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Team 13

Reflective Design

Design. What is it good for?

Design can mean planning but in the context of design and technology, we are looking at cultural values and how technology is situated in society.

Good example → Buildings

- Architects vs. Civil Engineers
  - Architects must think about the history, culture, and personal lives and habits of people that use the building; the cultural use of the building.
  - Civil Engineers work on the structure of the building; the technical implementation; or the utility of the building.
- What is a role in technology that could be considered a parallel to a building architect?
  - UX Engineer, Informatics Researcher, HCI
  - We need people to see that technology needs to encompass values

Interrogating Design

- What values, assumptions, and perceptions of the world are we unknowingly coding into the technology we design?
- How we shape the experience, how do we come up with methods to evaluate these things
- Blind spots at HCI
  - There's a focus on cognition, algorithm thinking but ignorant of the subjective experiences and emotions of users
  - We usually neglect emotion and rather, we have a lot technology that is meant for working productivity
  - It's difficult to know how to put emotion during interfaces
- Improve quality of life in order to make it better. Does this simply make all parts of life resemble work?
- How does a designer's interrogation of design shape people's experiences with that technology?

Reflective Design

- The critical design method to understand held values of users and embedded values in design
- Rather than challenging specific assumptions, reflective design aims to inspire critical reflection in itself by both the designers and users

What's so great about reflection?

- ❖ Grounded in Critical Theory
    - started out as a counterpart to teaching the church, individual thought and rationality during that time,
    - few centuries later, things that we think are not necessarily true, or are inherently flawed (unless we are a god, of course)
- ❖ Massive forces!
    - There are massive forces that shape our everyday life, play a huge part in how we see our world, not obvious so how do we find a way to identify to be consciously aware of them
    - Reflective design helps to identify these types of bias.
    - For example, politics of race, gender, and economics play a huge role in how we see the world
- ❖ Not purely cognitive, can be based in subjective experience
    - Be aware, make more informed choices, important, actually seeing something happen not just being told,

Participatory Design (PD)

- Foundational idea in Human computer interaction
- PD supports existing practices collaboratively designated by the users and the designers
- Originated in Scandinavia- designing computer systems in the interests of the workers
- Design approach that attempts to involve all the stakeholders- with emphasis on the workers ultimately using the system - in the design process
    - Introduced in reaction to the fear that computer systems would be a new source of power for authority over workers.
- Realizing that the experiences and skills of the users/workers need to be present in the "design and organizational implementation for the systems and the work they support"
- Taken up as a part of User-Centered Design- although PD itself is much more political in nature
    - In User-Centered Design workers are not considered co-designers
- Workers were present in the entire design process and allowed to make choices
    - Workers had experience and skills that make them a design asset.
- Important in PD methods, workers were treated as peers and co-designers
    - PD empowers workers politically
    - one way workers are empowered is by training and interactions in workshops
- Actual methods of PD include workshop designers, evaluation of the systems, stakeholder analysis.
- Efficiency over quality of life, this led to PD involving all levels of people, (workers, managers and everybody in the organization).

- As a designers, Participatory Designers are peers and user centered design central focus people that they talk to but not considered co-designers.

Activity

- Get into groups of 4-6 people - you are now a company that makes cars!
- 1 person is the designer, 1 person is the CEO, 1 person is the manager, and 1 person is the worker that assembles cars.
- The designer must redesign the car assembly line!
- 1st: redesign the assembly line with just the CEO and the manager (interests: productivity, efficiency, accountability).
- 2nd: redesign the assembly line with just the worker (interests: quality of life, cleanliness, personal security).
- Finally: Try to design the system with everybody involved.

Group Input & Feedback:

- What they found: CEO had different interests, manager = cost efficient, worker = different ideas, had to be efficient in the process.
- What we found: designer perspective: needs somebody to sit there as a mediator.

Participatory Design → Reflective Design

Participatory Design supports existing practices collaboratively designated by the users and designers.

Some reflexivity can come out of value conflicts between the designers and users

- When there is too much agreement between stakeholders values are less likely to be challenged because less reflection is inspired during design.
- Conflicts can provoke values that may usually be considered uninteresting or uncomfortable.

Value-Sensitive Design

- Developed by Batya Friedman at University of Washington
- 3 types of investigations:
    - Conceptual : important for understanding what the stakeholders want, predict potential value conflicts and tradeoffs
    - Empirical: qualitative, quantitative research, talking to users, surveys, frequency, people interaction, figure out how stakeholders connect with user's values, observations
    - Technical: making your system and how it aids/affects the values you are designing for

  Reflective Design: central design around values

Critical Design

Moving from values to more critical thoughts

- Developed by Tony Dunne and Fiona Raby.
- Design research to avoid or reject values of consumer culture and instead serve as cultural critique.
- Not for creating objects that do what users want, but provoke new ways of viewing the world by challenging assumptions.
- Things don't need to actually be built (meant for designers to go through design process).
- Critical Design can sometimes can be considered too extreme so as to be written off as too radical or too subtle such that it is seen as a conventional design and doesn't illicit reflection, inaccessible.
- Example: The Dawn Chorus Bird Feeder plays pop music for birds so that they will learn to sing the songs. It is intended to make us think about our dominance of nature.
- Critical Design is not meant for users to be using them, used for designers for self-reflection, defamiliarize notions that they have about designing, open up new design spaces, and make you a better designer.
- Critical Designers refuse to accept their designs as art; because art can be ignored as a passing fancy, where-as if you look at their designs as a design technique they imply that the world can be changed.
- Their designs don't necessarily need to be built, many times critical designs only need to be designed to allow the designers to see their own unconscious assumptions and biases

❖ Odom's "Designing for Slowness" with deployment of the Photobox

- Goal: to provoke discussion and develop a design space (NOT to engineer a solution) to massive Flickr archives.
- We aren't designing to do what users want, but to challenge our assumptions and perspectives.

Ludic Design

- Developed by Bill Gaver - designing for people as playful creatures, as a response to Critical Design's Extremism.
    - In return, this design method is a great way to learning, developing new goals and values.
- Homo Ludens from the Latin: Playful Man or Playful Creature.
- Leveraging play as a way to learn, develop new values, goals, understandings.
    - Play has more value than simply being entertainment
    - i.e. research is showing that video games have value other than being a form of entertainment
- Intended to inspire reflective design through play and curiosity; specifically rejecting utility.
- Focus on reflective experiences through the designed object by the user.

- Focusing on engagement and stimulating curiosity, explicitly designing with values counter to utility, efficiency, and work-oriented values.
- Curiosity and exploration as motivators, rather than external pressures.

Critical Technical Practice

- Proposed by Phil Agre in response to the lack of progress in Artificial Intelligence development and research.
- The focus of reflection is on the designer.
- A developer's/designer's "writer's block".
- Inverting metaphors to focus on the marginal and de-emphasize the prominent.
- Identifies underlying assumptions, questions values in the field, and seeks to shift them.
- While critical, it is a means to a technical end.
- Proposed Improvements from HCI
    - consider users
    - focus on critical thought rather than technical outcome
    - It identifies assumptions
    - Questions values
- What's distinctive is the idea that it focuses on the designers rather than the users.

Reflection-In-Action

- Reflection is proposed as an "in-the-moment", dynamic, and visceral process.
    - You reflect as you design
- Not a detached pre-emptive or retrospective activity.
- Unites theory and practice, research and design.
- Focus on improvisation, enables you to eliminate your theories as you go.
- A problem is faced but you come at the problem with the research and background needed to help you practice the design.

Culturally Embedded Computing

- Phoebe Singer's (dialogue).
- Design as inquiry and exploration rather than as the means to an outcome.
- Series of design exercises with users, keeping in mind the cultural context of computing.
- We see multiple design decisions, influenced by the design approaches we just looked at.
- "Conducted interviews as an open-ended exchange among equals" rather than as user vs. designer/researcher.
- Using the exercise of designing itself to encourage reflection on designed systems.
- Design as inquiry and exploration.
- Debate: Does the machine having conventional utility 'diminish its capacity as a critical device'?