

The Relationships of Workers to Work, Peers, and Others
Crowd work's perspective. **The relationships of workers with their peers and with requesters are nuanced and not especially well-understood.** Researchers have begun to appreciate the sociality of crowd workers in labor markets; still, the study of these communities is made more challenging by the limited access to workers on these sites of work inherent to digital spaces made without social affordances [7, 23]. We can break this general body of work into two subgroups: workers' relationships 1) with *requesters*, and 2) with *other workers*. We'll look at workers' relationships with work itself, which we'll discover gives us insight into why people engage in crowd work in the first place.

[al2: some topic sentence that brings together the debate where one side blames Turkers for being bad at Turking and another side blames requesters for not understanding Turkers as a culture of people.] Some research frames this tension as the *Turker's problem* (see, for example, Gadiraju et al.'s work, which frames the problem of unpredictable work as the result of "malicious" crowd workers), [5, 28, 9].

Early on, Irani and Silberman highlighted the information asymmetry between workers and requesters on AMT, leading to the creation of *Turkopticon*, a site which allows Turkers to rate and review requesters [12]. Salehi et al. took this critique on information asymmetry and power imbalances a step further, designing *Dynamo* to facilitate Turkers acting collectively to bring about changes to their circumstances — this led to the Academic Requester Guidelines [27]. This unbridled power that requesters have over workers and the resultant stress and frustration that this generates has been part of the undercurrent of research into the tense relationships between workers and requesters [6, 27].

The frustration that workers experience dealing with requesters seems to precipitate frustration and mistrust between crowd workers, as well. Salehi et al. describes "mega-drama" among workers on forums for Turkers; Irani and Irani and Silberman discuss the culture of crowd work and the study thereof. Gray et al. quantifies and maps this social network of Turkers. McInnis et al. takes these observations and considers what a crowd work platform might look like if it were to be designed more inclusively [27, 10, 11, 7, 20]. The overarching theme of the research in this space has been documenting the struggle of crowd workers and attempting to intervene in constructive ways, while walking the balancing act (especially in the cases of Irani and later Irani and Silberman) as we think about the culture of crowd workers.

Piecework's perspective. **The questions surrounding the ways pieceworkers related to managers might be best answered by the work that has been done in the emergence and proliferation of labor unions.** The primary avenue for workers to interact with managers has been through laborer advocacy groups such as the American Federation of Labor, (one of the forerunners of the largest and most politically influential labor union in the United States). Looking through that lens, we find copious research on the relationships between workers and requesters [17, 1, 19, 13]. One component of collectively negotiating with managers has been the process of collective

action, a topic which has been substantively explored but is not quite yet answered [8, 24].

Answering how workers related to one another is arguably more challenging for a number of reasons. For one thing, the research methods we typically associate with the exploratory study of cultures — Anthropology, and namely participant-observation, ethnography, etc. . . — didn't exist quite as we know them at the turn of the 20th century, and wouldn't for several more decades. Still, we can look at primary sources, like *The problem of piece work* to give us some hint of how they related to each other [14].

The driving force of American labor advocacy organizations was to get piecework railroad workers to identify "not only as railroad employees but also as members of the larger life of the community" [14]. Doing this, Ostrom and others argued, would facilitate collective action and perhaps collective governance [25, 8, 24]. Riis had contributed to this sense of shared struggle and endurance by the time *The problem of piece work* was published by documenting pieceworkers in their home-workplaces, literally bringing to light the grim circumstances in which pieceworkers lived and worked [26].

What's different about crowd work. **The differences between crowd workers and pieceworkers seem defined largely by the differences in the places of work.** Whereas it arguably became inevitable that workers would have a place to meet, discuss, and collaborate when they began sharing places of work, online spaces make it much harder to do so. Crowd workers can "lurk" and do tasks, or just do the occasional one-off task, without any affiliation with — or even knowledge of — communities of peers [23, 21, 4].

We further find the sources of differences between crowd work and piecework in the nature of the relationship between workers and requesters — or rather, the lack thereof. While historically the management of workers had to be done through a foreman (who necessarily had an intuitive — perhaps sympathetic — relationship with workers), the foreman of the 20th century has largely been replaced by algorithms of the 21st century [16]. The result of this change is that the agents managing work are now cold and logical, if unforgiving. Where a person might recognize that the "attention check" questions proposed by Le et al. ensure that malicious and inattentive are stopped, some implementations of these approaches only seem to antagonize workers [al2: shots fired] [15, 5]. Anderson and Schmittlein told us more than 30 years ago — in 1984 — that "... when performance is difficult to evaluate, imperfect input measures and a manager's subjective judgment are preferable to defective (simple, observable) output measures" [2]. [al2: here's an idea. feel free to push back or revise or something: "Should we be surprised that management approaches we've known to frustrate pieceworkers since 1984 would only aggravate crowd workers in many of the same ways?"]

Implications for crowd work research. **What we've done in the field of crowd work might be able to tell us something about piecework just as piecework has told us so much about crowd work.** Crowd work research doesn't just benefit

from digital media allowing us to make relationship networks like Gray et al. do; we benefit from the firmer theoretical basis of Anthropology that existed in a radically different form at the turn of the 20th century, when piecework began to emerge. Malinowski, Boas, Mead and Boas and other luminaries throughout the first half of the 20th century effectively defined Cultural Anthropology as we know it today; *participant-observation*, the *etic* and the *emic* understanding of culture, and *reflexivity* didn't take even a resemblance of their contemporary forms until these works [18, 3, 22].

The research on piecework still offers to guide us on perhaps the most rudimentary aspects of worker management Anderson and Schmittlein drew a dichotomous line between “defective (simple, observable) output measures” and “a manager’s subjective judgment”, but such a dichotomy need not necessarily represent our work management styles [2]. We can develop tools that better inform humans, rather than (perhaps futilely) attempt to delegate all worker management to machines. This is an area we should pursue, but haven’t yet. If the literature on piecework is to be believed, more considerate *human* management may resolve many of the tensions we’ve discovered among among crowd workers.

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