Claiming Democracy for Digital Infrastructures

Lilly Irani
UC San Diego
Communication, Science Studies
Feminist Labor Lab, Design Lab

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 instutituions, 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.

Overview

- Political agency and the limits of design
- TRUST Coalition: subjecting surveillance to democratic oversight
- Turkopticon:
  from software to supporting worker organizing
- Claiming political agency: learning new ways of organizing and relating

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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

Challenges of Political Agency and Infrastructure

- Private ownership, opaque trade secrets
- State capture by private companies
- Those with training to dissect and trace the infrastructure are often not the ones most directly harmed
- Invisible to many, posing a challenge for organizing

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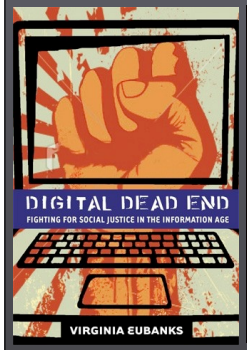
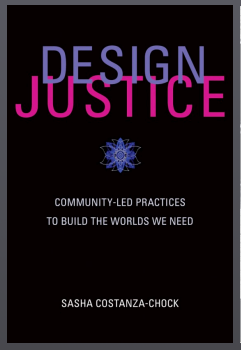
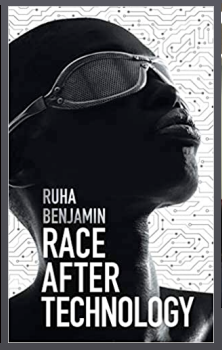
Historically, HCI has promoted agency through design and design-informing practices, such as within companies, or more rarely through policy. Now we also see opportunities like company ethics boards or, more encouragingly, jobs in regulation of these industries. What I've seen over and over is that without 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?

Community-led Transformation







Yeshi Milner's "Abolish Big Data" talk at UCI 2019
https://www.youtube.com/watch?v=26lM2RGAdlM

See also: Asaro, Peter (2000) "Transforming society by transforming technology: the science and politics of participatory design,"
Beck, Eevi (1996) "P is for Political," Kensing and Blomberg (1998) PD: Issues and Concerns

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 Karrahalios and Christian Sandvig. And at UCI, my mind was blown when Yesi 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?

TRUST Coalition: subjecting surveillance to democratic oversight

you can't refuse what you can't see

For more on this work, see: Whitney, C. et al. (2021) "HCI Tactics for a Politics from Below: Meeting the Challenge of Smart Cities." Proc CHI 2021.

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.

Promising “Smartness”

Smart Streetlights Program

San Diego Deploys the World’s Largest Smart City Platform

Background

With what began as a cost-savings effort to replace high energy use streetlights with more efficient LED lights, the City of San Diego is now deploying the world’s largest smart city sensor platform. The system is transforming the City’s existing street lighting infrastructure into a connected digital infrastructure which will lead to energy savings and new technological opportunities.

The anonymous data collected by the sensor nodes can be used to develop applications and systems that benefit the City and the community. These sensor nodes generate metadata (static data on parking, vehicle counts, pedestrian counts, temperature, humidity, pressure). The nodes connect to technology partner GE’s CityIQ cloud database to make the metadata collected by the sensors available. This open data platform possibilities range from pedestrian safety and directing drivers to open parking spaces to mobility planning and optimization, to helping first responders during an emergency and urban and real estate development planning. Our hope is that new applications will be built using this technology to help improve city

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

Promising “Smartness”

San Diego Smart City Hackathon

May 20, 2016 - May 22, 2016

What can we do to make San Diego one of the most connected cities in the world?

The San Diego Smart City Hackathon, organized by The Silent Intelligence in partnership with UCSD Center for Wireless Communications, the City of San Diego, Cleantech San Diego, and others will crowdsource the most innovative technology solutions from our tech community and beyond (academia, corporations, independent software developers) to help the City deliver on its Climate Action Plan.

Participants will have a chance to come up with original creative prototype solutions to difficult city problems, which require wireless sensors and a lot of data – such as energy and water monitoring, waste management, transportation, and other city services.

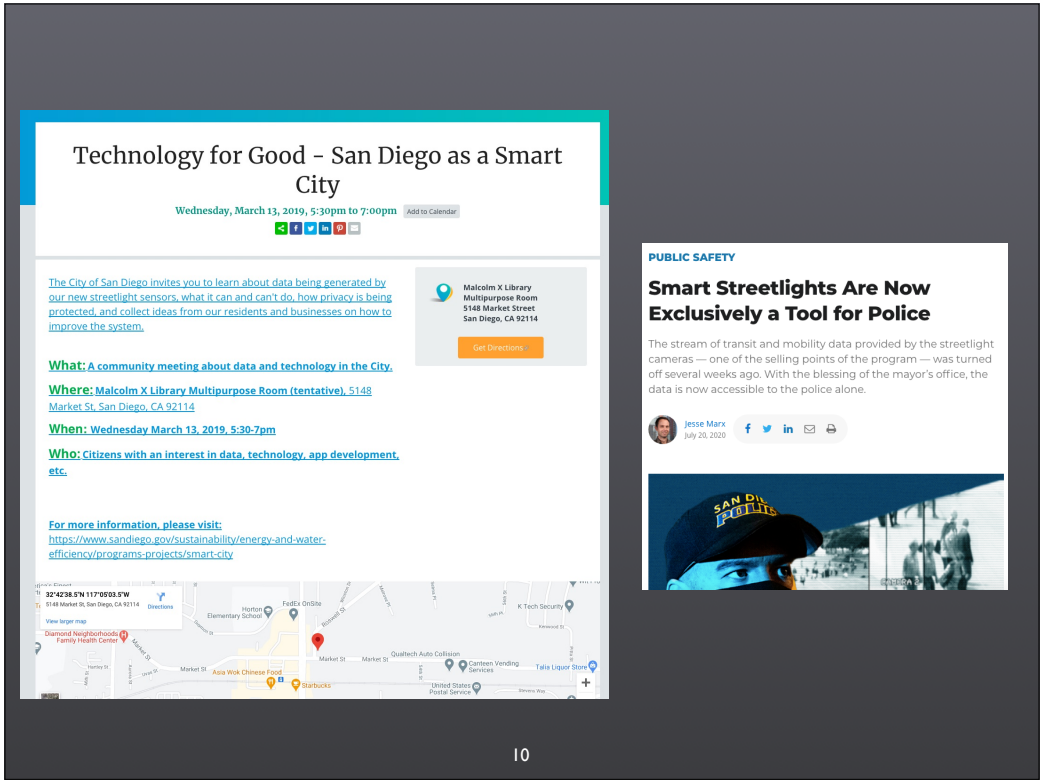
The Hackathon will be the kickoff event to a larger smart city innovation program: organizers plan to continue funding, mentoring, developing, and implementing the best ideas and solutions for the city emerging from the Hackathon event.

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

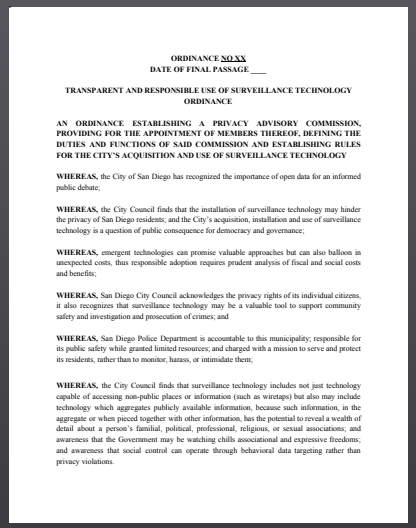
This is just one example, but communities had many examples.

Sparking the Coalition

Al Otro Lado
Alliance San Diego
Anakbayan San Diego
Asian Solidarity Collective (ASC)
Black Lives Matter San Diego
Change Begins With Me Indivisible
Community Advocates for Just and Moral Governance
Council on American Islamic Relations (CAIR) San Diego
Employee Rights Center
Generation Justice
Homie UPIndivisible La Jolla & Pacific Beach
Indivisible Resistance San Diego
Majdal Community Center
March for Black Women San Diego
MAS San Diego
Migrante
Muslim Leadership Council
Partnership for the Advancement of New Americans (PANA)
Paving Great Futures
People Over Profit
Pillars of the Community
Racial Justice Coalition
San Diego Original Black Panther Party For Community Empowerment
San Diego Tenants United
Showing Up for Racial Justice (SURJ)
TechLEAD
Tech Workers Coalition (TWC)
Think Dignity
Universidad Popular
United Women of East Africa Support Team
We the People SD

Building on racial justice coalitions and Coalition for Police Accountability, but Tech Workers Coalition, TechLead joined and expanded ranks

Goal: Subjecting Surveillance to Oversight



ORDINANCE NO XX
DATE OF FINAL PASSAGE ____

TRANSPARENT AND RESPONSIBLE USE OF SURVEILLANCE TECHNOLOGY ORDINANCE

AN ORDINANCE ESTABLISHING A PRIVACY ADVISORY COMMISSION, PROVIDING FOR THE APPOINTMENT OF MEMBERS THEREOF, DEFINING THE DUTIES AND FUNCTIONS OF SAID COMMISSION AND ESTABLISHING RULES FOR THE CITY'S ACQUISITION AND USE OF SURVEILLANCE TECHNOLOGY

WHEREAS, the City of San Diego has recognized the importance of open data for an informed public debate;

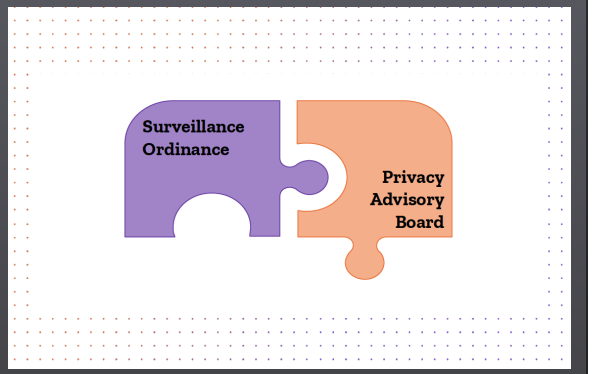
WHEREAS, the City Council finds that the installation of surveillance technology may hinder the privacy of San Diego residents; and the City's acquisition, installation and use of surveillance technology is a question of public consequence for democracy and governance;

WHEREAS, emergent technologies can promise valuable approaches but can also balloon in unexpected costs, thus responsible adoption requires prudent analysis of fiscal and social costs and benefits;

WHEREAS, San Diego City Council acknowledges the privacy rights of its individual citizens, it also recognizes that surveillance technology may be a valuable tool to support community safety and investigation and prosecution of crimes; and

WHEREAS, San Diego Police Department is accountable to this municipality; responsible for its public safety while granted limited resources; and charged with a mission to serve and protect its residents, rather than to monitor, harass, or intimidate them;

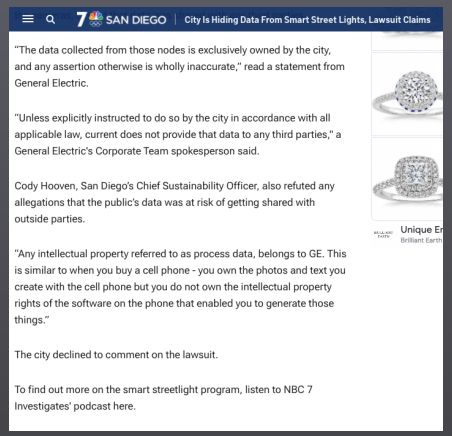
WHEREAS, the City Council finds that surveillance technology includes not just technology capable of accessing non-public places or information (such as wiretaps) but also may include technology which aggregates publicly available information, because such information, in the aggregate or when pieced together with other information, has the potential to reveal a wealth of detail about a person's familial, political, professional, religious, or sexual associations; and awareness that the Government may be watching chills associational and expressive freedoms; and awareness that social control can operate through behavioral data targeting rather than privacy violations.



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



7 SAN DIEGO | City Is Hiding Data From Smart Street Lights, Lawsuit Claims

"The data collected from those nodes is exclusively owned by the city, and any assertion otherwise is wholly inaccurate," read a statement from General Electric.

"Unless explicitly instructed to do so by the city in accordance with all applicable law, current does not provide that data to any third parties," a General Electric's Corporate Team spokesperson said.

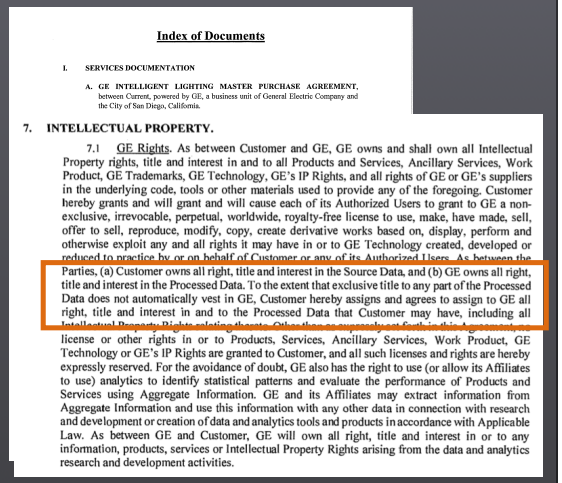
Cody Hooven, San Diego's Chief Sustainability Officer, also refuted any allegations that the public's data was at risk of getting shared with outside parties.

"Any intellectual property referred to as process data, belongs to GE. This is similar to when you buy a cell phone - you own the photos and text you create with the cell phone but you do not own the intellectual property rights of the software on the phone that enabled you to generate those things."

The city declined to comment on the lawsuit.

To find out more on the smart streetlight program, listen to NBC 7 Investigates' podcast here.

https://www.nbcsandiego.com/news/local/city-is-hiding-data-from-smart-street-lights-lawsuit-claims/2230490/



Index of Documents

I. SERVICES DOCUMENTATION

A. GE INTELLIGENT LIGHTING MASTER PURCHASE AGREEMENT, between Current, powered by GE, a business unit of General Electric Company and the City of San Diego, California.

7. INTELLECTUAL PROPERTY.

7.1 GE Rights. As between Customer and GE, GE owns and shall own all Intellectual Property rights, title and interest in and to all Products and Services, Ancillary Services, Work Product, GE Trademarks, GE Technology, GE's IP Rights, and all rights of GE or GE's suppliers in the underlying code, tools or other materials used to provide any of the foregoing. Customer hereby grants and will grant and will cause each of its Authorized Users to grant to GE a non-exclusive, irrevocable, perpetual, worldwide, royalty-free license to use, make, have made, sell, offer to sell, reproduce, modify, copy, create derivative works based on, display, perform and otherwise exploit any and all rights it may have in or to GE Technology created, developed or reduced to practice by or on behalf of Customer or any of its Authorized Users. As between the Parties, (a) Customer owns all right, title and interest in the Source Data, and (b) GE owns all right, title and interest in the Processed Data. To the extent that exclusive title to any part of the Processed Data does not automatically vest in GE, Customer hereby assigns and agrees to assign to GE all right, title and interest in and to the Processed Data that Customer may have, including all Intellectual Property Rights relating thereto. Other than as expressly set forth in this Agreement, no license or other rights in or to Products, Services, Ancillary Services, Work Product, GE Technology or GE's IP Rights are granted to Customer, and all such licenses and rights are hereby expressly reserved. For the avoidance of doubt, GE also has the right to use (or allow its Affiliates to use) analytics to identify statistical patterns and evaluate the performance of Products and Services using Aggregate Information. GE and its Affiliates may extract information from Aggregate Information and use this information with any other data in connection with research and development or creation of data and analytics tools and products in accordance with Applicable Law. As between GE and Customer, GE will own all right, title and interest in or to any information, products, services or Intellectual Property Rights arising from the data and analytics research and development activities.

Contract signed between GE Current and City of San Diego (2019), obtained through public records request by Cedric Whitney.

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.

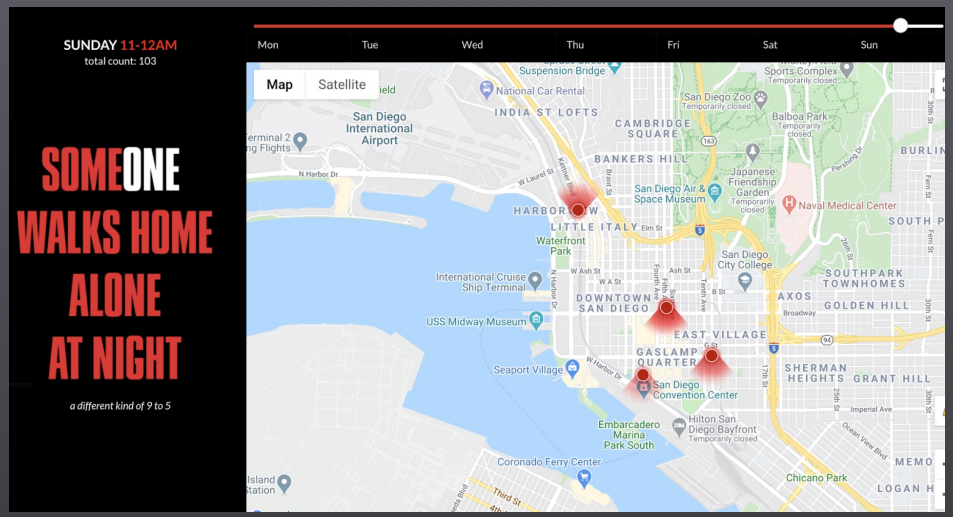
Supporting Community Forums

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

a publication widely read by City politics people

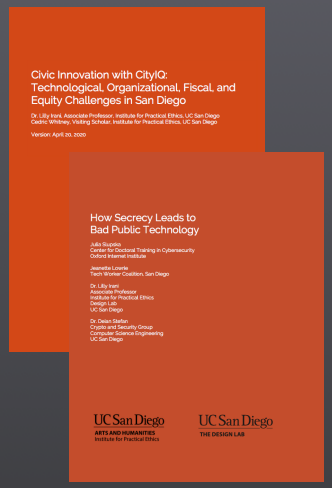
Speculative Research: Slightly Dystopian Demos



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



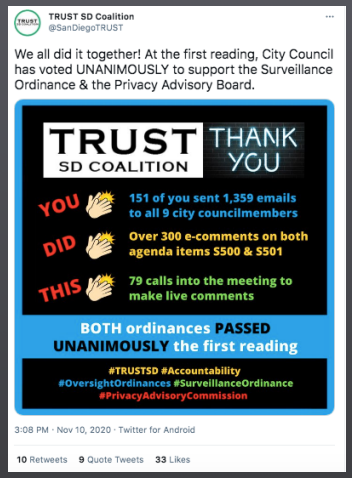
- Policy memos assembled established research, news reports, and lab findings (5-14 pages double spaced)
- Organized to address policy makers as "users"
- Assembled quickly and bespoke based on long term research
- Cited from the dais by Council President

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

Turkopticon: from software to worker-led advocacy organization

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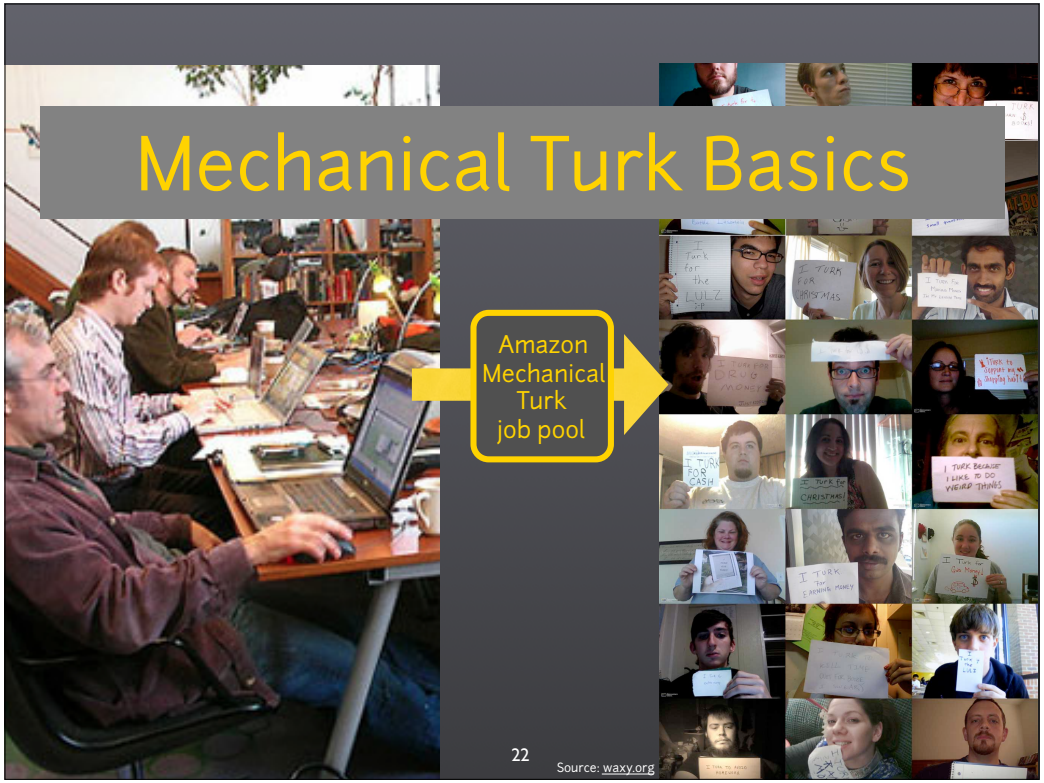
Next, I want to talk about a decade-long project in which software and research helped workers gain some power, but also, over a decade, became a bandaid for a flawed system.

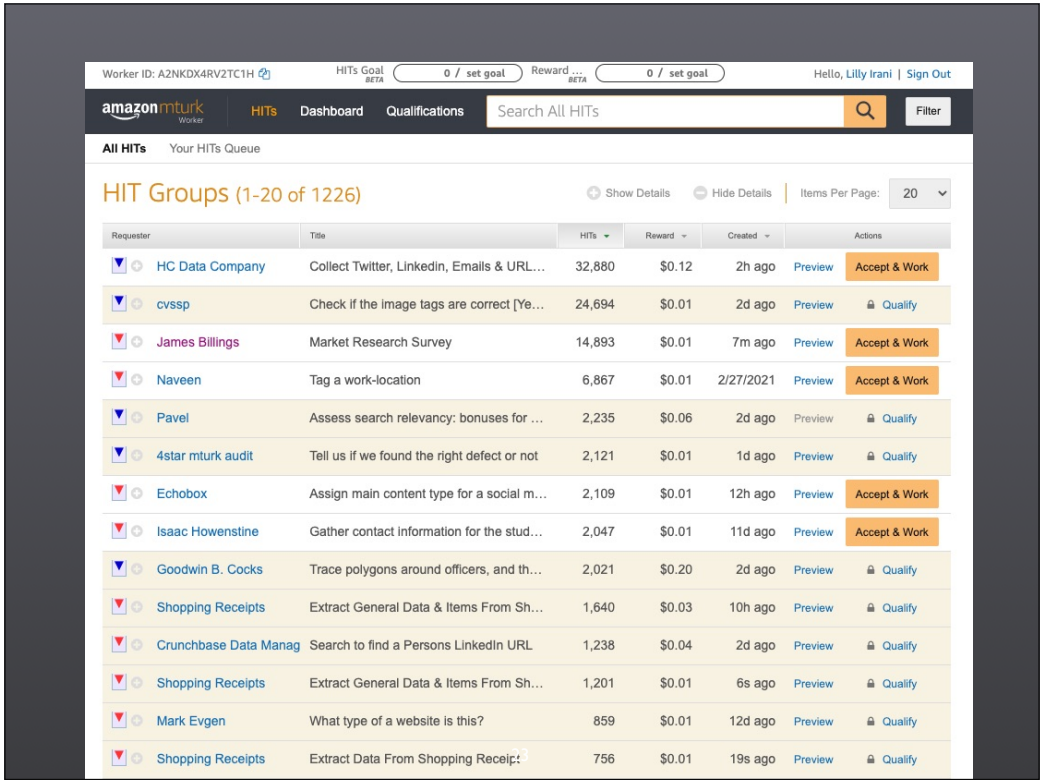
For a future of work with good conditions for AI workers, we need to invest the most basic resources in workers so they can take the time and create their own spaces to organize for change. Donated money is what Amazon Mechanical Turk workers need to make time to organize for the future of work that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

Turkopticon's agonistic home page

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.

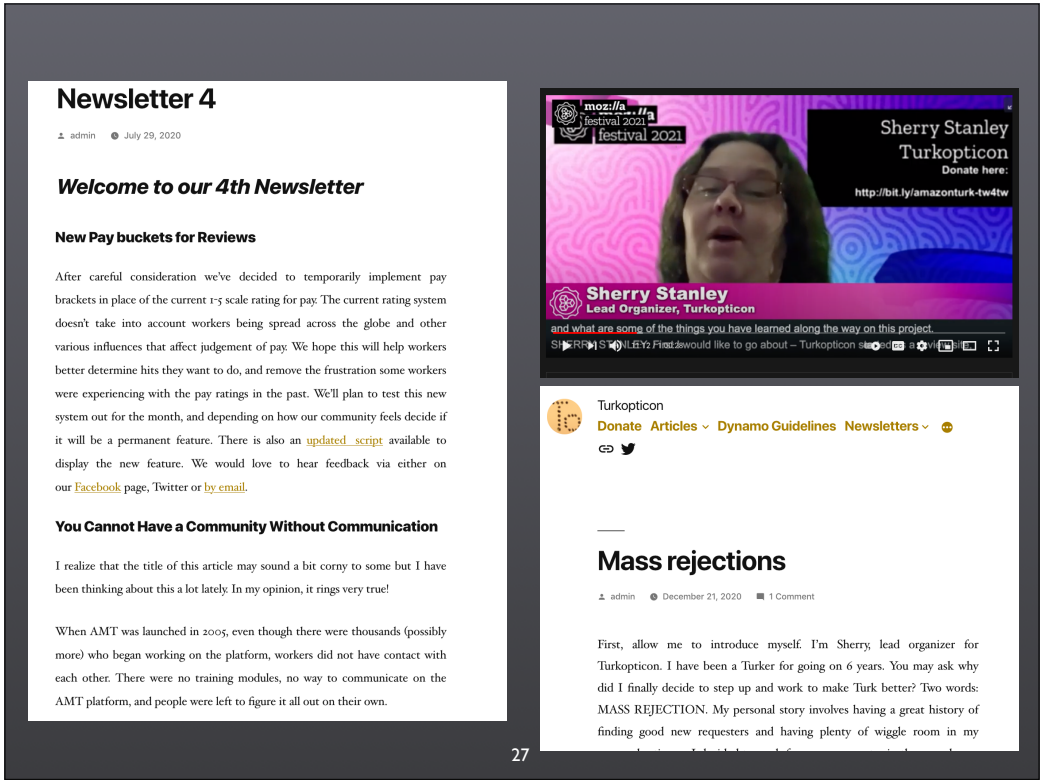
Yelp for employers
Helps avoid the worst wage theft
But by and large, the problems on the platform are still the same
Employers who do “mass rejections” for example
By the time the review exists, someone has gotten hurt

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 be 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

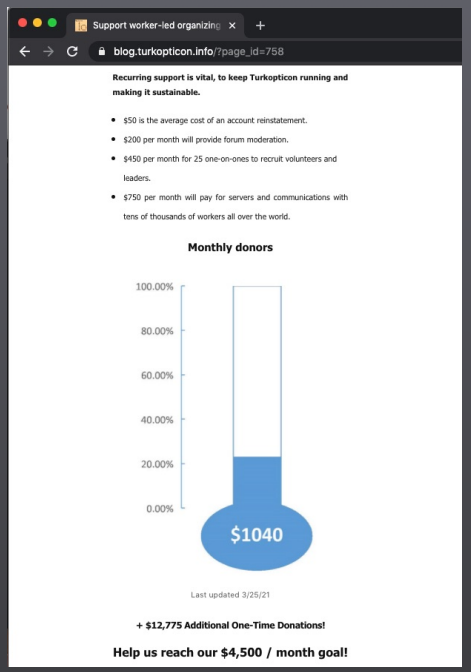
Turk worker organizers have a long road ahead, including coming up with proposals to the rejection problem. They tell me a good solution needs to uplift good faith work, exclude workers who spam and threaten the integrity of the craft, and prevent baseless rejections, and repair harm when it happens. Proposals hae 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?



Please donate directly to worker organizers!

http://bit.ly/amazonturk-tw4tw

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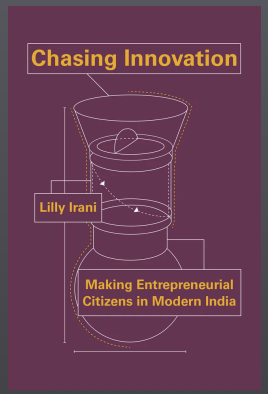
What worker organizers are asking us to do instead is to give money to sustain organizing. Only after workers create shared agendas, can our other skills, tools, or institutional legitimacy support them. That can be a hard thing for humanistic academics to hear because we get paid to change ideas and 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

See: Irani, L. 2019. Chasing Innovation: Making Entrepreneurial Citizens in Modern India. Princeton University Press. p. 24

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

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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

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

- 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

Source: Irani, Vertesi, Dourish, Philip, Grinter (2010) "Postcolonial computing: a lens on design and development." Proc SIGCHI

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