Examining Crowd Work Through The Lens of Piecework

Anonymous for submission
Affiliation fields filled
to take representative space
of final document

ABSTRACT

The Internet is enabling the rise of crowd work, gig work, and other forms of on–demand labor. A large and growing body of scholarship has sought to predict the socio–technical outcomes of this shift, especially along three threads: 1) finding crowd work's limits; 2) decomposing work; and 3) the relationships of workers. In this paper, we look to the historical scholarship on piecework — a similar trend of work decomposition, distribution, and payment that was popular at the turn of the 20th century — to understand how these questions might play out with modern crowd work. To do so, we identify the mechanisms that limited piecework historically, and identify whether crowd work faces the same mechanism limits or might differentiate itself. This approach to understanding crowd work provides additional theoretical framing to make sense of a topic with which researchers continue to struggle to understand.

ACM Classification Keywords

H.5.m. Information Interfaces and Presentation (e.g. HCI): Miscellaneous; See http://acm.org/about/class/1998/ for the full list of ACM classifiers. This section is required.

Author Keywords

Crowdsourcing; human computation; research vision

INTRODUCTION

The past decade has seen a flourishing of on–demand work, largely driven by the reformulation of work as the constituent parts of larger tasks. This framing of work into modular blocks has allowed people to engage in work despite limited time, little to no awareness of the broader context of the work, and (often) fleeting identities and associations [53, 79, 66]. The realization that complex tasks can be accomplished by directing and managing crowds of workers has spurred the research and industry communities to flock to sites of labor like Amazon's Mechanical Turk (AMT) to explore the limits of this distributed, on–demand workforce. Researchers have taken to the space in earnest, finding opportunities to enable new forms of work using this population of "Turkers" [5, 110, 86].

[MSB: I suggest merging the next two paragraphs into one. Right now it's not clear by the time I get to the third paragraph where this is going. Instead, I think the topic of the single (merged, snipped-down) paragraph would be how this stuff is growing, yay, and it's giving rise to challenges.] This form of work has grown considerably in size, far beyond the domain of "information work" from which it first sprang. While Howe described crowdsourcing as "outsourcing [work] to an undefined, generally large group of people in the form of an open call", for years the instantiation of this work was limited to the utilization of human intelligence to process data and act on information [58, 129, 133, 31, 88]. More recently, crowdsourcing of embodied work — driving, cleaning, for instance — has become a focus of on–demand labor markets [68, 117, 43, 111]. Today, on–demand work promises to become a .

For all the growth we've observed in this labor market, we have also seen a complicated and conflicted culture emerge among its constituent workers. Researchers have made efforts to understand the people that have gravitated toward crowdsourcing platforms since its emergence and popularization, but as the form of work has grown and changed, so too have the demographics of workers [95, 104]. Some of this research has been motivated by the identification of the sociality of gig work, and the frustration and disenfranchisement that these systems embody [50, 98]. Other work has focused on the *outcomes* of this frustration, reflecting on the resistance workers express against digitally mediated labor markets [68].

[MSB: there's a lot of flipping between on-demand work, crowd work, etc. in this intro. Name them all up near the front, state which one you're going to use in *italics*, and then be consistent throughout.] The extant body of work has ostensibly sought to answer one underlying question: What does the future hold for [MSB: on-demand/crowd] work and those that do it? Researchers have offered their input on this open question along three major threads:

1. What are the limits of crowdsourcing? Specifically, 1) how complex can crowd work get? [MSB: how complex are the goals that crowd work can accomplish?] and 2) how far will crowd work reach into the everyday lives of people? [MSB: which people? workers? requesters? do you mean, will recruiting crowd work be the domain of experts or everyday end users?] [90, 109, 56, 132, 131, 81, 36];
2. To what extent can we decompose work (especially into micro–tasks)? [MSB: How far can work be decomposed into smaller and smaller microtasks?] [61, 5, 14, 73, 62, 67, 12, 16, 82]; and