CRITICAL DESIGN
CPSC 544
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DEFINITIONS

“Critical design is a form of research aimed at leveraging designs to make consumers more critical about their everyday lives, and in particular how their lives are mediated by assumptions, values, ideologies, and behavioral norms inscribed in designs.” (Bardzell & Bardzell, 2013)

Dunne and Raby contrast this against “Affirmative Design”
AFFIRMATIVE DESIGN

- “the emphasis is on easy pleasure and conformist values. This genre reinforces the status quo rather than challenging it. We are surrounded by products that give us an illusion of choice and encourage passivity.”
  (Dunne & Raby, 2001, p.58, 45)
- Promotes “conformity, obedience, easy pleasure, and corporate identity”
  (Bardzell & Bardzell, 2013, p. 3298)
### Dunne and Raby’s Binary

<table>
<thead>
<tr>
<th>Affirmative Design</th>
<th>Critical Design</th>
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<tr>
<td>Primary intended outcome is a better product or service</td>
<td>Primary intended outcome is knowledge and discussion</td>
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<td>Reinforces how things are now and conforms to expectations</td>
<td>Provides a critique of the prevailing situation through designs that embody alternative values</td>
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CRITICAL DESIGN: KEY IDEAS

- Design is political
- Design can be a mode of inquiry
- Design can spark debate, change perspectives
CRITICAL DESIGN

- Engages with HCI’s potential to:
  - marginalize
  - isolate
  - threaten survival
**Critical Design Process**

Theorize → Design

Design → Critique

Critique → Prototype

Prototype → Theorize
THE “CRITIQUE” IN CRITICAL DESIGN

- Twists or comments on traditional design
- Similar to participatory design, the user is an active maker of meaning
- Intent to be dialogic: the product provokes discussion and the users’ reaction informs theory
EXAMPLES OF CRITICAL DESIGN

Teddy bear blood bag radio
Always somewhere, never there
Photobox
TEDDY BEAR BLOOD BAG RADIO

Dunne, A. & Raby, F. Design for Debate. Convivio Web-Zone 203:
TEDDY BEAR BLOOD BAG

- Precursor: Chew-Chew, the robot that eats only sugar cubes
TEDDY BEAR BLOOD BAG

- Problem: Technologies facilitating organic matter as fuel for robots open up new types of exploitation.

- Critical design challenge:
  - How can we get the public and designers to engage with the consequences of this technology?
TEDDY BEAR BLOOD BAG RADIO
Always Somewhere, Never There

ALWAYS SOMEWHERE, NEVER THERE

Problem: Clear and usable classification systems flatten and distort realities.

Critical design challenges:
- How can a digital information collection foreground the residual?
- What is the interaction, or reading, experience of such a collection?
Always Somewhere, Never There

- Three designers created classificatory interfaces with an attempt to foreground the residual
- Solicited interaction critiques from professionals and student readers
- Synthesized readers’ critiques and designer reflections into a new concept of database navigation
Here in Texas addresses the relationship between a stereotypical idea of Texas as positioned against its reality, filtered through an authorial persona’s perspective as a non-native Texas resident. Some browsing categories reference Texas concepts that are not represented in the collection’s current videos.
ALWAYS SOMEWHERE, NEVER THERE

- Asking participants to *critique* the designs rather than use or evaluate them lead to rich data, well-formed arguments.

- “In both substance and scope, these arguments challenged our own initial interpretations of our work and propelled our thinking.”
ALWAYS SOMEWHERE, NEVER THERE

- One participant called the design “a perfectly functioning dilemma generator”

- We found that database design typically orients towards a transport mode of interaction, but participants experienced critical designs as a wayfaring mode of interaction
Always somewhere, never there

- Our two research questions became commingled: it seemed like a collection might foreground the residual not through being different so much as through being read differently.
- Discovered modes of database design that would reveal and explain residuality via a wayfaring mode of interaction.
PHOTOBOX

**PHOTOBOX**

- **Problem:** Ample storage and the easy creation of content has made personal collections large and largely invisible.

- **Critical design challenge:**
  - How can we design for anticipation?
  - How will users react to a device that does not demand their attention?
  - How will users react to a device that they cannot control or predict?
фотobox
PHOTOBOX

- Prototype deployed in three households for 14 months
- Interviews every two months and at the end of the deployment
- Field notes and documentary photography
“The surprise of getting a photo was great but I had this, I don’t know, sense that I should have some ability to make it print. ...Sometimes I’d have these thoughts like why am I not telling it when to? I guess it’s what I’m used to doing. ...When we got back [from vacation]. ...I opened it up and found three photos, one was of a different trip, [from] back when we first met. That’s when I felt like I ‘got it.’ It’s going to do its thing. It can take care of itself. That way of thinking about it changed things for me. I don’t have other things that do stuff on their own. From then on, it started to take on a personality. It’s independent and takes its time, but it’s going to print something for me.”
“It made me think about how quickly things are moving these days. Like I check Facebook four or five times a day, clicking through all kinds of stuff. Like what’s all that information doing to my brain?? ...I thought about changing things up some. ...I took a break from Facebook recently. Don’t know how long it’ll last [laughs] but I thought why not try it out.”
PHOTOBOX

- Importance of layered randomness
  - Unfamiliar and disruptive machine behaviour
  - Caused frustration but also invited meaning
- Importance of long-term (14 month) study
  - From novelty to disruption to integration
PHOTOBOX

- Successful at providing a rich, ongoing sense of engagement with digital photo archives
- Prompted participants to reflect on the role, place, and pace of other technologies in their lives
EVALUATING CRITICAL DESIGN
Some Types of Critical Design

- Transgression
- Satire
- Staging of dilemmas
- Provocation
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<tr>
<th>Topic</th>
<th>Changing perspectives</th>
<th>Proposals for change</th>
<th>Enhancing appreciation</th>
<th>Reflectiveness</th>
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<td>Purpose</td>
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RELATED APPROACHES

- Speculative design
- Adversarial design
- Research through design
- Constructive design
- Design fiction
DESIGN FICTIONS CFP

We seek submissions that imagine possible futures for research on the relationships between computers and people. Submissions will include two portions: a fictional document related to the conduct of research and an author statement about the document. The fiction document could be an extended abstract, a call for papers, an excerpt from API documentation, a book review, a study protocol for IRB review, or any other relevant type. The author statement should connect that document to current events, cite on-going research in the field, or otherwise extrapolate how the envisioned future might arise from our given present.

http://group.acm.org/conferences/group18/author.html
Reframing Your Lightweight Project as Critical Design
**QUESTIONS TO ASK ABOUT YOUR PROJECT**

- What assumptions does your project make?
  - About the domain of use
  - About how the technology should serve users
  - About dominant cultural, social, or economic values

- How could your design instead:
  - Challenge dominant notions (for example, of comfort, pleasure, capitalism)?
  - Make users think critically about the role of technology in their lives?
Propose an alternative, critical design

Suggestions:
- Make it refuse to work in expected ways (counterfunctional)
- Make it a design fiction (propose something imaginative, requiring new capabilities or as a extreme consequence of your design)
- Make it serve aims against the scope of commercial design

Include ideas on how you could evaluate the effect of the design
DISCUSSION
THEMES FROM STUDENT REFLECTIONS

- Is any advance in design paradigm “critical”? (e.g., human-centered design)
- Is the goal of HCI only to address human needs? Can or should it not also make users think about their needs?
- Is the point of critical design only exploratory and imaginative or is it actually something that we can use to solve problems?
REFERENCES AND FURTHER READING


