This topic is bigger than anything one person can address, but I want to keep this question as a collective, guiding frame.
I’m very much looking forward to your thoughts to help develop this relatively new attempt at synthesizing what we’ve been up to the last two years.

land acknowledgement

explain that the backdrop of this is the growth of ethics and the incursion of computational tech into our public institutions, from policing to education to health care.
Design, research, or tools alone are ill equipped to transform infrastructures.

We need to address political agency to redirect the technologies that impact our lives.

To deepen democratic control of our digital infrastructures, we also need to focus on political agency. By political agency, I mean the capacity of agents to create effects through direct and institutional action.
To address this, I'll move through two case studies:

* the first, a struggle for democratic oversight over city surveillance technology acquisition in San Diego. In this case, a highly organized set of community organizations already had experience doing racial justice work. This case study lets me zoom in on what HCI knowledge and practices, in tactical forms, were able to contribute to the effort.

* the second case study is of Turkopticon, a decade old software project supporting Amazon Mechanical Turk workers. I'll show the limits of software in creating political agency for workers and how we have turned the project into a worker-led advocacy organization.

* I'll wrap up by reflecting on how claiming political agency requires us to learn ways of organizing and relating discouraged by post-Fordist production.
don’t go through each tech

“‘infrastructure’ is best defined negatively, as those systems without which contemporary societies cannot function” (2003: 187).

cut across space and communities, invisible to most
(trust supporting those to whom the problem is visible)
(turk, supporting those to whom the problem is visible)
(combahee collective thing here where if you address the issue by those most harmed, works up through the system)

much of what they do is invisible to most
some affect communities very differently, as in surveillance systems used by law enforcement in our American system of racial capitalism
Historically, HCI has promoted agency through design and design-informing practices, such as within companies, or more rarely through policy. Now we also see opportunities like company ethics boards or, more encouragingly, jobs in regulation of these industries. What I’ve seen over and over is that without strong and organized movements, these sanctioned oversight or regulatory roles are subject to the challenges I outline here. Further, these expert roles cannot represent how diverse communities encounter and need to adapt technologies they encounter in different institutions.

So how can we do our work in ways that strengthen the hand of communities that have a stake in technologies?
Digital Dead End begins from the problem of creating a computer center and offers methods for project-oriented community building to strengthen community agency to direct technology deployments.

Design Justice calls for community control and political accountability for technologies and calls on us to putting technology design in service of communities and social movements.

Race After Technology centers on race and anti-Blackness in technology and shows what technology practice in service of abolition movements would look like.

It also builds on responds to the immense work on accountability, auditing, and questions of how to make publicly deployed algorithms accountable especially by Karrie Karrahaliós and Christian Sandvig. And at UCI, my mind was blown when Yeshi Milner gave a talk that showed example after example of black organized communities tackling big tech on the terrain of the school district and neighborhood.

I’ve learned a tremendous amount from these works but want to pick up with the question of not just how design can serve movements, but how can we account for and build the political agency of the movements we hope to contribute to? What resources can we offer to strengthen communities’ voice and hand?
The first case is about how a coalition of community groups, including racial justice organizers and tech worker organizers, came together to subject surveillance infrastructures to democratic oversight. This case illustrates a variety of ways we put HCI and Information studies knowledge practices contributed to the political agency of an anti-surveillance coalition.
This battle over the smart streetlights is a battle between what the city said and what it really was.

First, background the situation

power saving
really cameras, microphones, object detection, APIs
after council approval, the city revealed a strategy of tech gentrification built onto the street lights — they did not call it that but I recognized it as such

I FOUND OUT ABOUT IT THROUGH DESIGN LAB as the city was reaching out to some communities to build the value of this platform.

after they were launched, publicly getting people to build apps
(no apps currently exist mind you and I’ll talk more about that later)

A reporter also had reported on the surveillance aspects of the technology, but no group had picked the issue up to really work on it and get council to prioritize it.
khalid
observation that mostly police were presenting
At the moment civic tech was imagined how to improve the community with apps they could imagine, community groups were imagining what was likely to happen. They drew on their expertise in their own histories with of interaction with institutions.

ONE example:
gang documentation, SDPD

This is just one example, but communities had many examples.
Building on racial justice coalitions and Coalition for Police Accountability, but Tech Workers Coalition, TechLead joined and expanded ranks
Decided we didn’t want to just shut down the streetlights
Realizing that new tech comes along all the time
Subjecting acquisitions to oversight by council, board
Tech acquisition as a moment when it can be refused or revised / reconfigured
You can’t reconfigure something you can’t see
A city can't reconfigure something it does not understand
How could we, as HCI researchers and tech workers, strengthen the coalition’s work?
Providing counter-expertise

The City’s only technical experts on the record were the company representatives themselves.

Cedric did a PRA, also checked with counsel in his old company. I worked on educating journalists about how AI processes and models are essentially processed data.
Linda Vista, Law school, three zoom community forums,
Free public education in some sense
People don’t see the infrastructure, hidden in plain sight or actively hidden
People approach it with hope, this will bring jobs
Places for developing a collective, political understanding rather than just transferring expertise
Community will gets built in such spaces
Legitimating Community Demands

San Diegans Shouldn't Be Lab Rats for Innovation
San Diego's anti-surveillance coalition of community groups rightly are demanding a seat at the table to design the city's data infrastructure.

a publication widely read by City politics people
Speculative Research: Slightly Dystopian Demos

Subverting the City’s public safety narrative by dramatizing the potential of the APIs.

Broken streetlights were actually the most important finding of this work.
Bespoke Policy Reports

- Policy memos assembled established research, news reports, and lab findings (5-14 pages double spaced)
- Organized to address policy makers as “users”
- Assembled quickly and bespoke based on long term research
- Cited from the dais by Council President

Policy reports can be found at: http://quote.ucsd.edu/lirani/news/

Point people to Q&A if they want to learn more about this

highlight the title categories: technological, organizational, fiscal, equity
appeal to priorities of different council members
fashion council members as allies by creating a narrative of technology is complicated
The Coalition is winning!
Key strategies:

- Mobilizing hundreds of City Council calls in an election year
- Aligning with both progressive and conservative council member values: privacy, fiscal prudence, racial and immigration justice
- Keep the focus on democratic oversight process rather than specific technologies
Next, I want to talk about a decade-long project in which software and research helped workers gain some power, but also, over a decade, became a bandaid for a flawed system.

For a future of work with good conditions for AI workers, we need to invest the most basic resources in workers so they can take the time and create their own spaces to organize for change. Donated money is what Amazon Mechanical Turk workers need to make time to organize for the future of work that they want.
So what is Amazon Mechanical Turk and why does it exist?

AI promises autonomous, almost magical, automation — delivered by heroic engineers and the compute power at command. This is a myth and it hides so many workers who make AI work. Fifteen years ago, Silicon Valley companies were starting to face this reality head on. Trained as a Computer Scientist, I worked at Google for a few years. There, I never met but I knew there were were workforces who pitched in when the automation failed, or helped to train the automation in the first place. At Google, they helped tune up a new search algorithm by judging which set of search results were better. They made sure advertisers’ webpages did not violate Google’s tobacco or firearms policies. My friends worked at similar companies and search startups. There, the engineers faced challenges like teaching a computer how to see the difference between porn and not porn — something even judges famously have a difficult time with. Some of them needed to convert YouTube audio to text so search engines could search it. Or they needed workers to check and correct error prone automated transcriptions. The roboticists needed to teach rolling robots how to see the difference between an immovable couch and a navigable carpet. Tech companies were encouraging all us to upload more of our lives and work onto their servers, but the companies had trouble understanding and organizing it all.

These were tasks that are easy for people but hard for computers to do. They’re easy for people because we grow up in culture, learning and interacting with each other and with these objects over a lifetime. That knowledge is what AI engineers need to access and extract so they can approximate it with their AI algorithms. They can never fully
automate it for two reasons. First, culture changes. One day “binders” are office supplies, and the next day political satire when a presidential candidate announces he has “binders full of women.” Slang changes. Standards of obscenity change. The shapes and forms of buses and cars change. Buildings fall apart, receipts fade, and algorithms need humans to help them keep up with it all or step in when they fail. AI companies will downplay this because they want you to think they make magic and we should all be grateful to them.
The platform allowed engineers and academics like my friends to upload huge volumes of data tasks to the site and set a piece rate, say a penny per faded receipt transcribed.
Addressing Problems with Software

Reading those surveys over a decade ago, I responded in the way I knew how. I designed a website and a browser tool. Six Silberman, a classmate and applied math major, coded up the design. Got a problem? We knew how to build software. :-/

<Show the Turkopticon website>
<Explain that workers can rate employers and write comments>
<Explain that it puts the reviews into the Amazon website>

We ran this site for about ten years. AMT workers came on board to help with making day-to-day policy decisions and do community moderation work. The site allowed workers to avoid problematic employers and their rejections. There was a lot, however, that the software did not do. A negative review meant that a reviewer had already suffered. Someone had to try out the new employers, it might be the worker most needing to take a risk to make ends meet.

The site also encouraged workers to share information as individuals, but it did nothing to synthesize across employer reviews to find common issues that might require a more systemic solution. The software could bring agreements or disagreements about specific employers to the surface, but it couldn’t facilitate consensus or find common points of action[1].

A decade later, tens of thousands of workers had used Turkopticon. Many told us that it helped allay anxieties as they worked. A labor economist even did an empirical experiment and estimated that workers who used an employer reputation system earned 40% more than those who didn’t.[2]
A decade later, rejections had not gone away. The AI economy had only expanded and grown more flush with money, but Turk workers did not have an organized voice in discussions of policy makers, employers, or at Amazon. It felt a little bit like I’d spent 10 years building a mutual aid tool that had become a bandaid for a broken and exploitative corner of the academic–industrial complex.

[1] (Salehi et al. Dynamo paper talks about these issues.)
[2] Sojourner et al
His experimental methods unfortunately damaged community trust for a while and I'm happy to discuss that in Q&A).
Turkopticon inserts reviews into the AMT job interface

On Turkopticon, workers review, comment on, and discuss employers.

Yelp for employers
Helps avoid the worst wage theft
But by and large, the problems on the platform are still the same
Employers who do “mass rejections” for example
By the time the review exists, someone has gotten hurt
From Software to Organizing

So in 2019, Six and I decided to turn Turkopticon into a worker-led and maintained project. We held a series of workshops to enlist workers interested in taking over governing and re-orienting it. We explained our concerns about the software as a bandaid ameliorating tensions but not addressing upstream sources of harm. A grant allowed us to pay workers $15 an hour working with us to learn to organize, plan a transition, and build a team focused on a shared mission. Over the last year, this has been a transition away from being a software project run by a designer, an engineer, and a few worker moderators. It has transition to an organizing project run by a growing team of Amazon Mechanical Turk workers with seed funding to support the time, trainings, and conversations needed to learn the organizing skills neither Turking nor engineering gave us.

Over the past year, the team of organizers has accomplished a lot. We have a lead organizer, longtime Turk worker Sherry Stanley, who has been brave in being willing to speak and write publicly about these issues. (Link to pieces?) Worker organizers canvas Turker forums and do one-on-one conversations to understand broad needs and concerns. They facilitate workshops to develop creative proposals for longstanding problems. They work with a group of software engineers from Tech Worker Coalition to operate and make improvements to the software features and stability. They have a network of mentors who help them strategize. Six and I can get hit by a bus and Turkopticon will not only survive, be actually be able to address problems the software couldn’t.
Moving forward, we’ve given up hope that software and information sharing will spontaneously generate a coordinated strategy for change. Those were the dreams many had for Facebook, blogs, and twitter — that many individuals sharing online could enable the envisioning and pursuit of political change. We’ve all seen that this dream can crash hard. Organizing work is not just about communication, or even engagement, but about creating focus, consensus, and trust relationships. I’m convinced that this is what is essential for a future of work that works for the workers that power AI.
Why is organizing necessary?

Organizing is what allows communities to puncture the attention of experts and professionals to be heard. Explain how rejection problem is not on any policy or labor agenda that I know of long been a tension in union organizing, about navigating concerns at local plants vs national level agendas.

Organizing is like participation in that it has to synthesize across situated needs and desires, but it also builds political agency.

Turk worker organizers have a long road ahead, including coming up with proposals to the rejection problem. They tell me a good solution needs to uplift good faith work, exclude workers who spam and threaten the integrity of the craft, and prevent baseless rejections, and repair harm when it happens. Proposals have to navigate how work interacts with disability benefits, workers’ ability to juggle caregiving responsibilities, or host of other considerations that only come out when people start evaluating different ways of tackling the problem. Improve their work conditions means accounting for these unanticipated dependencies.

Good designers are trained to recognize this complexity, but they are rarely accountable to the users on whose behalf they advocate. They are accountable to those who pay them for their time. In pro bono work, designers are too often accountable to themselves and their own visions of the right and good.[1] As Six and I built and maintained...
Turkopticon over a decade, we tried to be accountable to workers but ultimately our day jobs prevented us from communicating enough to see the complexities they navigated, and to make decisions that were truly accountable to them.

Yet, Six and I found that we were the ones invited to convenings put on by policy makers, academics, and even tech companies to speak about the problems of Turk work. This is a problem. In the United States, there is a long history of policy bodies or journalists consulting by-the-book experts — managers, engineers, and academics — to speak on issues of public concern. Today, we can add non-profits that are run by such by-the-book experts to fuel what Meredith Whittaker of AI Now has called the “critical academic industrial complex.” Such convenings channel resource investment into by-the-book experts rather than developing workers’ ability to collectively speak for themselves. Six and I tried resisting this, getting organizers and journalists to invite AMT workers to speak. Sometimes they did. This created its own problems, when invited workers advocated a point of view not broadly supported by other workers back on the Turk forums. The product of such inclusion efforts, when not backed by collective organizing and consensus building, was conflict and mistrust by those who felt misrepresented. This mistrust was towards both the workers who were speaking at convenings, and the convening bodies themselves.

A future of work that is good for workers requires us to invest in workers’ collective capacities to pursue changes to the problems they face in their own workplaces. This includes time off the job to imagine, communicate, organize, strategize, and design. We should not be looking to academics or designers like me and Six, no matter our good intentions, to represent their will. We should not be cherry picking individual workers as a voice in the room, outsourcing the burdens of representing a group onto a token person’s shoulders.

[1] <Reference the book on the slide> An exception was the 1970s participatory design movement in Scandinavia in which the law required that workplace technology designers involve trade unions in design of the technologies that affect them. <Gramscian intellectual, work of planning and synthesizing; Berardi futurology>
How could we, as HCI researchers and tech workers, strengthen the worker organizers’ work?
What worker organizers are asking us to do instead is to give money to sustain organizing. Only after workers create shared agendas, can our other skills, tools, or institutional legitimacy support them. That can be a hard thing for humanistic academics to hear because we get paid to change ideas and theories of the world through teaching and writing; it is easy to forget that this becomes its own form of idealism. It can be a hard thing for design researchers to hear because we are trained that our research will make technology better for people. We are rarely trained in how our own accountabilities to our jobs directs us towards problems seen as theoretically significant or technologically novel — and away from what those we hope to support actually want and need from us. Solidarity, not charity, means we give not because others are worse off but because we recognize a system that harms all of us and needs to change.
Claiming Political Agency: Learning New Ways of Organizing and Relating
How the Innovation Economy Organizes Us

- Privileging design-managerial agenda over shared control
- Channeling our sense of injustice into entrepreneurial, design initiatives that don’t challenge overarching agenda
- Organizing our sense of community into contained projects rather than to connected power movements


For those of us trained in design, or middle class forms of technocracy and professionalism, we probably have some personal work to do to unlearn tech culture habits.

“They don’t know what they want, but when the designer gives it, they will want it.”
“They are are scared of change.”
The innovation economy needs experts and legitimacy

Ethics from below requires building political capacities of all affected communities

Building political capacities means, to review:
* building collective voice, through education, communication, trust building, figuring out that you can make a difference

* Not just our own agendas and interests in the research world, or in conferences
The Political Stakes of Infrastructure

- They standardize practices
- They get reused over and over again in different domains
- They connect fates across communities
- They exclude those who do not fit its assumptions, dividing us*

* Thank you to Seda Gurses for elaborating this point.

See: Bowker, G. and Star, L.’s body of work on infrastructure and social worlds and Puig della Bellacasa, “Matters of Care in Technoscience”
Adding Political Agency to HCI’s analysis

- **Engagement:** how we connect with users or stakeholders
- **Articulation:** how we formalize requirements for technology
- **Translation:** how we translate requirements into specific technological configurations
- **Political agency:** capacity and strategy to hold institutions accountable or create new institutions to design, maintain, and configure tech

Example: Postcolonial Computing (2010)’s abstraction of HCI concerns


poco was about design, but we can see it almost on the way to a political theory of technology. Geopolitics, colonialism, capitalism mediate how these play out in that paper.