

# Design of Interactive Systems (DIS)

## Lecture 5: Experience Design

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# Overview

- **Chapter 1:** Designing interactive systems: a fusion of skills
- **Chapter 2:** PACT: a framework for designing interactive systems
- **Chapter 3:** The process of human-centred interactive system design
- **Chapter 4:** Usability
- **Chapter 5:** Experience Design
- **Chapter 6:** The Home Information Centre (HIC): a case study in designing interactive systems

# Experience design

- Designers of interactive systems are increasingly finding themselves **going beyond the design of usable systems** and are instead expected to design systems that **provide people with great experiences**.
- A shopping list application on the iPhone, for example, needs to be much more than functional; it needs to be **fun to use, engaging** and **enjoyable**.
- Websites have to attract and keep customers if they are to be profitable and, once they provide appropriate functionality and content, they will do that only if people enjoy using them.
- we explore the **factors** that contribute to **creating high- quality experiences** for people using interactive systems.
- This area of HCI and interaction design is often called user experience (UX).

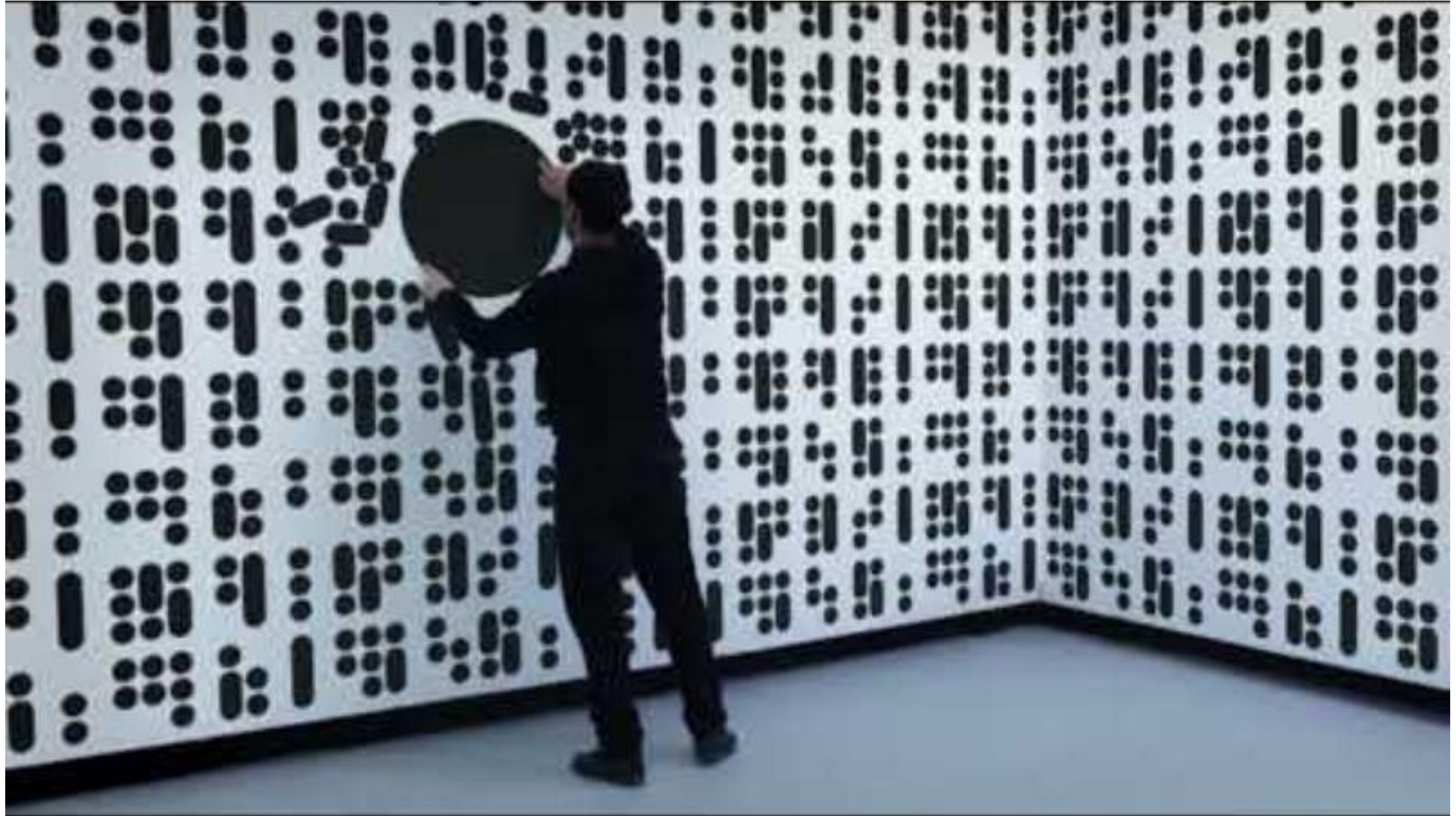
# Aims

- Discuss ideas of experience and the different traditions from which concepts come
- Understand Nathan Shredroff's model of experience
- Understand 'designing for pleasure'
- Understand the importance of aesthetics

# Experience Design

- Importance of designing for **pleasure**
- Researchers talk about ***ludic***, ***hedonomics*** and ***funology*** in design
- Homo Ludens explores the concept of ***play*** in different cultures
- 'play' something more **fluid** and **self-motivate**
- Experience design is about recognizing that interactive products and services do not just exist in the world, they affect who we are.







# Experience Design

- Experience is concerned with ***all the qualities of an activity that really pull people in***
  - whether this is a sense of immersion that one feels when reading a good book, or a challenge one feels when playing a good game, or the fascinating unfolding of a drama.
- It is concerned with all the qualities of the interactive experience that make it ***memorable, satisfying, enjoyable and rewarding***.
- ***Emotion*** is a very important part of experience as *experience is about feeling*.
- Experiences, therefore, **cannot** really be designed.
- **Designers can design *for* experience**, but it is individuals and groups who have the experience.



# Engagement

- Engagement is about ensuring that the **interaction flows**.
- If **usability** is concerned with optimizing or balancing the PACT elements in some domain, **engagement** is when the PACT elements are truly harmonized.
- Nathan Shedroff identify following as the key elements
  - *Identity, Adaptivity, Narrative, Immersion, Flow*

# Engagement

- **Identity**

- A sense of authenticity is needed for identity and expression of the self. The sense of authenticity is often only noticed when it breaks down. (Are you a Mac or a Windows person or don't you care?)

- **Adaptivity**

- *Adaptivity* is to do with change and personalization, with changing levels of difficulty, pace and movement. Example: Musical instruments

- **Narrative**

- *Narrative* is to do with telling a good story, with convincing characters, plot and suspense. Example: Menu structure on a mobile phone

# Engagement

- **Immersion**

- *Immersion* is the feeling of being wholly involved within something, with being taken over and transported somewhere else.

- **Flow**

- *Flow* is the sense of smooth movement, the gradual change from one state to another.

# Medium

- A medium is engaging if it draws the person in, if it seems to surround the activity, if it stimulates the imagination.
- An engaging medium allows for continuity and variety, for 'flow' and movement between many subtle differentiations of conditions. Example: Change in lighting in cinema causing anticipation, satisfaction and being drawn.

# Gamification





# Gaming Experience

- Lazzaro, 2012 draws the **link between fun and emotion** in her contribution to understanding what makes interactive activities engaging.
- Five ways that emotions impact the gaming experience:
  - **Enjoy**. Emotions create strong shifts in internal sensations.
  - **Focus**. Emotions help gamers to focus effort and attention.
  - **Decide**. Emotions are central to decision making in games.
  - **Perform**. Emotions increase appeal to enhance performance.
  - **Learn**. Emotions are important for motivation and attention.
- Four Fun Key model
  - hard fun, easy fun, serious fun and people fun
  - Each of them goes on to unlock emotions such as curiosity, relaxation, excitement and amusement

# Fun Model

- *Hard fun* is concerned with **overcoming adversity**, the emotion that Lazzaro calls Fiero. (I.e. driving a car in games, comes from mastering)
- *Easy fun* evokes the key emotion of **curiosity**. Novelty, ambiguity and fantasy make feel curious to explore interaction.
- *Serious fun* is about **relaxation**. (Receiving rewards)
- *People fun* concerns the emotion of **amusement**. It arises when people are connected to one another in cooperative or competitive activities

# Create Engaging Experience

- Using these four fun keys helps the interaction designer to produce a UX that **moves the user through different emotions**, helping to create **engaging experiences**
  - Deciding what challenges to include in the product and whether these are short-term challenges or longer-term 'quests'
  - Deciding how to deal with the different skill levels of different users and how to accommodate changing skill levels

# Create Engaging Experience

- Deciding what rewards to provide people with and how rewards relate to challenges and skill levels
- Deciding if people can collect things, or complete things like puzzles, and if they do collect things how they relate to rewards, abilities and skills
- Deciding how people will relate to other people through competition such as league tables and posting achievements or through cooperation and working with others to achieve a common goal.

# Designing for Pleasure

- Product designers have long been concerned with building in pleasure as a key marketing point.
- Designing for pleasure can be as important as ensuring that an interactive device is usable.
- In the context of interactive devices or products, designing for pleasure contributes to ‘emotional, hedonistic and practical benefits’





# Aspects of Pleasure

- Tiger, 1992 has argued that there are four dimensions or aspects of pleasure.
  - **physio-pleasure:** This is concerned with the body and the senses.
  - **socio-pleasure:** Socio-pleasure arises from relationships with others.
  - **psycho-pleasure:** It refers to cognitive or emotional pleasure in Tiger's framework. (ease of use, effectiveness of device, satisfaction of acquiring a new skill.
  - **ideo-pleasure:** It concerns people's values - things one holds dear or meaningful - and aspirations. (desirability of having an expensive device)

# Aspects of Pleasure in Practice

These four dimensions are a method of structuring design thoughts. Let's consider the example of the MacBook Air laptop and analysing it against Tiger's four pleasures.

- ***Physio-pleasure.*** The machine is light, the texture of the titanium shell is pleasing and the keyboard is responsive.
- ***Socio-pleasure.*** Certainly when first released, owning a MacBook Air might be thought to enhance image as it distinguishes the owner as someone with the discernment to adopt a stylish remodelling of the laptop. There is also a certain socio-pleasure in being part of a small group of Apple devotees among a much larger community of PC users in our particular workplace.
- ***Psycho-pleasure.*** The MacBook Air provides relatively seamless integration between different media and so generates satisfaction from streamlining many work tasks.
- ***Ideo-pleasure.*** For some consumers, Apple products remain an embodiment of independence, creativity and free-thinking - attributes inherited from the early image of the corporation. Whether this is still an accurate perception is not the point: it is enough that people feel that it is so.

# Product Attachment

Six '**framing constructs**' that captured important elements of product attachment:

- **Role engagement concerned** support for the different roles that people play in their lives. It arises from the observation that people have to switch roles depending on the context, such as the time of day, or relationship required for a particular activity.
- **Control concerned** empowering people, giving them control over the product. This could be control over the 'look and feel' of the product, personalizing it to their tastes, or it could be control over the functionality of the product.
- **Affiliation concerns** how people develop feelings for a product by ensuring that the product meets a real need for them.

# Product Attachment

- **Ability and bad habit** is a construct concerned with enhancing people's abilities and preventing them making mistakes or engaging in their bad habit.
- **Long-term goals** need supporting as well as short-term functions. People build their attachment by recognizing that the product supports their long-term goals.
- **Ritual concerns** how the product fits in with important ritual aspects of the person's life.

# Aesthetics

- Aesthetics is a large area of study concerned with human appreciation of beauty and how things are sensed, felt and judged
- Norman's book *Emotional Design* (2004) discusses people's experiences in terms of
  - Visceral elements
  - Behavioural elements
  - Reflective elements



# People's experience

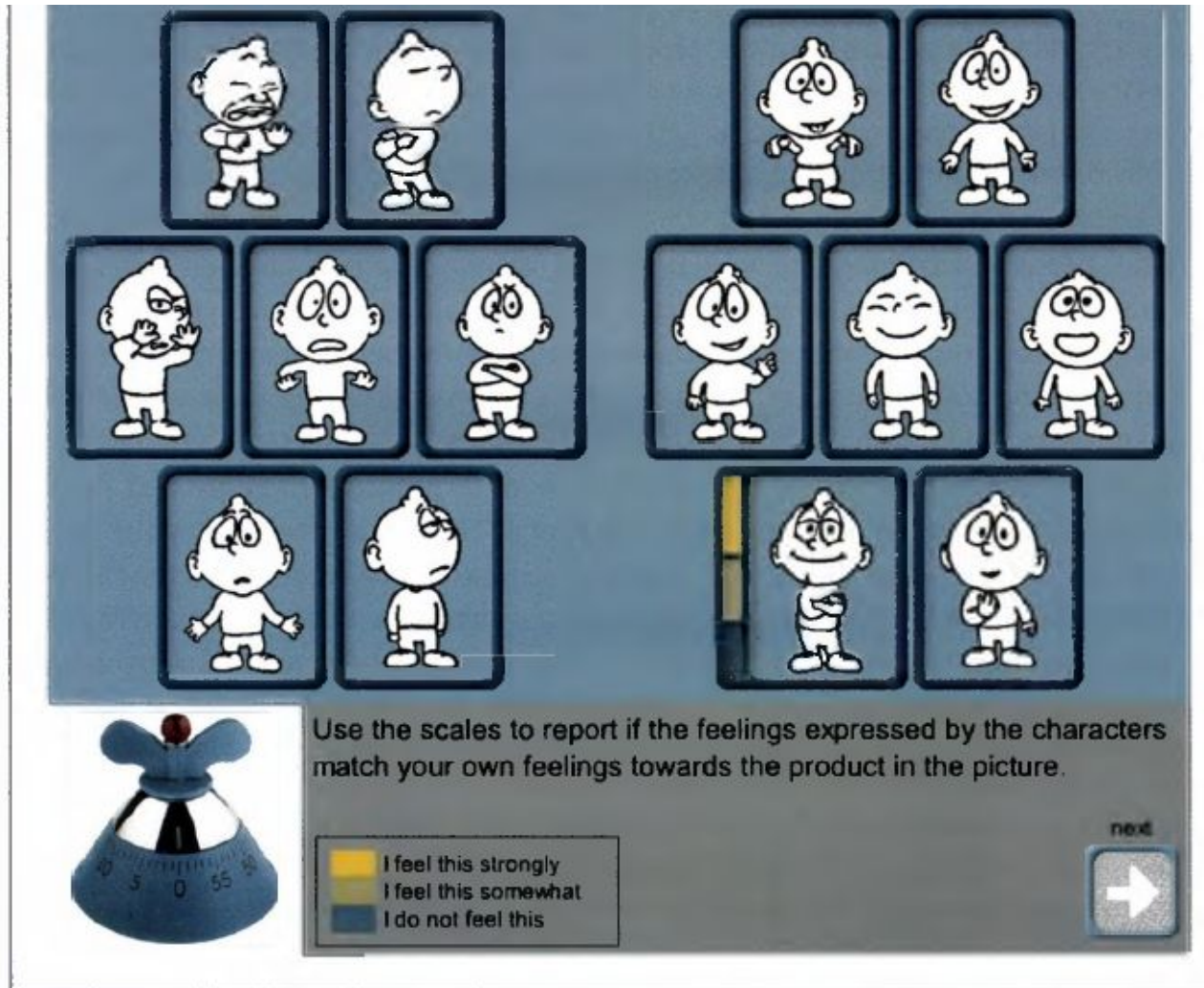
- **Visceral elements:** At the visceral level lies the perceptual aesthetics of an experience.
- **Behavioural elements:** At the behavioural level a positive emotional response will come from feeling in control and from the understanding that comes through use.
- **Reflective elements:** At the reflective level are issues of personal values and self-worth.



# Product Emotions

- The product and emotion navigator and a non-verbal method for measuring people's response to product features, called PrEmo.
- It consists of fourteen animations of a cartoon character, each expressing an emotion.
  - **Positive:** inspiration, desire, satisfaction, pleasant surprise, fascination, amusement, admiration
  - **Negative:** disgust, indignation (anger), contempt, disappointment, dissatisfaction, boredom and unpleasant surprise

# Product Emotions



**Figure 5.5** PrEmo

(Source: Desmet, P.M.A. (2003), pp. 111–123)

# Aesthetics of Interactive Systems

## Lavie and Tractinsky (2004)

- **Classical aesthetics**
  - clean, clear, pleasant, aesthetic, symmetrical
- **Expressive aesthetics**
  - original, sophisticated, fascinating, special effects, creative
- They assert that “***what is beautiful is useable***”
- For Boehner *et al.* (2008) the issue is to make products not just right, but meaningful.

# Class activity

1. Think about your favorite video game/VR game/3D game. Analyze the four fun key models that make the game engaging. Could it be more engaging if the design were different?
2. Think about a product you are attached to. Describe six framing constructs that captured important elements of product attachment.