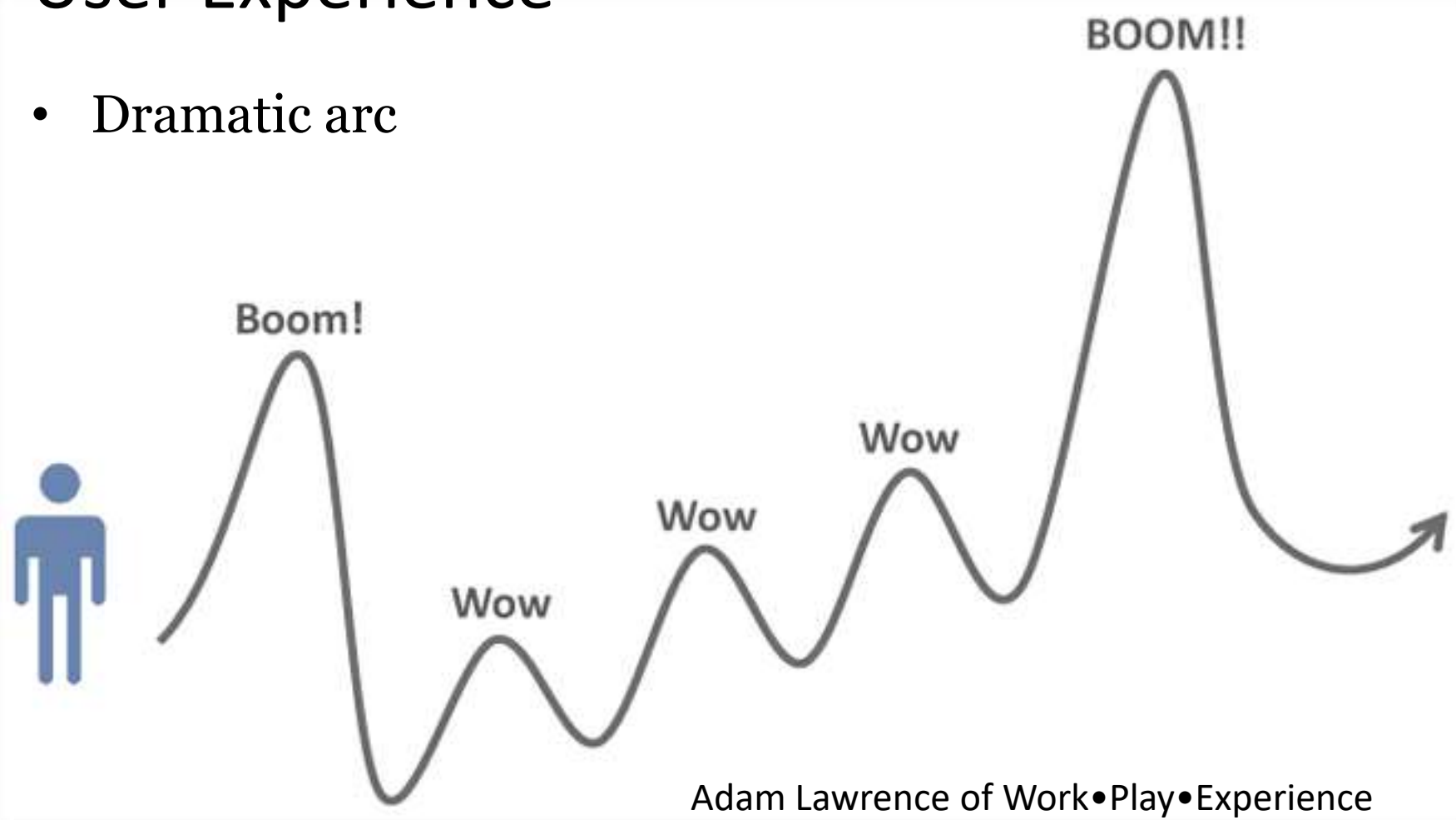
User Experience

- How do you design (for) experiences?

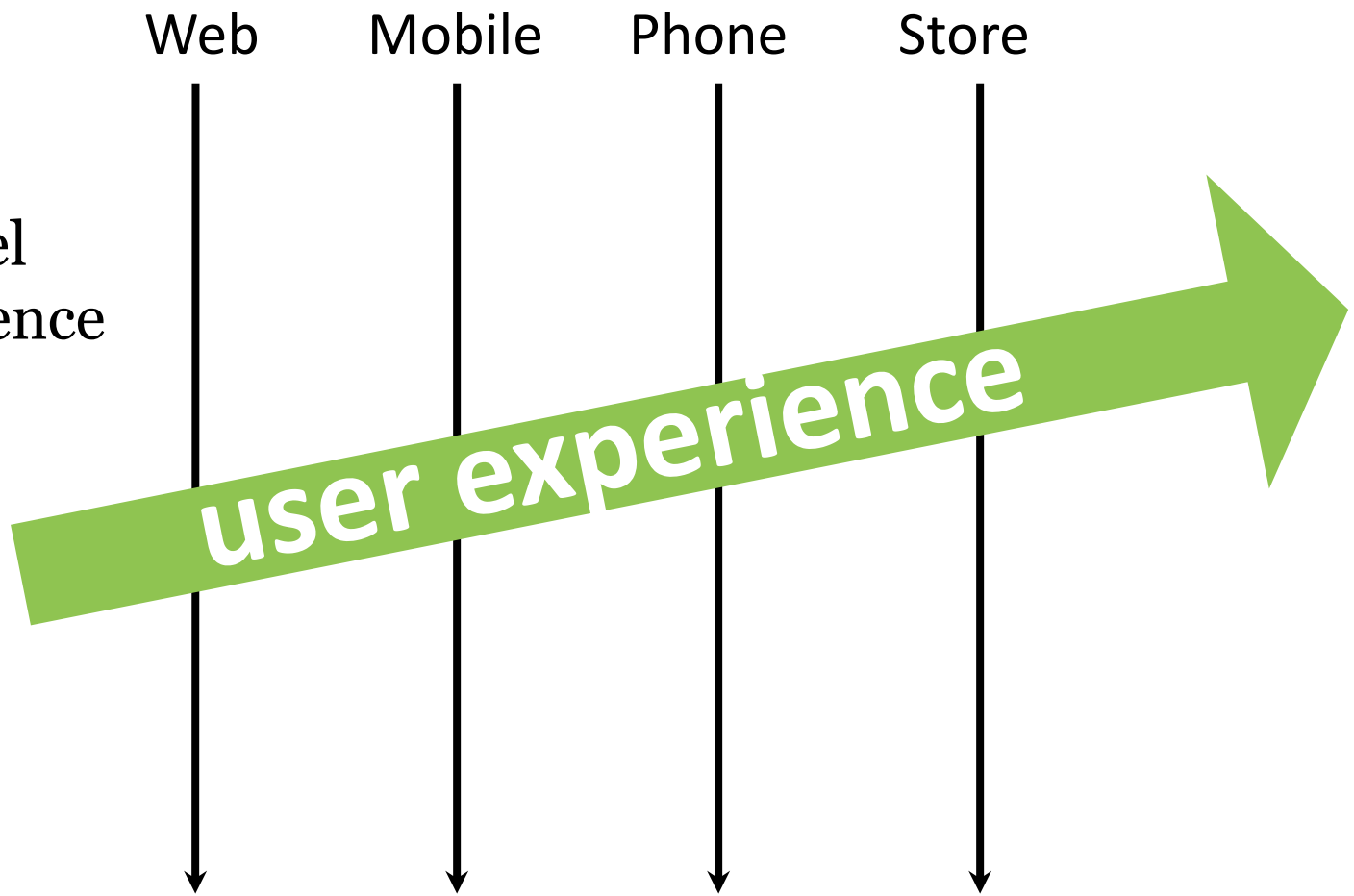
User Experience

- Dramatic arc



Adam Lawrence of Work•Play•Experience

- Cross-channel experience



User Experience

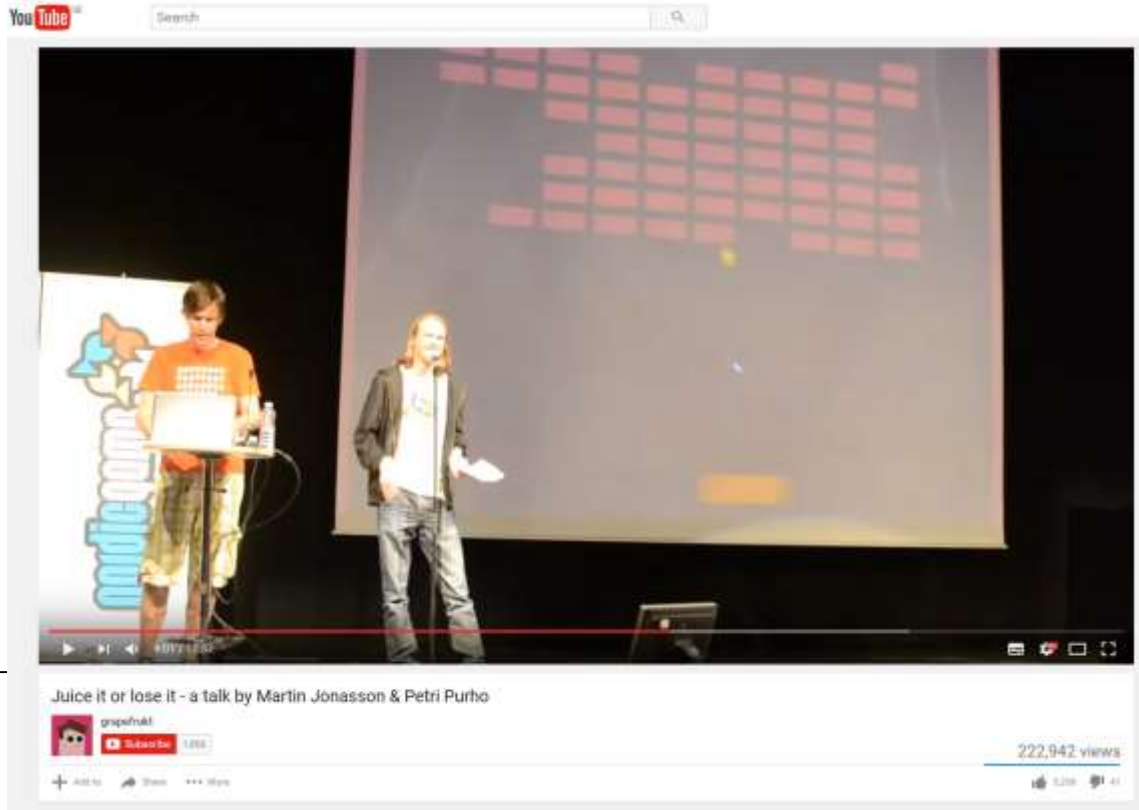
”Increase the experience”

Juicy interaction

"A juicy game feels alive and responds to everything you do tons of cascading action and response for minimal user input."

(Inbe)Tweening

/ Easing



References

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- sdafa
- [1] By Antoine Claudet - https://blogs.bodleian.ox.ac.uk/adalovelace/2015/10/14/only-known-photographs-of-ada-lovelace-in-bodleian-display/ Reproduction courtesy of Geoffrey Bond., Public Domain, https://commons.wikimedia.org/w/index.php?curid=63293739

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