

Studying workers' contexts to inform design

Ali Alkhatib

ali.alkhatib@cs.stanford.edu || @_alialkhatib

April 17, 2018

Google

Studying workers' contexts to inform design

or...

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Studying workers' contexts to inform design

or...“using anthropology to guide computer science”

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Google

Some background on me

- **Archaeological** digs in Belize and Ecuador
- **Anthropology** and **Informatics** at UC Irvine
 - *Quantified Self* with **Tom Boellstorff**
- **Computer Science** at Stanford
 - *On-Demand Work* with **Michael Bernstein**
- Microsoft Research/Future Social Experiences (FUSE) Labs
- Center for Advanced Study in the Behavioral Sciences (CASBS)

Roadmap

Some of my projects...

Dynamo

Work with MSR/FUSE Labs

Alia

Interrogating Piecework

Vitae

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And for each project...

What we did

Something interesting

Dynamo

Dynamo

Understanding the conditions that facilitate **collective action**.

What we did

- Built an online system for workers on Amazon Mechanical Turk to **suggest, discuss, and vote** on ideas for collective action
- **Guided** discussions toward consensus on action

Dynamo

Understanding the conditions that facilitate **collective action**.

Some takeaways

- **Stalling** can stymie movement toward a goal; **friction** can derail momentum
- Some **scaffolding** can mitigate these issues, but people have to be involved as well

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Microsoft Research/FUSE Labs

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Exploring and developing platforms for **worker cooperatives**, with worker advocacy organizations (the **SEIU**, **IBEW**, & **NDWA**) and **Casa Latina**.

What we did

- Interviewed and ran focus group meetings with gig workers across **myriad** industries
- **Worked** at a worker cooperative for domestic workers
 - Learning about the relationships workers develop with employers
 - Studying how the group made decisions
- **Collaboratively** designed an online scheduling system for domestic workers

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- People develop **their own explanations** for opaque systems
- **Presence** matters

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Alia

Alia

Building and deploying a cooperatively governed labor market for domestic workers, with the [NDWA](#)'s innovation arm, the [Fair Care Labs](#).

What we did

- Built a system for domestic workers to manage appointments and correspondence with clients
- Interviewed, focus tested, and prototyped with nannies, caregivers, & housecleaners in and around Oakland

Alia

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Some takeaways

- Technical solutions tend only to work for technical people
- Workers need more privacy than they're getting

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Piecework

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Contextualizing the **on-demand work** phenomenon as a whole in some broader context, and figure out where to go from there.

What we did

- Systematic **historical review** of some 150 publications spanning 200 years
- Mapping **themes** in research into gig work to developments in piecework

Piecework

Contextualizing the **on-demand work** phenomenon as a whole in some broader context, and figure out where to go from there.

Some takeaways

- We've seen gig work before (e.g. “**surge pricing**” and other management techniques)
- We can affect workers' conditions, empowered by **historical theory**, with **digital systems**

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Vitae

Outlining the landscape

Crowd work



Upwork

UBER

Gig Work



**On-demand work is a modern instantiation of a
much older phenomenon**

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piecework

Outlining the landscape

Crowd work



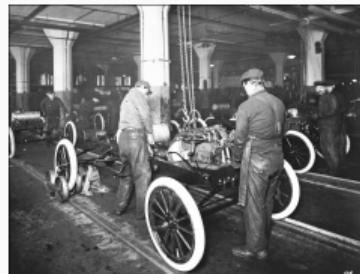
Upwork

UBER

Gig Work



Outlining the landscape



Crowd work



Upwork

UBER

Gig Work



provocation

#1

What is work going to look like in the future?

(Re)framing the question

(Re)framing the question

Persistent issues in on-demand work

- People have varied work histories
- How can we be confident that on-demand workers are qualified?
- Work histories are often reduced to 5-star or binary ratings
- Workers' histories not necessarily reliable

How can workers organize, govern, and act in environments increasingly controlled by the platforms on which they work?

Hiring Halls

Hiring halls historically ameliorated these issues:

1. Varied, transient work histories offset by relatively stable organizations
2. These organizations traded on their collective reputations
3. Hiring halls consolidated negotiation between employers and workers

What sorts of affordances and values would we build into the walls of factories, if we could?

- A qualification management system
- Scaffolding to deliberate on work
- A series of communities of workers

Qualification Management

This screenshot shows the Amazon Mechanical Turk Qualifications page. At the top, there are links for 'HITs', 'Dashboard', and 'Qualifications'. Below that, it says 'Transcribe some audio (HIT Details)'. It shows 'All Alphabets' as the qualification type, 'HITS 2', 'Reward \$1.00', and 'Time Allocated 160 Min'. There are 'Skip' and 'Accept' buttons. A message at the bottom says 'You must accept this Requester's HIT before working on it. Learn more'.

We can't determine eligibility during HIT preview.

This task uses an external qualification system called Vitae to make sure you're eligible.

You need to have this extension installed and be in one of the necessary communities to be eligible. The requester should make it clear what group you should be in to be eligible.

You can check your eligibility without installing Vitae by entering your worker ID:

Interested in downloading Vitae? Go here

Report this HIT | Why Report

Skip Accept

A large green checkmark icon is displayed. Below it, a message says: "Sorry, you're not in the community for this task ('random_forest'). This means you're not eligible. If you think you should be in the 'random_forest' community, please contact the manager of that community. Otherwise, please return the HIT so others can attempt it. Thanks." A note below says: "Please transcribe the audio in the player below".

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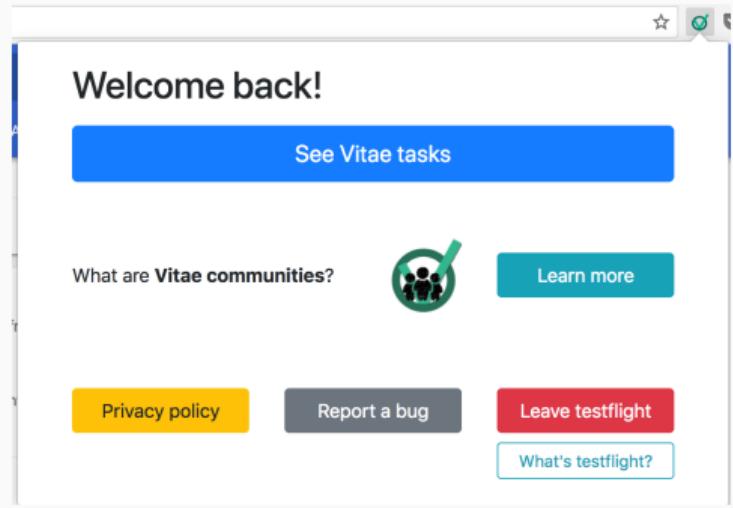
Keep in mind these style guidelines

- Whenever someone else starts speaking, always start a

A large green checkmark icon is displayed. Below it, a message says: "You're eligible for this task. Happy Turking!" A note below says: "Please transcribe the audio in the player below". On the right, a sidebar titled "Keep in r" lists:

- Whe new
- Don' long
- If the h

Scaffolding to deliberate on work



The Amazon Mechanical Turk interface shows a HIT detail page. It includes a "Discuss" button with a checkmark, a "Flag" button, a "Skip" button, and an "Accept" button. The task details show a "Reward" of \$1.00 and a "Time Allotted" of 180 Min.

Communities of workers

A screenshot of a community forum interface. At the top, there are navigation icons and a search bar. Below that, a header bar shows a star icon, 66 messages, 0 notifications, and an 'Add a topic' button. The main content area has a light gray background with a white message card.

Vitae Tasks on Amazon IV.
Vitae Tasks on AMT

Hi @channel! There are tasks on Mechanical Turk for you. Please check in there and check in back here if there are issues.

Vitae Tasks on Amazon Mechanical Turk
Vitae Tasks on AMT

Vitae Bot APP 9:32 AM
Hi @channel! A HIT was flagged!

HIT flagged!
Does this HIT violate the rules for testflight?

When discussing whether the HIT is appropriate, please refer to the rules at
<https://vitae.online/communities/testflight>

I'm curious if these hits are flagged by people in this community, or are they being flagged by others who are not able to do these hits?

that is a good question idn't have any problems doing the hit. I was just going to come in and ask why the last one was flagged as I was able to do it just fine.

**How do we evaluate the success or failure of systems
intended to empower and uplift workers?**

Evaluating Vitae

1. Does Vitae make it easier for quality workers to trade on their collective reputation?

Evaluating Vitae

1. Does Vitae make it easier for quality workers to trade on their collective reputation?
2. Can Vitae pull sites of labor like Mechanical Turk out of this “market for lemons” scenario?

On the horizon

Timeline

- Approximately 300 workers actively using Vitae.

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- Collaborations with academic requesters

How can we ensure that platforms that empower workers in negotiations with (or rather, **against) employers don't also **endanger** those workers?**

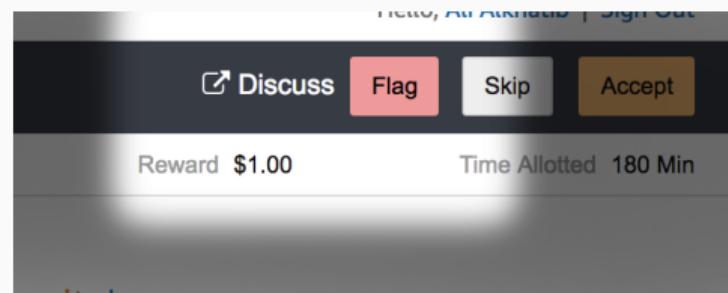
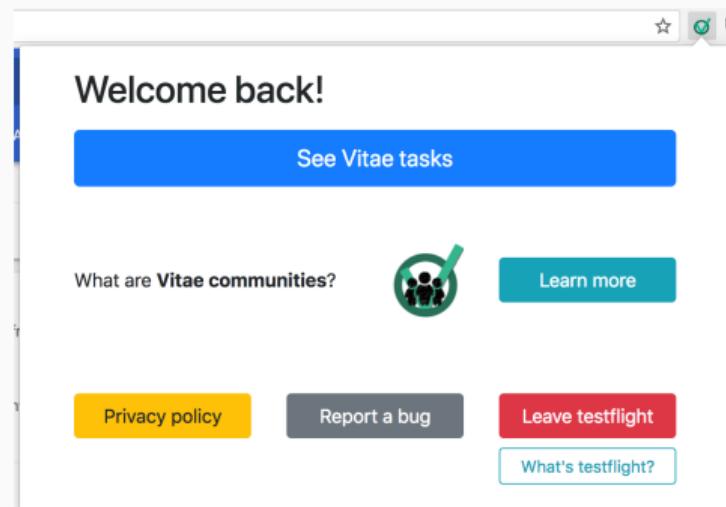
Qualification Management

This screenshot shows the Amazon Mechanical Turk Qualifications page. At the top, there are links for 'Workers' ID: A2XJH52J2FMVX', 'Hello, Ali Alkhatib | Sign Out', 'Skip', and 'Accept'. Below this, there are tabs for 'Qualifications', 'HITs', 'Dashboard', and 'Qualifications'. The main content area displays a HIT titled 'Transcribe some audio (HIT Details)'. It shows 'All Available', 'HITs: 2', 'Reward: \$1.00', and 'Time Available: 180 Min'. A message at the top says 'You must accept this Requester's HIT before working on it. Learn more'. A large yellow box in the center contains a green checkmark icon and the text 'We can't determine eligibility during HIT preview.' Below this, it says 'This task uses an external qualification system called Vitae to make sure you're eligible. You need to have this extension installed and be in one of the necessary communities to be eligible. The requester should make it clear what group you should be in to be eligible. You can check your eligibility without installing Vitae by entering your worker ID: [text input field] check my eligibility'. At the bottom, there is a link 'Interested in downloading Vitae? Go here' and buttons for 'Report this HIT' and 'Why Report'.

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This screenshot shows the HIT preview page again, but this time the worker is eligible. The green checkmark icon and the message 'You're eligible for this task. Happy Turking!' are displayed. The 'Keep in mind these style guidelines' section is partially visible on the right.

Scaffolding to deliberate on work



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☆ | 866 | 0 | Add a topic

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Building a digital version of a **hiring hall**, helping workers establish **careers** out of diffuse gig work histories, and giving more power to enforce norms.

Some takeaways so far

- Some of the things that bring people to crowdwork make **collectivism** a difficult proposition
- We need to think more about the **incentive structure** necessary to justify rejecting work opportunities

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Wrapping up

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Vitae

Questions, Discussion, Thoughts

Thanks for having me today!

name: Ali Alkhatib

email: ali.alkhatib@cs.stanford.edu

twitter: [@_alialkhatib](https://twitter.com/_alialkhatib)