Critiques

CS 347
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Announcements

Final presentations (two sessions) this Friday, June 4 (10am, 5pm)
  • You must attend your session; you can also attend the other if you want

Final project paper also due Friday, June 4 11:59pm
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Why we must be reflective

We cannot blindly design ourselves into a bright future. What if that bright future is not what we think it is?

HCI was, in many ways, born out of a critical perspective on artificial intelligence [Winograd and Flores 1986]
What is ‘critical’ here?

Not ‘critical’ as in being mean, or ‘critical’ as in a crit

**Critical theory** aims to be reflective about our assumptions and what they might imply

A strong critical HCI paper reorients us toward important problems, and pushes us to cast aside previous assumptions
Critical design
Design to challenge us
[Dunne and Raby, 2001; Bardzell and Bardzell, 2013]

Use design fiction to cause us to re-evaluate our assumptions of what design can and should be doing

Sputniko’s Menstruation Machine

Electrodes for pain, fake blood…

Its question: how might design challenge our gender norms and identities?
Fit4Life [Purpura et al., CHI 2011]

Critique of today’s persuasive and behavior-change technology

Computer vision to estimate calories, LED beacon to tell others how you’re doing, “metabolic lancet” to analyze blood, hourly Facebook posts if you’re not tracking your behavior.
Datacatchers [Gaver et al., CHI 2016]

IoT device that scrapes facts about the area you’re in

“People around here earn £25,300 per year. A 4-5 bed house will cost £26,000 per year to rent.”

“People from New Cross are in the bottom 50% of health in England.”

“The Government say that 6% of people in this community are unemployed. That is 339 people.”
Let’s get divorced [Forlizzi et al. 2017]

Constructive design research (“research through design”) and critical design research are increasingly at odds:

Constructive research: demonstrating preferred futures in the lab or field

Critical design research: polemicizing the current zeitgeist in a showroom

Suggestion: let’s stop trying to connect these communities — they have extremely different values
Critical theory and HCI
Design justice
[Costanza-Chock 2020]

Design can be a tool not just to solve problems, but to resist structural inequalities

Connects activism with notions of participatory design
Recall: third wave HCI [Børker ’06]

First wave: human-machine fit, human factors

Second wave: understanding cognition, groups working together in the context of applications

Third wave: non-work, non-purposeful, non-rational

But are our techniques up to the task of the third wave?

e.g., usability studies? design thinking?
Is our drive to design ‘liberation technology’ or ‘ICT for development’ (ICT4D) just reinforcing old colonial legacies?

“We’re going to go help the fairly poor Indian resident who are getting water from the river by giving them our new water purifier system!”

Alternative points of view: might these people be teaching us design lessons instead?
Yesterday’s tomorrows

[Bell and Dourish ’06]

Ubiquitous computing is driven not by a technological goal, but by a shared vision of the future.

However, this vision is a future in 1991.

What should the future of ubicomp be, from today’s perspective?

Bell and Dourish’s proposal: messiness of everyday life
Feminist HCI

[Bardzell CHI 2010]

Feminist theory often aims to emphasize the roles of currently marginalized groups in society.

Who is the “ideal user” of your design? Is that person who you really want it to be?

What assumptions are you making about users? Do you allow them to self-disclose?

How integrated are your users in the IxD process? See also: participatory design movement.
Intersectionality and HCI

[Schlesinger, Edwards, and Grinter, CHI 2017]

For the most part, HCI has considered representation in terms of one dominant axis: e.g., gender, nationality, expertise

Intersectionality emphasizes that experiencing multiple at these attributes simultaneously produces a substantively different experience than each attribute individually

How might we better engage with intersectionality in design and HCI? Especially given that design and computing have left race and ethnicity under explored
Critical Race Theory & HCI

[Ogbonnaya-Ogburu et al., 2020]

Introduces critical race theory to the HCI community: a body of work that grew out of the civil rights movement and examines society and culture as it relates to race and racism.

Highlighted concepts relating to HCI include:

- Interest convergence
- Neoliberalism in tech industry
- Value of storytelling to upend assumptions.
In conclusion...

It's been a pleasure.
Interaction

Social Computing

Design
<table>
<thead>
<tr>
<th>AI+HCI</th>
<th>media and creativity</th>
<th>foundations</th>
<th>ICT4D</th>
</tr>
</thead>
<tbody>
<tr>
<td>accessibility</td>
<td>programming</td>
<td>collaboration</td>
<td>visualization</td>
</tr>
<tr>
<td>cognition</td>
<td>critiques of HCI</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
An Image of Society: Gender and Racial Representation and Impact in Image Search Results for Occupations
Beyond being there
Activity sensing in the wild: a field trial of ubitfi garden
Labeling Images with a Computer Game
User-defined gestures for surface computing
Auditing Algorithms: Research Methods for Detecting Discrimination on Internet Platforms
Zooids: Building Blocks for Swarm User Interface
Yours is better!: participant response bias in HCI
Ability-based interfaces
He says, she says: conflict and coordination in Wikipedia
Predicting Tie Strength With Social Media
Learning Visual Importance for Graphic Designs and Data Visualizations
Past, present, and future of user interface software tools
Visualizing API Usage Examples at Scale
Mental Models of AI Agents in a Cooperative Game Setting
Social Comparison and Facebook: Feedback, Positivity, and Opportunities for Comparison
What do we mean by “accessibility research”?
Exploring the Quality, Efficiency, and Representative Nature of Responses Across Multiple Survey Panels
Distance matters
When (ish) is My Bus? User-centered Visualizations of Uncertainty in Everyday, Mobile Predictive Systems
Automated Class Discovery and One-Shot Interactions for Acoustic Activity Recognition
Parallel Prototyping Leads to Better Design Results, More Divergence, and Increased Self-Efficacy
Principles of mixed-initiative user interfaces
Direct manipulation interfaces
Designing mobile interfaces for novice and low-literacy users
Sketch-n-Sketch: Output-Directed Programming for SVG
I always assumed that I wasn’t really that close to [her]: Reasoning about Invisible Algorithms in News Feeds
Tangible Bits: Towards Seamless Interfaces between People, Bits and Atoms
The Reflective Practitioner
Will the Crowd Game the Algorithm?
On distinguishing epistemic from pragmatic action
Reflective Physical Prototyping through Integrated Design, Test, and Analysis
The Psychology of Human-Computer Interaction
Information Visualization
Methodology matters: Doing research in the behavioral and social sciences
Methodology matters: Doing research in the behavioral and social sciences
The tasks of programming, In Psychology of programming
Bravo!

Thank you all so much :)
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