

# Making Crowdwork Work: Issues in Crowdsourcing for Organizations

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## Abstract

Existing approaches to crowdwork center around the unique ways in which work is sourced from the crowd, often emphasizing the kind of work characterized by hyperspecialized, microtask labor, such as that found in Amazon’s Mechanical Turk. However, real work in organizations is complex and rich, and as crowdsourcing is increasingly used alongside mainstream organizational work, social, technological, human-factors and work practice-related challenges arise. This paper presents the preliminary results of a research study designed to investigate models and methods for effective organizational uses of the crowd. The results indicate that despite the growing trend in organizational crowdsourcing, its implications on the organisational work performance and human requirements are yet to be fully understood.

## Introduction

A number of definitions and frameworks for understanding crowdwork have been advanced (Quinn and Bederson 2011; Erickson 2011; Estellés-Arolas and González-Ladrón-de-Guevara 2012), and issues raised in relation to organizational uses of the crowd (Kittur et al. 2013). We have found that the nature of work in crowdwork is itself considered only tangentially.

Broad-based grounds for understanding the phenomenon of crowdwork are identified in such concepts as collective intelligence, “wisdom of the crowd”, and human computation. A remaining challenge is to provide a framework for effective use of crowdsourcing in organizations, which requires that organizational issues around the use and adoption of crowdsourcing be well considered. Crowd characteristics that are desirable to organizations are only beginning to emerge (Erickson, Petrick, and Trauth 2012), and implications of organizational uses of the crowd are just starting to be understood (Felstiner 2011). Such understandings are critical for exploring relevant issues that

would enable the building of frameworks and processes for effective and efficient organizational uses of the crowd.

## Research Study

The preliminary results presented in this paper are based on an on-going study to investigate organizational uses of the crowd for accomplishing traditional forms of work, e.g. in IT application maintenance and consulting. Here we specifically draw on results of a study of a non-commercial crowdsourcing system designed for organizational use. The system offers an outcome-based model enabling an organization to deliver small contained “components” or packages of work, known as events, at fixed prices using crowd-based resources. Events are defined per project, and are posted to the system portal so that crowd workers can subscribe to them. Events are to be completed within predefined short-cycle times. Successfully completed events are reviewed by project leaders and integrated into achieving main project goals.

The study takes an interpretivist qualitative approach, using literature review, study of existing applications, as well as semi-structured interviews as primary methods of data capture. The interviews focused on organizational motivations for leveraging the crowd, details of specific tasks performed, advantages gained, problems encountered and perceived impacts on the organizational work models. Analysis of data uses grounded theory in order to elicit emerging themes. Our goal in this paper is to discuss emerging initial themes, while highlighting issues in relation to the nature of work for organizational crowdsourcing.

## Emerging Issues

Data analysis is focused on such questions as: what kind of work does it take to use crowd-based systems and models? What forms of work representations exist (explicitly or implicitly) in existing crowdsourcing models, and how much (if at all) do these representations take account of the

Table 1: Summary of emergent themes

Emergent themes	Advantages offered by, or sought from, using the crowd	Challenges posed to organizational work performance
Managing and specifying work takes work (the meta-work of crowdwork)	Accomplishing work faster through the use of a diverse workforce	A huge overhead of “meta-work” is required to specify and enable crowdwork
	Outsourcing work to a crowd of people in a compelling way, including entertainment	Impacts on organizational work efficiency and quality
Current uses of the crowd takes the form of outsourcing of low-level routine tasks	Focus on componentized or “hyperspecialized” work	May lack compatibility with organizational workflow
	Possible automation of low- level routine tasks	Organizational work is inherently complex
	Access to an undefined network of workers	Organizational work performance assumes a pyramidal structure of workers with often rigidly defined roles
Ability to access open crowd knowledge, while safeguarding internal organizational know-how requires crowd knowledge management techniques	Access to distributed work	Reliability and accuracy of submitted work
	Access to expertise outside organizational boundaries	Protecting organizational intellectual property and competitive advantage
	Exploiting and utilizing crowd knowledge	Exploiting and integrating other forms of knowledge
	Leveraging collective intelligence	Selection or recruitment of individual intelligence from the crowd

inherent complexity of work? In line with grounded theory technique, we identified the following themes and issues regarding the use of the system under examination (see also Table 1)

**The meta-work of crowdwork** – Particularly in a system designed with an aim to reduce cost, for example, the significant amount of “meta-work,” i.e. the work required to plan and execute crowdwork, needs to be accounted for as part of the overhead. This includes providing the necessary tools and context to perform the work (which is higher in crowdwork as participants do not have the same access to the context as in-house workers), planning and structuring work requests, accessing and engaging the crowd, collaborating with the work producers, reviewing the quality of the work, and integrating the result of the work back into a larger project.

**Low-level outsourcing of routine tasks** – Many uses of crowdwork focus on decomposing or “atomizing” routine time-consuming tasks into low-level pieces of work to be performed by the crowd. The system under investigation focused on short-cycle (though not microtask) work. However, much of organizational work consists of complex sets of interdependent tasks that need to be coordinated as a single thread across organizational processes.

**Crowd knowledge management** – Crowdwork thrives on harnessing crowd knowledge from an openly distributed pool of people. This sits rather uncomfortably with other, more traditional forms of knowledge, including tribal knowledge, application knowledge and local know-how, which have proved to be an organization’s most valuable knowledge asset. It can be difficult to effectively utilize crowd knowledge in a manner that leverages other forms of knowledge, while safeguarding organizational intellectual capital.

## Concluding Remarks

A significance of crowdwork is that large numbers of un-or loosely-affiliated people can contribute to a single effort. Data analysis to date suggests that there are significant implications of organizational uses of the crowd on how work is performed. It points toward the need for more coherent frameworks for organizational crowdwork that take a broad-based approach to consider the implications on the organizational work performance and human requirements. Such approach will need to better account for the inherent complexities of work, the many ways work is conceptualized, experienced and described, and the many forms and modalities it takes.

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