# **Worker-Managed Crowdsource Labor Markets**

## INTRODUCTION

In the past several years, researchers have watched new forms of labor — exemplified by labor markets like Amazon Mechanical Turk (AMT), Uber, and TaskRabbit — emerge and balloon into billion—dollar industries. While these markets allow people to engage in the workforce in novel ways, this "gig economy" has been criticized for commoditizing and marginalizing workers [4].

On Turkopticon [3] and in my prior work on Dynamo [7], we attempted to make these markets more rewarding for workers, but no labor markets to date place workers first; existing markets trade one manager for another, maintaining an adversarial role between laborers and their managers.

Workers have faced issues like these for more than a century, but they bear relevance to the HCI community broadly for two major reasons: 1) the features of digital systems allow researchers to have an outsize impacts on workers, whereas historically markets have been fractured & untenable, and 2) as researchers of technical systems and social interactions, researchers have a prerogative to attempt to steer systems toward more beneficial outcomes, especially given the growth of this form of labor and the potential implications for the future of work.

#### **HYPOTHESIS**

I propose to investigate the viability of a technologically-mediated, worker-run market as an alternative to existing systems. I hypothesize that such a market can compete effectively, and that workers and consumers would benefit more, for a number of reasons. For workers, 1) communally determined rules and norms are perceived as, and perhaps are, fairer, and 2) a protocol for labor markets would allow markets to communicate things like worker reputation. Customers, for their parts, would be able to leverage market competition, minimizing predatory pricing models.

#### **BACKGROUND**

The most immediate question is why technologically-mediated worker-run markets are so rare. One may have predicted that worker-run markets would emerge inevitably as online systems parallel (and sometimes model) offline settings. Furthermore, the structure of the Internet — a "rhizome", as Miller and numerous others describe [5] — suggests that communities should be able to form naturally, unencumbered by barriers like geography. Futurists predicted that the Internet would democratize communication, enabling grassroots organization at unprecedented scales.

The empirical research suggests that the reality of this promise is more qualified [7, 8]. Indeed, the factors which stymic community—run digital markets are not technical. Researchers have built on existing markets to experiment with the organization of work; others have implemented labor markets entirely from scratch [1, 6]. The components of gig labor market — such as scheduling, dispatch, & payments — are sufficiently explored that we should consider them "solved problems".

No; we're finding that the challenges to worker–centric markets are social. Research has shown that crowds can be directed and can make tactical decisions on an ad hoc basis, but collective governance and policy–making, especially in competitive economic settings, remains an open question. The coalescence of culture adds a dimension of complexity to the individual cases of collective action represented by the study of individual events. Engineering instances of collective action is a qualitatively different challenge from fostering a community of ongoing collective action [2].

# **METHODOLOGY**

I intend to develop a worker-run labor market, which the National Domestic Workers Alliance

(NDWA) will operate through their innovation arm, the Fair Care Labs. I hope to demonstrate that cooperatively operated digital labor markets can be successful, and that technologically–mediated cooperative labor markets are viable alternatives to markets operated as firms.

My immediate task is to create a labor market which illustrates the characteristics described — technical features like scheduling, dispatch, & payments, as well as the necessary affordances for collective governance: forums for discourse, voting systems for referendums, and communally written bylaws. These tools will be the starting point for a worker–run crowd labor market, upon which more affordances will be designed and implemented as needed.

The Fair Care Labs plans to continue the relationship that began over the summer while I was affiliated with Microsoft Research, deploying this system in the San Francisco Bay Area and the Seattle area in order to allow me to provide high–level guidance and to make any necessary course–corrections. This should ameliorate concerns both about funding the system and sourcing workers; my involvement is the extent to which I will be able to contribute as a researcher.

Using Hardin's perspective of collective action, distinguishing between "one-shot" and "ongoing" campaigns, we realize it's necessary to consider how groups sustain collective action over time. Thus, designing ongoing collective action requires skills in system-building, as well as a "nearly anthropological investigation" to engage in the sociocultural questions herein [2]. This describes the type of evaluation involved: a reflection on the ways in which people work and relate with one another, and the techniques we can use as engineers of social systems to guide relationships.

The ethnographic and design work I've done with various labor advocacy groups, my prior work on Dynamo [7], and my background and training as an Anthropologist make me ideally skilled to pursue this line of research. I have demonstrated that I can build systems, and crucially I have proven experience in the qualitative, sometimes nebulous fieldwork necessary for this research.

## **REFERENCES**

- [1] FELSTINER, A. Working the crowd: Employment and labor law in the crowdsourcing industry. *Berkeley Journal of Employment and Labor Law 32*, 1 (2011), pp. 143–203.
- [2] HARDIN, R. Collective action. Resources for the Future, 1982.
- [3] IRANI, L. C., AND SILBERMAN, M. S. Turkopticon: Interrupting worker invisibility in amazon mechanical turk. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (New York, NY, USA, 2013), CHI '13, ACM, pp. 611–620.
- [4] LEE, M. K., KUSBIT, D., METSKY, E., AND DABBISH, L. Working with machines: The impact of algorithmic and data-driven management on human workers. In *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems* (New York, NY, USA, 2015), CHI '15, ACM, pp. 1603–1612.
- [5] MILLER, V. Understanding digital culture. Sage Publications, 2011.
- [6] RETELNY, D., ROBASZKIEWICZ, S., TO, A., LASECKI, W. S., PATEL, J., RAHMATI, N., DOSHI, T., VALENTINE, M., AND BERNSTEIN, M. S. Expert crowdsourcing with flash teams. In *Proceedings of the 27th Annual ACM Symposium on User Interface Software and Technology* (New York, NY, USA, 2014), UIST '14, ACM, pp. 75–85.
- [7] SALEHI, N., IRANI, L. C., BERNSTEIN, M. S., ALKHATIB, A., OGBE, E., MILLAND, K., AND CLICKHAP-PIER. We are dynamo: Overcoming stalling and friction in collective action for crowd workers. In *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems* (New York, NY, USA, 2015), CHI '15, ACM, pp. 1621–1630.
- [8] TOYAMA, K. Geek Heresy: Rescuing Social Change from the Cult of Technology. Public Affairs, 2015.