Building for and with multiple stakeholders

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HW2 is up!

- Will discuss throughout class and at end
- **Fully group project,** and you'll be dinged if it looks otherwise

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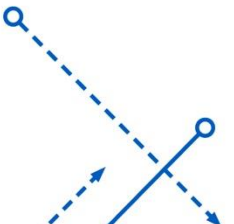
Today

- Continue your activity

- Participatory Design and Participatory Action Research

- Another activity ☺

- If time … start "Bias in NLP"

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The Impact of Generative AI on Critical Thinking: Self-Reported Reductions in Cognitive Effort and Confidence Effects From a Survey of Knowledge Workers

Hao-Ping (Hank) Lee, Advait Sarkar, Lev Tankelevitch, Ian Drosos, Sean Rintel, Richard Banks, Nicholas Wilson

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The rise of Generative AI (GenAI) in knowledge workflows raises questions about its impact on critical thinking skills and practices. We survey 319 knowledge workers to investigate 1) when and how they perceive the enaction of critical thinking when using GenAI, and 2) when and why GenAI affects their effort to do so. Participants shared 936 first-hand examples of using GenAI in work tasks. Quantitatively, when considering both task- and user-specific factors, a user's task-specific self-confidence and confidence in GenAI are predictive of whether critical thinking is enacted and the effort of doing so in GenAI-assisted tasks. Specifically, higher confidence in GenAI is associated with less critical thinking, while higher self-confidence is associated with more critical thinking. Qualitatively, GenAI shifts the nature of critical thinking toward information verification, response integration, and task stewardship. Our insights reveal new design challenges and opportunities for developing GenAI tools for knowledge work.
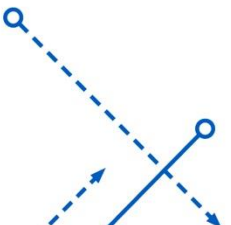
PDF

Projects

Tools for Thought
The New Future of Work

Research Areas

...higher confidence in GenAI is associated
with less critical thinking...

Qualitatively, GenAI shifts the nature of critical thinking toward information verification, response integration, and task stewardship.
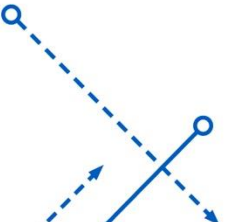
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Extension #2

1. Groups 1-2 are now focusing on humanities students.
2. Groups 3-5 are now focusing on helping CSE students…understand Global Inequality

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Presentations! 3 minutes this time.

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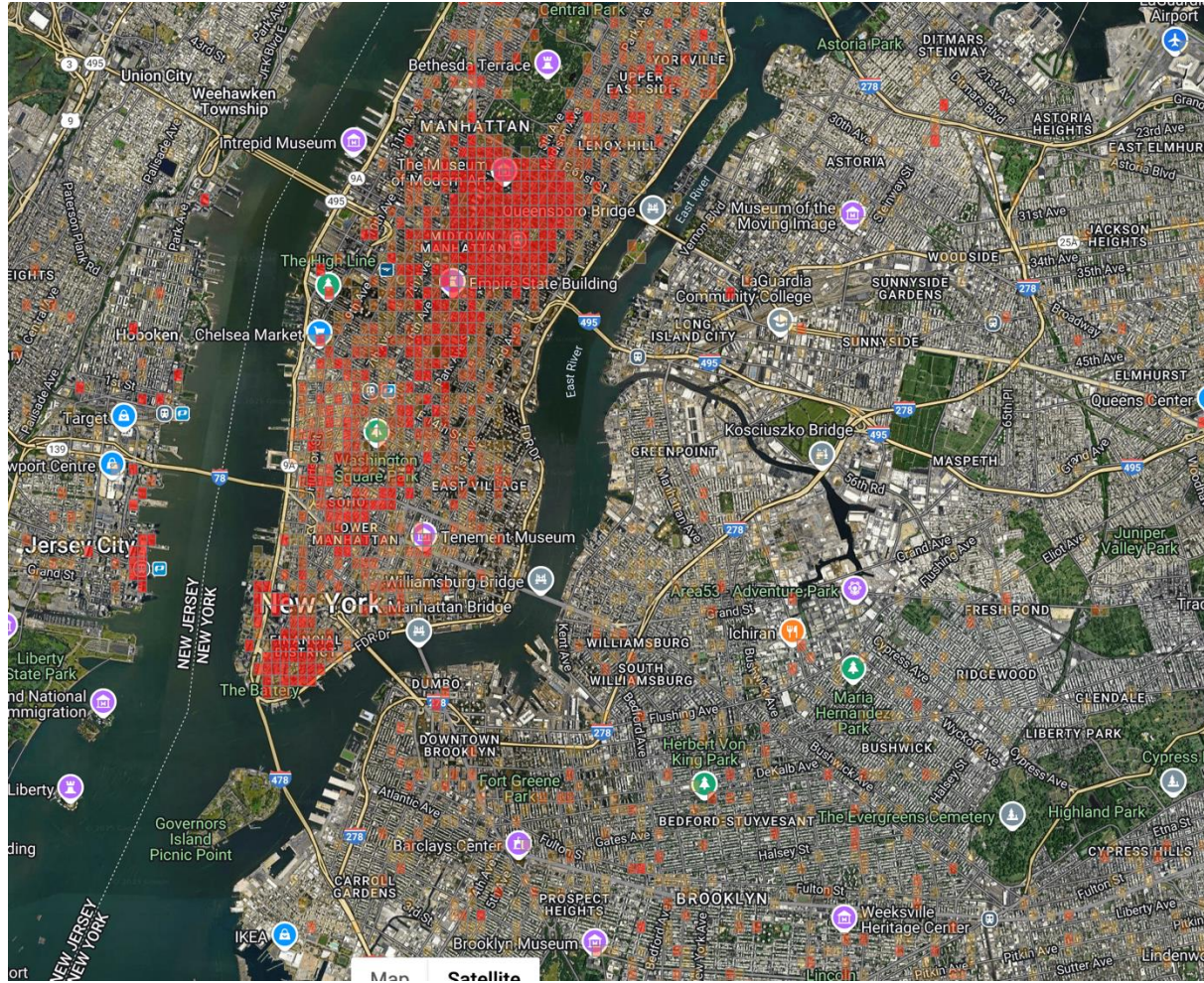
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Game idea is great!

Groundbreaking course challenges students to reimagine justice through art, game design, history

From left: Matt Kenyon and Camilo Trumper address their students while the judges score the presentations. Judges (from left) are local artist and MFA candidate Kenny León Andino; local artists and business owners Alexa and Edreys Wajed; and actor, artist and educator Ahmed Best, who flew in from California to be part of the panel. Photo: Meredith Forrest Kulwicki

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"Make VS code worse"

https://whitecollar.thenewinquiry.com/

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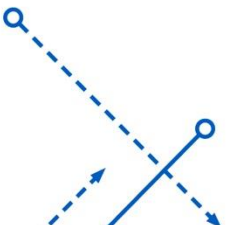and Engineering
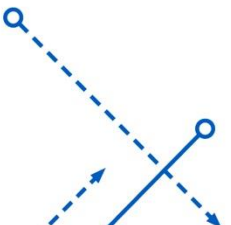School of Engineering and Applied Sciences

Reflections on presentations

- Getting people to know vs care

- Incentivizing … who?

- Pushing through "that won't work" is important

- What's a "history expert"

- What's "bias"?

- Spend time on your slides

- Competing optimization criteria (e.g., student satisfaction vs unbiased)

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Participatory Design / Participatory Action Research

- On Monday, Atri mentioned that your solutions somewhat superficially involved the actual stakeholders

- OK, well, what do we do about that?

- (At least) two ways of thinking about this:
  - **Participatory *Design* –** Out of HCI, how do we incorporate stakeholders into the *design* process
  - **Participatory *Action Research* –** Out of social work, how do we incorporate stakeholders into the process of *research*

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Participatory

Design

originated, in

some sense,

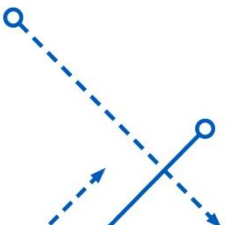with Luddites…
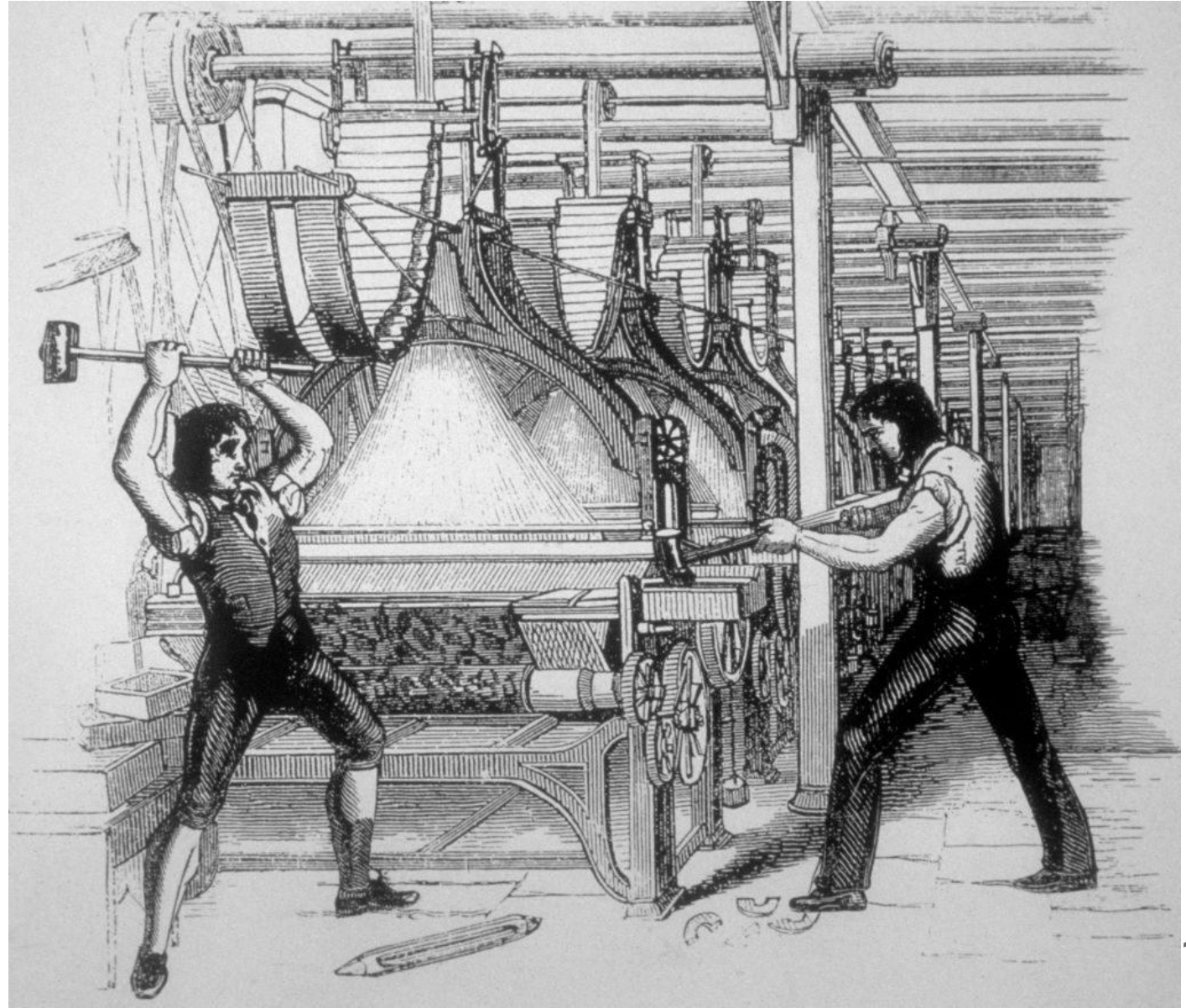
The Scandinavian Approach

- 1970's Scandinavia

  - Growing concerns of deskilling and shift in workplace dynamics due to computerization

  - Foundational work by Kristen Nygaard and the Norwegian Iron and Metal Workers Union

- UTOPIA

  - Utbildning, Teknik Och Produkt I Arbetskvalitetsperspektiv

    - Training, Technology and Product in Work Quality Perspective

  - Ambitious attempt at direct participation in development of computerized systems in the workplace

 - Nordic Graphic Union – newspaper graphic designers

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PD summary

- Real participatory design is challenging!

  - Uncertain outcomes

  - Long timelines

  - Interpersonal dynamics of participation

  - Buy-in from investors

- Real participatory design is important!

  - Democratic development of public good – rather than tech for tech's sake

  - Not just inclusion – empowerment

  - Genuinely novel design insight generated by jumping far out of the box

  - Projects with longevity that can thrive well after you have left the space

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Participatory Action Research: Origins

- 1982: International Participatory Research Network
  - 1960s and 70s, India: Anti-colonialist lens, inspired by social movements
  - 1970s-1980s
    - Tanzania (Hall and Swantz) and Chile (Vio Grossi): restructuring life around new economic policies (e.g., land redistribution) necessitated an understanding of citizens' experiences (e.g., obstacles to subsistence farming on newly held land)
    - Paulo Freire tied it altogether: Adult (popular) education, democratization of research

NEW FRAME

(Glassman & Erdem, 2014)
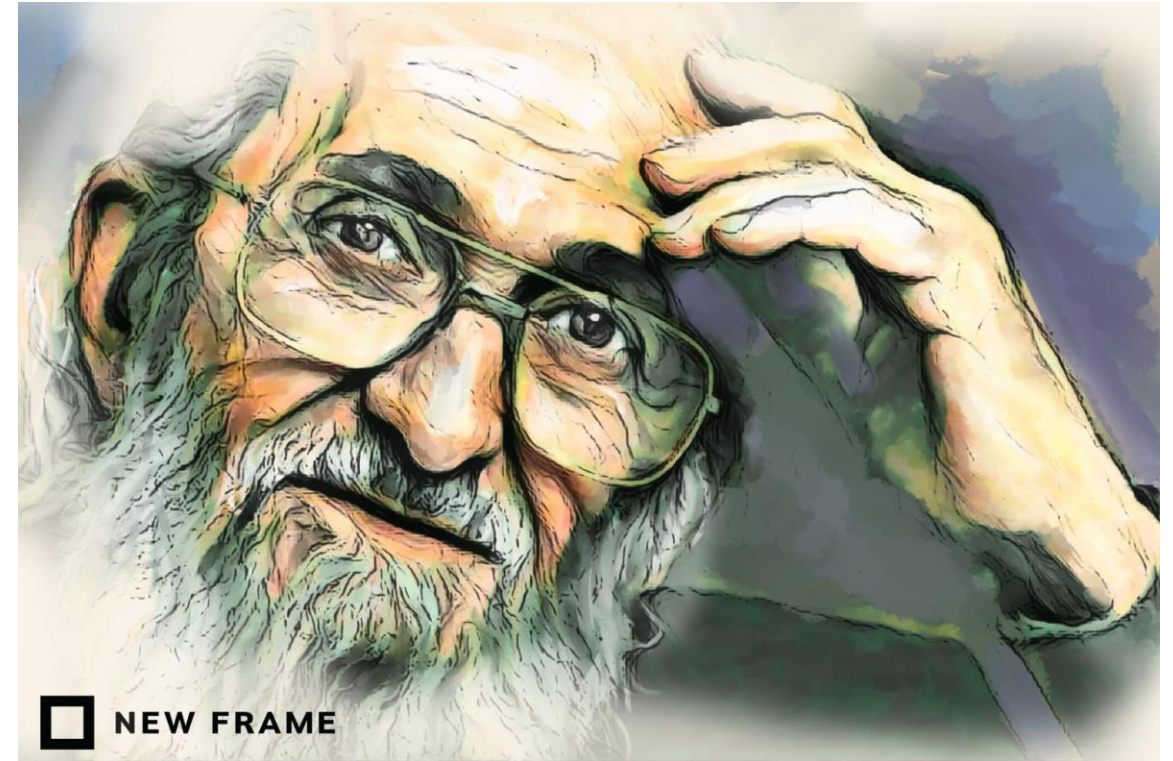
Participatory Action Research: Components

1. **Participation (*Vivencia*):** Central to components 2 and 3 below and meant to represent the importance of lived experience as a driving, transformative force

2. **Action (*Praxis*):** The act of transforming one's current lived experience to one that is more collectively just based on a critique of social conditions (see component 3); the focus is on changing structural power relations, both through the research process and the actions driven by the data.

3. **Research (*Conscientization*):** The point at which the oppressed "begin to question and critique actions they may have once believed were critical to their survival . . . [Conscientization involves] creating new community-based problem-solving processes" through research

PAR Case Study: Youth Participatory Action Research (YPAR) 2.0

- Institute for Sustainable and Economic Educational and Environmental Design (ISEEED) in Oakland, CA: iseeed

- **Aim:** 'Ground-truth' the County health department's official database on food outlets, which had labeled East Oakland as a food oasis

- Youth and adults worked together to create an app that young people could use to capture information about locations in their environment and conduct interviews and surveys with store owners and residents: streetwyze

- **Findings:** The county claimed there were 50 grocery stores, but there were only 3. The rest were liquor or corner stores.

- **Action**: Made recommendations to decision makers and convinced them to add a farmers market, food commissary, and urban farm to local school districts

- **Youth outcomes:** Newfound of their social locations within systems of race and class

(Akom et al., 2016)