

The Invisible Labor Behind Technology

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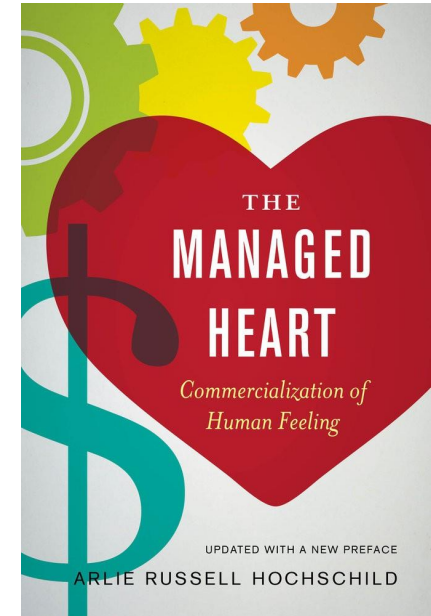
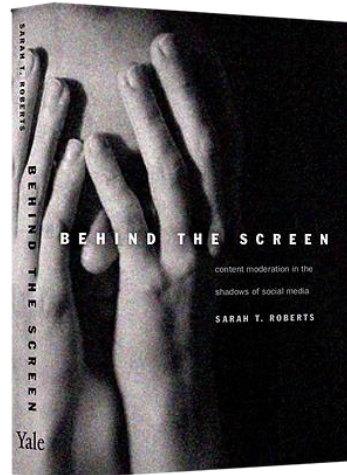
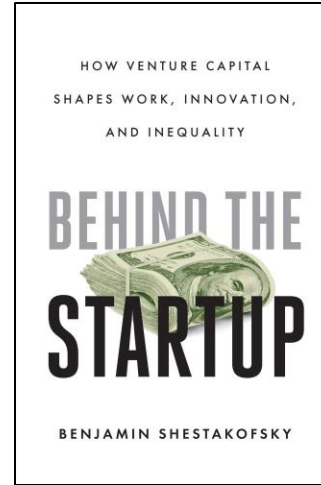
What comes to mind
when you hear the phrase
the invisible labor behind technology?

Invisible labor

- Essential
- Common
- Emotionally demanding

...yet often...

- Unrecognized
- Uncompensated
- Undervalued
- Gendered
- Unevenly distributed around the world



Invisible labor

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- Common
- Emotionally demanding

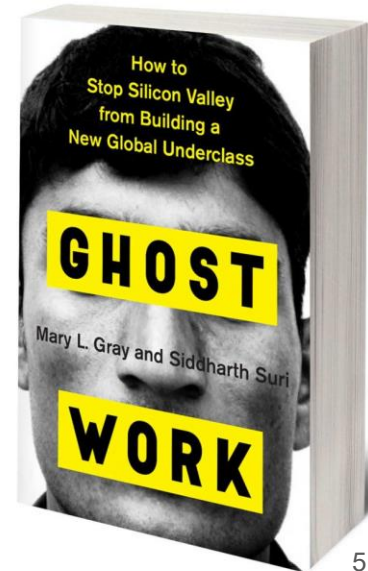
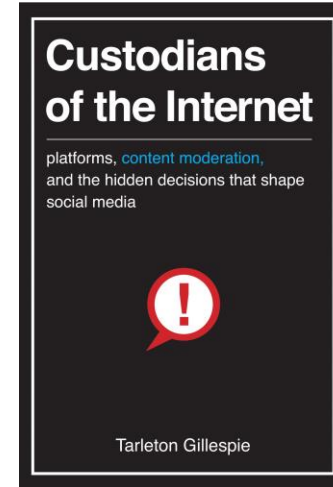
...yet often...

- Unrecognized
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around the world

- In visible to whom?
- Why?
- On purpose? Out of ignorance?
- With what implications?

Invisibility in technology production and maintenance

- **Changing Emphases:** From ‘crowdsourcing’ and ‘peer production’ to piece-remunerated ghost work
- **Content Moderation**
- **Data Annotation and Cleaning:** Behind AI and ML systems lie vast datasets labeled by workers, through platforms like Amazon Mechanical Turk. They remain anonymous and are typically paid very little.
- **Software Maintenance and Open Source:** Much of the work that keeps digital systems operational—bug fixing, documentation, and community support—is unpaid or done by volunteers, often underappreciated.
- **Platform-mediated labor** and automation’s last mile: Gig workers in food delivery, taxi services etc.



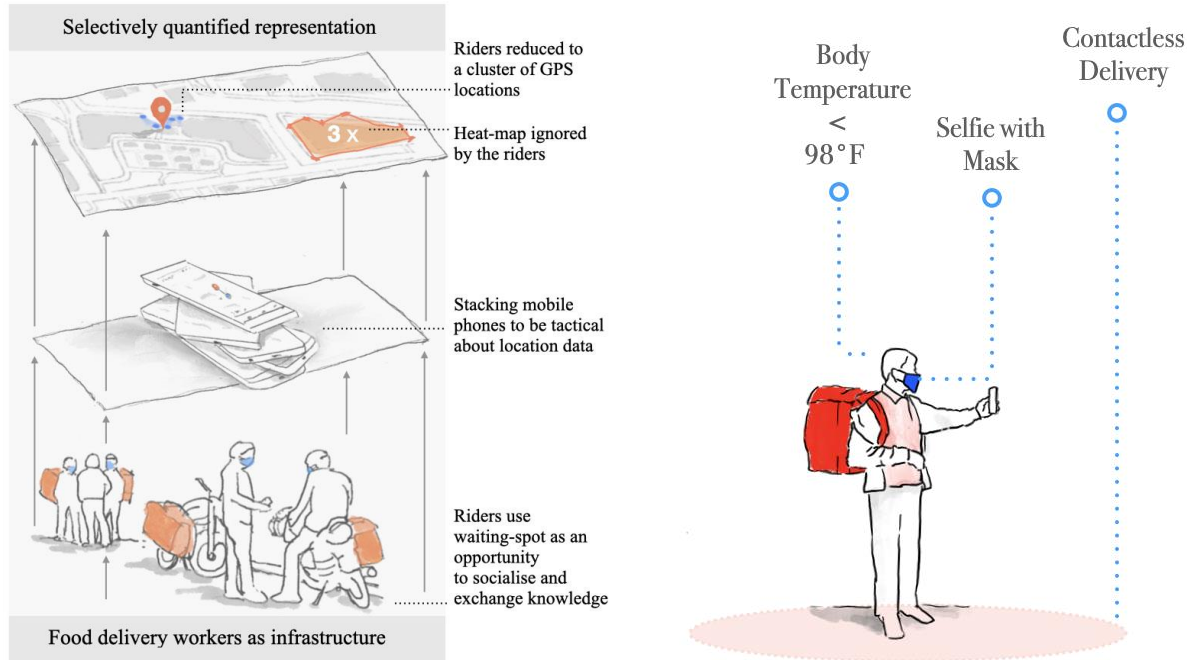
Human labor in the 'AI pipeline'

- Attending to **the constellation of mundane labours** that make AI systems work the way they work
- **Labor across sites**, from labelling datasets, to red teaming, to the (inevitable) public perception management
- **Labor across categories of work**, from knowledge work to emotion work, from bodily work to organisational work



Airi Lampinen, Rob Comber, Sravya Chandhiramowuli, Naja Holten Møller, and Alex S. Taylor. 2024. The Work of AI: Mapping Human Labour in the AI Pipeline. In Companion Publication of the 2024 Conference on Computer-Supported Cooperative Work and Social Computing (CSCW Companion '24). Association for Computing Machinery, New York, NY, USA, 728–731. <https://doi.org/10.1145/3678884.3681825>

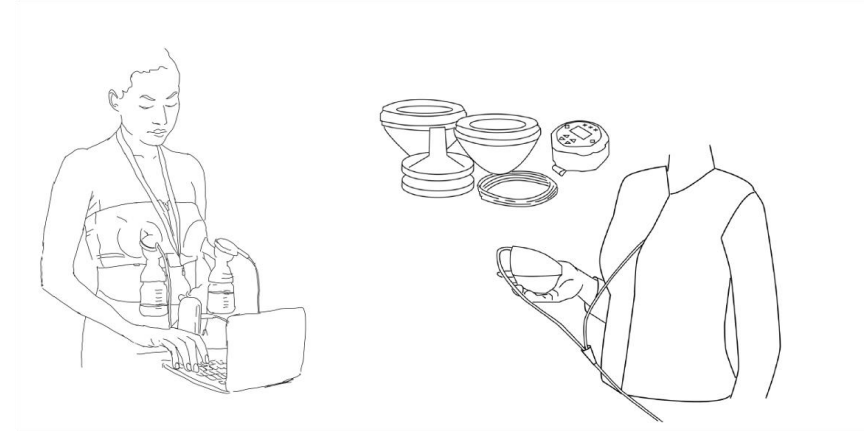
Rendering gig work (in)visible



Riyaj Shaikh, Anubha Singh, Barry Brown, and Airi Lampinen. 2024. Not Just A Dot on The Map: Food Delivery Workers as Infrastructure. In Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems (CHI '24). Association for Computing Machinery, New York, NY, USA, Article 385, 1–15.
<https://doi.org/10.1145/3613904.3641918>

Rendering bodies and bodywork (in)visible

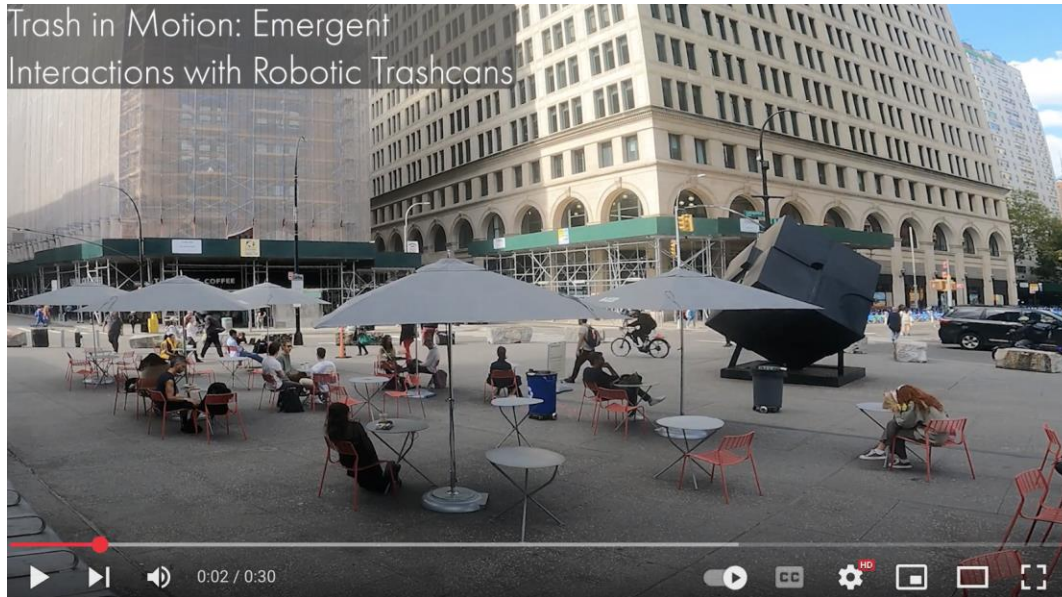
- **Bodywork:** the work individuals undertake on their own bodies and the bodies of others (Gimlin, 2007)
- **Bodily needs impact work** and managing the body with the help of a variety of technologies is key to work – differently for different people, often goes unacknowledged.
- Bodywork is present in all work, ultimately, **all systems are bodily systems**



Deepika Yadav, Kasper Karlgren, Riyaj Shaikh, Karey Helms, Donald Mcmillan, Barry Brown, and Airi Lampinen. 2024. Bodywork at Work: Attending to Bodily Needs in Gig, Shift, and Knowledge Work. In Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems (CHI '24). Association for Computing Machinery, New York, NY, USA, Article 383, 1–13. <https://doi.org/10.1145/3613904.3642416>

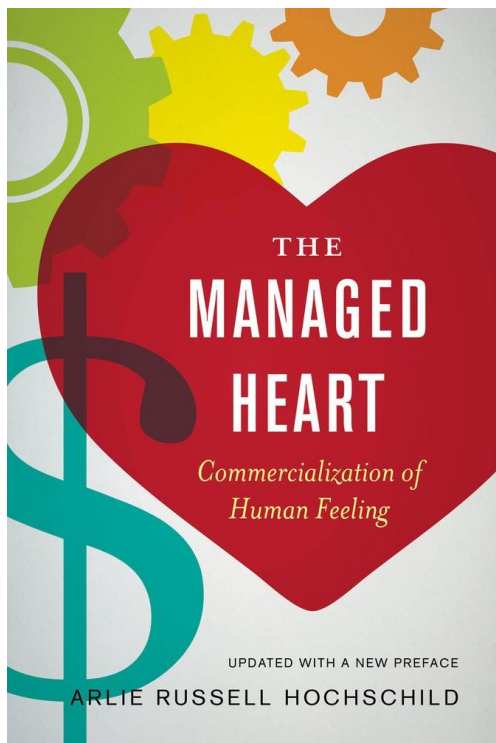
Invisibility in research practice

- Wizard of Oz studies
- Hidden operators that enable technological experimentation



<https://www.youtube.com/watch?v=JsJKwPvuf0A>

Invisibility in research practice: Emotion work



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Emotion Work in Experience-Centred Design

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ABSTRACT

Experience Centred Design (ECD) implores us to develop empathic relationships and understanding of participants, to actively work with our senses and emotions within the design process. However, theories of experience-centred design do little to account for emotion work undertaken by design researchers when doing this. As a consequence, how a design researcher's emotions are experienced, navigated and used as part of an ECD process are rarely published. So, while emotion is clearly a tool that we use, we don't share with one another how, why and when it gets used. This has

KEYWORDS

emotion work, experience-centred design, design research

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1 INTRODUCTION

Where does invisible labor
come up in **your own
research and/or practice?**

‘Fauxtimation’

“Though automation is presented as a neutral process, the straightforward consequence of technological progress, one needn’t look that closely to see that this is hardly the case. **Automation is both a reality and an ideology**, and thus also a weapon wielded against poor and working people who have the audacity to demand better treatment, or just the right to subsist.”

Astra Taylor (<https://logicmag.io/failure/the-automation-charade/>)

‘Fauxtimation’

“But if you look even closer, things get stranger still. **Automated processes are often far less impressive than the puffery and propaganda surrounding them imply—and sometimes they are nowhere to be seen.** Jobs may be eliminated and salaries slashed but people are often still laboring alongside or behind the machines, even if the work they perform has been deskilled or goes unpaid.”

Astra Taylor (<https://logicmag.io/failure/the-automation-charade/>)

‘Fauxtimation’

“In its more harmless form, fauxtimation is merely a marketing ploy, a way to make pointless products seem cutting-edge. -- But fauxtimation also has a more nefarious purpose. **It reinforces the perception that work has no value if it is unpaid and acclimates us to the idea that one day we won’t be needed.**”

Astra Taylor (<https://logicmag.io/failure/the-automation-charade/>)

‘Fauxtimation’

“We have to recognize both the dangers and possibilities associated with automation while relentlessly poking holes in rhetoric that seeks to conflate technology’s present and potential capacities with an inescapable, and deeply exploitative, way of organizing labor and compensation. **Where fauxtimation attempts to pass as automation, we should call it out as such.**”

Astra Taylor (<https://logicmag.io/failure/the-automation-charade/>)

Why is fauxtimation having such a moment?

Why is it problematic?

What might it look like to resist it?

Visibility

- What we acknowledge
- What we value

Visibility

- what we acknowledge
- what we value

- what we can hold accountable
- what we can critique

Visibility

- what we acknowledge
- what we value
- what we can hold accountable
- what we can critique
- what we can measure
- what we seek to control

Should making labor visible be a goal?
In what settings?
With what caveats?

What desirable and problematic implications might there be
to making the different labors behind technology visible?