Is Uberization the Future of Work?

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Overview

• Introduction to the Technologies for Emerging Markets Group at MSR India
• Introduction to ethnography for design
• Deep dive into the uberization of work
Introduction to TEM
Technology for Emerging Markets
At Microsoft Research India

Understand
existing and potential technology users and context

Design and build
solutions designed for emerging markets (socio-economic development and beyond)

Evaluate
technology in use (both research and real-world)

Scale-up impact
in collaboration with product groups, NGOs, academia & government

(subject to feedback cycles and iterative improvements)
Some example projects

- **99DOTS (Being rolled out in India)**
- **KrishiPustak (A technology probe)**
- **Ola Auto (An ethnographic study)**
- **Loan Payments (Ethnography to design)**
- **CGNetSwar (A working technology portal)**

**Pure research**

**TEM research continuum**

**Deployment or product group adoption**
Ethnography: The naturalistic study of human behavior

Ethnographic studies are the disciplined, detailed, empirical study of the organisation of activity

Methods: Observation, in-situ & open-ended interviews, collecting artefacts, tools and traces

Aim is to understand the complexity of the situation on the ground

Ethnomethodological analysis
  • Not just what the world looks like but how the world comes to look like it does
  • A-theoretical

‘What people say, what people do, and what they say they do are entirely different things’
Margaret Mead
Ethnography and Technology Design

Use understandings of how work is achieved to design useful and usable technologies to support or transform that work

- User-centred, iterative design

Truly useful technology supports and enhances natural human capacities and practices – it’s “artfully integrated” with practice

- Even the most revolutionary technology is ‘made at home in the world’ of the user
Uberization and the Future of Work
The Uberization of work

Encompasses one or more trends

• Non-contracted workforce
• Independently competing for work
• Working in a technologically-mediated workplace or labour market
• ‘Taskification’ where work is performed as a series of individual tasks
Working in platform-based labour markets

3 main parties involved
1. Platform provider
2. Worker
3. Customer/work provider
Why should computer scientists care?

Role in defining the future of work: Let’s make it a good one!

Workplace technologies which do not take into account work practices
  • Disruptive or worked around
  • Cause frustration to workers and customers
  • Do not produce the best possible work

Design to enhance human capabilities
<table>
<thead>
<tr>
<th>Indian <strong>crowdworkers</strong></th>
<th><strong>Ola and Uber cab drivers</strong> in Bengaluru</th>
<th><strong>Auto-rickshaw drivers</strong> in Bengaluru</th>
<th><strong>Business Process Outsourcing workers</strong></th>
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<tbody>
<tr>
<td>• 78 ‘door opener’ surveys</td>
<td>• 48 Ola &amp; Uber cab drivers</td>
<td>• 66 auto-rickshaw drivers with and without Ola Auto</td>
<td>• Data entry for Healthcare Insurance</td>
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<tr>
<td>• 35 in-depth interviews and walkthroughs,</td>
<td>• Observation of 35 rides</td>
<td>• Observation and in-situ interviewing of 23 drivers during 14 days in the field</td>
<td>• ~7 working weeks observation &amp; in situ interviews of In-office workers (India) and @Home workers (USA)</td>
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<tr>
<td>• 12 observations in 5 locations</td>
<td>• 16 driver and passenger interviews</td>
<td>• 48 semi-structured interviews</td>
<td>• Agents, supervisors, quality, production control</td>
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<tr>
<td>• Recordings of HITs</td>
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1. Workers as independent ‘micro-entrepreneurs’

What’s it like being a non-contracted worker?
Independence, flexibility and digital middlemen

Workers value their independence and flexibility

Crowdwork as ultimate flexible working
The crowdworker has to be flexible to the rhythms of work on the platform

Ketan: “I also try and look for work on MTurk when I have some time but mostly I work at night because that’s when there are some jobs available”

Already independent workers
Ola acts as a digital middleman, eroding independence of drivers, whist doing little to reduce uncertainty

Mr. L “if you wait for Ola rides to come in when you are waiting at a particular location [...] you end up waiting all day without getting either normal or Ola passengers”

Current platform design therefore limits both the independence and flexibility of workers in these labour markets
Motivation and job satisfaction

Motivation and job satisfaction is key to getting high quality work on time

Often forgotten in functional accounts of the work

Outsourced data entry vs crowdsourcing

• Outsourced data entry. Workers made accountable, targets achievable, fairness demonstrated, and training and feedback given

• Crowdsourcing. Designs out relationship between workers and organisation and replaces complex social, organisational & financial motivators almost solely with monetary ones. Typically at lower pay!
Moving forward/design opportunities

Designing better individual platforms
• Support and enhance worker agency
• Take into account work practices

Platform agnostic design to support digital workers as a whole
• Cross-platform tools to manage workloads, visualize and understand markets and make informed choices
• Enable workers to develop a dynamic, portable, platform agnostic CV
2. Independently competing for work

Who do we talk to? Who do we learn from?
Platforms design collaboration out of the work

But work remains collaborative!

Networks of crowdworkers: physical & virtual
- Help manage scarcity of good jobs
- Work quality (Yin et al, 2016)
- Provide community and support

‘Employers’ work around system to form loose relationships with workers

US-based Uber drivers use forums to organize, make sense of the app and algorithms, etc. (Lee et al 2015)

OlaAuto drivers do not have this option
- Discuss locally, troubleshoot together, work things out on their own
- Less powerful
Moving forward/design opportunities

Build the relationships back
  • E.g. relationship-based crowdsourcing

How can we enable and support local and global networks of cloud workers?
  • How would they find one another?
  • What are the implications for trust?
2. Algorithmic management

What’s it like when your manager is an algorithm?
Taskification and co-ordination work

Coordination work is the work to organize people and groups so they work harmoniously together

• Often hidden work
• Likely to become more difficult and time consuming

Digital systems rarely support easy coordination of complex work, either

• Leaving it to the user
• Automating it
Automating task assignment

Automation is not simple
Ride-assignment in ridesharing rarely takes into account all the contingencies
For example, cabs vs. auto-rickshaws:
• Journey time, passenger opportunity, driver choice
Algorithmically specifying all the contingencies is complex, even in ‘simple’ cases
Worker evaluation

• Interchangeable workforce
• Distinguished only by ratings (often stars) or reputation
Worker evaluation: OlaAuto

Drivers are evaluated by Olacabs and passengers
But the implementation is poor
The current system it is not actionable, leading us to ask, who is it for?

Mr N. “Sometimes in the afternoon, I have lesser stars and it increases in the evening. Some days when I have accepted lots of rides, I get lesser stars and some days when I barely have any passengers, I get rated high. I am not entirely sure why this happens.”
Reputation on AMT

Maintaining a good reputation is one of the foremost concerns

Fear blocks (requesters) and suspensions (AMT)

- Engage in ‘hidden work’ to maintain reputation
- Err on the side of caution

Pandit: “I have done this many times and ‘submitted’ HITs successfully but sometimes it doesn’t work because by the time I complete the survey the HIT disappears”

Not clear how much their reputation is really in their hands
Moving forward/design opportunities

Designing better algorithms
... but unlikely to take into account all the situated complexities
Design for failure
... how can we design fair algorithmic management

Designing for worker agency and individuality rather than control and standardization
Conclusions

As technology becomes ever more pervasive, then designs which support and enhance human practice are increasingly important.

**Why should we care?**

It is in our hands to design a better future of work for all parties – workers, customers and the platforms (or employers).

**Design challenges for platform-based work:**

- Enhancing independence and flexibility
- Building in motivation and job satisfaction
- Designing fair algorithmic management
- Designing for worker agency and individuality

Ethnography can help us design a more informed future of work.
Research conducted with David Martin, Neha Gupta, Ban Hanrahan, Noopur Raval, Anupama Dhareshwar, Baneen Karachiwala, Srihari H Muralidhar, Syed Ishtiaque Ahmed

Thank you!

David Martin
1972-2016
Call for Comments
Paying minimum wage on online labor platforms
http://minwage.platformwork.org/