

A Perfect Storm? Reimagining Work in the Era of the End of the Job

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Trends of independent workers, an economy of increasingly automated processes and an ethos of the peer-to-peer “sharing economy” are all coming together to transform work and employment as we know them. Emerging forms of “open” and “crowd” work are particularly keen sites for investigating how the structures and experiences of work, employment and organizations are changing. Drawing on research and design of work in organizational contexts, this paper explores how experiences with open and crowd work systems serve as sites of workplace cultural re-imagining. A marketplace, a crowdwork system and a crowdfunding experiment, all implemented within IBM, are examined as instances of new workplace configurations.

“It’s like old age. It’s the worst thing, except the alternative.”
(A local farmer when asked to take on more work in Downton Abbey, Season 4)

INTRODUCTION: WHITHER THE JOB, LONG LIVE WORK!

A perfect storm in the world of work may be forming. Consider the following dynamics. In the United States, the Affordable Care Act is projected to enable freedom from job lock, or the need to stick with an employer primarily for benefits, particularly health insurance (Dewan 2014). This comes on the heels of the Great Recession which has pushed many into “the independent workforce” a population some already consider undercounted, under-represented (Horowitz 2014) and likely growing (MBO Partners 2013, US Government Accountability Office 2006). Increasing automation and technical systems are giving rise to the possibility of extreme productivity and technological unemployment (Arthur 2011, Rifkin 2014). Peer-to-peer models for engaging with others are taking hold in arenas as diverse as consumption, education and services. Upstarts of the “sharing economy” are attaining mainstream status (The Economist 2013, Friedman 2014). The models and ethos of “sharing” and “open” are permeating the world of labor. Do these trends together spell the end of “the job” as we know it?

At least since Marx's critiques of industrial capitalism and Weber's "iron cage of rationality" in bureaucracy (1930), social researchers have long critiqued alienating, stultifying and manipulative forms of organizations and labor (Casey 1995, Graeber 2013, Gregg 2013, Hochschild 1989, 2003) and advocated for change. Push factors, such as retiring workforces (Aiken 2012), also challenge current work configurations as long-tenured employees, especially baby boomer generations, depart organizations taking their reserves of experience and knowledge with them. At the same time, emerging business models and technologies enable work to be designed and distributed in new ways. The organization as the pre-eminent industrial era site for harnessing creativity, managing production, and developing and disseminating the produce of business is under stress. Such tensions reverberate through the organization of labor for ethnographic praxis in industry as well. Calls to evolve the practice (Bezaitis and anderson 2011, anderson et al. 2013, Wakeford 2011) sit beside those who remain vigilant to the risks of market transformations of ethnographic labor (Granka and Larvie 2008, Lombardi 2009).

At the same time, collaborative and peer-based forms of labor organization are emerging, sharing in the ethos of DIY, maker, hacker and other open and peer movements. For some, these dynamics hold out the promise of freedom from institutionalized hierarchies, the autonomy to determine what work to do and how, and for the possibility to shape lives independent of dominant institutional forms. Others see these same dynamics as instead portending a kind of neo-liberal feudalism, the demise of job security and the shifting of the requirement for management to the worker. Not only is the threat of return to piece-work evident, but the generative value of organizational forms (eg., for protection, for mobilizing resources towards long-term ends) may be at risk. The worse thing indeed, except the alternative?

Systems for open and crowd forms of work are particularly keen sites for investigating what is coming of these dynamics. Open and crowd work systems enable the distribution of work through open calls rather than assignment. Whether deployed for employees internal to an organization (as is of particular interest here) or for freelance and cross-organization labor, the work done and how it is organized may be undergoing transformation. In general and consistent with the broader growth of service, platform-driven, API models of transaction, we are witnessing shifts from "acquiring" to "accessing", even in the case of labor.

What is happening to the cultural meaning of the workplace and forms of workplace sociality that organizations engender? Drawing on experiences in studying, designing and using intra-organizational open and crowd work systems, this paper investigates changing relations between organizations and those who perform labor for them in the context of changing ways of organizing work. As explored by (Batteau 2001), organizational culture is made through constant processes of negotiation and management of ambiguities. But what happens when the target of affiliation is less the organization and more specific and often granular units of work? Is the assumption of the collective entity and identity of the organization changing through participation in crowd and open work?

Understanding changing meanings of the workplace, we argue, requires looking not just at the organization of labor, but the configurations of the work itself. How work is conceptualized, represented, disseminated, accessed, managed and performed, may be

changing through use of these systems (Cefkin 2014, Anya et al. 2014, Irani 2013, Martin et al. 2014, Moore et al. 2014), demanding an even more intimate consideration of the experience of work and working. How do these experiments with alternatives to traditional staffing and assignment models impact the way organizational culture is imagined and enacted? In what ways do open and crowd forms of work enhance or detract from workplace sociality and from other aspects of organizational practice and workforce engagement? A deeper understanding of shifting engagement between organizations and workers – a relationship mediated through the work itself – advances understanding of potentially significant social transformations, allowing ethnographers in industry to sustain an active voice within the organization about the changing nature of society (Bezaitis 2012, anderson et al. 2013).

OPEN AND CROWD WORK SYSTEMS

By “open” and “crowd work” systems, we mean online applications that enable the distribution of work through open calls rather than through assignment or pre-defined job-role requirements. In contrast to the more narrowly defined terrain of online crowdsourcing most commonly associated with microtask labor, we include a wide range of mechanisms and event types within our definition. These systems enable work opportunities of a tremendously varied focus and scope to be announced openly and for people looking to perform work (“the crowd”) to find and perform it. They can vary in the degree of “openness”, from the world at large (or at least those with digital access and know-how) to a particular group of people, or even sub-group within a company or population. Depending on the form of the system, those looking to perform the work may simply claim it, apply to be selected to perform it, or submit completed work results.

Thousands of applications using these models exist. They range from *specialized marketplaces supporting a single domain or practice* (eg., HighSkill Pro for consultants, finance and legal professional, Freelance Physician for doctors, Petridisk.org for lifesciences), to *general purpose intermediaries across a range of work domains* (Elance-Odesk is perhaps the largest and best known of these), to *volunteer and charitable assistance sites* (eg., LinkedIn, Spark!), to *outcome-based contest sites* (eg., 99Designs for creative work or Innocentive for complex scientific and technical innovation development), to *microtask platforms* such as Mechanical Turk. Though some systems are designed only to support *digital work*, the model of open and crowd work can also support *place-based labor*. Task Rabbit supports finding people to perform errands and chores, OnForce provides local IT support, and the above-mentioned Freelance Physicians aligns doctors to hospitals. While the work is not digital, these platforms rely on digital capabilities for such things as matching, notification and communication. Participatory systems that allow the design and execution of complex work, such as those common to citizen science projects (eg., GalaxyZoo, or the contest-hosting platform InnoCentive), may well require attendant off-line work with other instrumentation and participants.

Another distinction is whether the system acts as an actual site for crowdwork or merely act as an intermediary for matching work efforts with specific producers who submit bids to perform the work (eg., Elance or Freelance.com. Some platforms allow *microtasks* while

others provide support for *complex work*. Microtasking involves the decomponentization of work into tiny bits which can be disseminated, claimed and performed by people worldwide in the matter of minutes. Here work producers simply perform and submit the work rather than applying to perform it. A similar model plays out at the other end of the spectrum, the large contest platforms such as InnoCentive and Kaggle, which provide a platform upon which other entities (governments, universities, businesses) host contests aimed to solve large, complex challenges. The work is performed and a winner(s) selected. Even crowdfunding plays into these dynamics; people identify work to be performed (e.g., an art work or gadget to be produced) and solicit investment in the form of time and money from others to get it done.

In short, the diversity of forms, sites of application, and implications for the kind of work performed and how it is organized is significant. At the same time, as has been recently made apparent in the popular media, attention to such peer-based consumer systems as Uber, these are not just experimental or feel-good efforts to collaborate in new ways. Many are business enterprises with profit-making interests, which aim to support businesses in enhancing productivity and accelerating innovation. Indeed, the usefulness of these models for business operations is witnessed in the fact that open and crowd work models can be *applied internally among full-time employees*, as we explore here. IBM has utilized crowdwork platforms for the execution of componentized technical and creative work drawing on work producers both internal and external to the organization. Applications that enable people to post work requests to reach across organizational bounds but within the company at large are used (including a system the authors have been prototyping). Crowd-sourced ideation and problem solving “jams” where employees at large are invited to participate are common, as are hack-a-thons and other contest-based models open to all employees or those of a particular division. And a number of internal crowdfunding programs have been run, in which employees allot company funds to employee-created projects. Many of these are designed as much to extend participation and innovation than, for instance, narrowing costs. So while open and crowd work systems may portend further practices of neoliberalization (a worry that surfaces in the experience of participants, as we show below), they are not singularly about shedding jobs from companies or engaging freelancers. Even so, they do change the relationship to (and amongst) their consumers and workers. The line between consumers and producers, requesters and workers, blurs. We believe that a look at *intra-*organizational experiences with crowd and open work promises some of the richest cases for considering what the emergence of these forms of work may mean in terms of the cultural reimagining of work and the workplace.

DATA AND METHODS

We have been tracking the development of new work formations and the crowd work industry through secondary sources (the press, others’ research) and by engaging in online forums and public meetings. We also have conducted research in a variety of specific projects at IBM involving open or crowd forms of work. The particular role we played in these projects has varied. We have designed concepts for broader strategic consideration,

analyzed the use of systems others developed, and made recommendations on design and use. We have also developed and tested technical prototypes that we designed.

Here we focus on data from three programs. All were used internal to the organization, engaging employees in working with their peers in new ways. One of them also included external participants. While each program opened up for broad input some aspect of the work, whether identification, selection and/or execution, the aims, forms and mechanisms employed by each varied, shaping the experiences of participants in different ways. We conducted interviews with participants in a variety of roles for each system, and observed communications and meetings amongst those supporting the efforts.

Marketplace

One program involved the pilot of an application our team had designed. The purpose of the application, referred to as a “marketplace,” was to match people trained in organizational change management methods to specific initiatives. The program aimed to address two key challenges. First, as organizational change management applies broadly across an organization, many people from different geographies, roles and divisions were being trained. However very few of those trained had the opportunity to perform change management on a consistent basis, limiting their meaningful, on-the-job experience post-training. Secondly, as a large, global firm, the times and places where change management expertise is required are uneven. This means that not only might those who have been trained have difficulty finding opportunities, but initiatives needing personnel at particular times and places cannot easily find available people. The marketplace was designed to provide a central location where those with work needs could post their requests and those looking to perform work could apply to be selected to do it.

Crowdwork

We studied the use of an existing crowdwork system designed initially for the execution of technical work such as software development by employees and by external participants who worked through existing vendor service provider companies. Targeted work was that which could be done in a week or less. Detailed specifications for desired work products were posted in the system by requesters. Workers submitted proposals based on the specs, and, if awarded the bid, the worker would perform the work and return the results through the system. As a work execution system, the intention was that the work could be sourced and completed without (or with only minimal) interaction between the requester and worker. This contrasts with the marketplace, which was designed as a simple match-making system to identify people, but where the details of the effort and the results were shared outside the system. In the crowdwork system, work agreements were “outcome-based,” that is, worker and requester agree on a fixed price for a pre-specified outcome or product.

Crowdfunding

The third case was a crowdfunding program that occurred in our own research lab (Muller et al. 2014). Dollars were allotted by the lab director to each member of the research division at

the lab. Research and other lab staff both proposed projects and were able to invest their allotted dollars in others' proposed projects (people could not invest in their own project) as well as to volunteer to work on those projects. Projects ranged from the simple purchase of products (eg., plastic cups to replace Styrofoam in the cafeteria) to more elaborate endeavors (eg, supporting data wrangling for advanced scientific projects).

FINDINGS

In re-examining our interviews and observations from these projects, we see evidence of a number of ways in which open and crowd work systems are engendering workplace reimagining. We found that the mere fact of people having a chance to participate in these novel initiatives occasioned reflection and commentary on aspects of people's working lives, from the nature of bureaucracy ("Things get lost in bureaucracy, people don't want to stick their necks out") and how crowdfunding has the opportunity to disrupt it (through the bottom up approach), to how people manage personal commitment vis-à-vis work, to the opportunities (or lack thereof) for personal growth and development. And we heard directly, and with some anxiety, reflection on what crowd and open models portend for the future of work more generally, such as the concern that making work beholden to the crowd will give rise to an ominous slippery slope of employment, "we'll all be greeters at Walmart." It may be that these reflections were especially charged given the internal organizational settings we observed, where these approaches contrast directly with more traditional and stable means of organizing work.

Here we look in more depth at three dimensions emerging from the data. The first explores indicators of how participation in an open and crowd work initiatives appeared to prompt reflection on the question "what kind of person am I?", on people's sense of identity as a person, worker, professional, and organizational member. The second extends from this to consider relational dimensions of work, how participation in these initiatives throws into relief workplace and organizational relationships and affiliations. And the third looks at authority and control. By definition, the move from work assignments determined by resource-owning entities to more open access and selection shifts the locus of control. It is this factor that leads some to optimistically suggest these forms are leading to greater democratization, and others to see them as the further commoditization of work.

Identity and Roles

Participation in these three programs gave rise to reflections on people's sense of self, constructs of identity and the social roles they play.

The *crowdfunding* effort invited participants to propose "any" project (as long as it was legal, and was not for the purchase of capital equipment so as to avoid undue accounting and taxation complications.) These projects and proposals, then, signaled to members of the lab what others found to be important. As participants considered what to support and how (eg., investing and/or volunteering), they necessarily judged their estimation of others' proposals. By making transparent what mattered, people were confronted with the question

of whether what others proposed fits their own expectations of the kind of work and workplace they aspired to be a part of.

In a number of cases, people's identities as scientists in a research lab played into their evaluations. One proposer, a long-time Silicon Valley tech expert with experience across a range of companies, proposed to initiate a particular talk series in order to make the lab a more "researchery" place. "It's important, I think, for a research place to have a kind of an *economy of ideas* as the basis, rather than an *economy of products* or an *economy of business*.... And a good way to determine that is how many speakers come through the lab and how well-attended they are." He felt the results would speak for themselves about what kind of place this is, whether it a place worthy of the investment of scientists. "It goes to who we are." (The proposal was funded.)

Another research scientist, in assessing whether to invest in a proposal for a community garden, wished the proposal were "more scientific", by focusing on practices of field flooding, analysis of evaporation and optimized water use, or adjusting potassium levels with soil tests. Referring to lessons from his childhood in India:

My dad's engineer used to say this when I was a kid, "It's an engineer's job to eliminate other engineer's jobs." Always optimization. It kind of sticks with you. You think this is the meanest, harshest thing to say. You are going to bring in more automation, you are going to take people out of a job. But you know you bring in automation, you optimize production. So its one of those things. And I didn't see that.

Here we see how the evaluation of a project proposed by a colleague raised questions as to what was a worthy investment given the context of the scientific lab and the worldviews of this scientist, informed by a childhood in India, and which drives his own scientific efforts. Encounters with the proposals of peers in the crowdfunding initiative gave rise to questions of belonging, a chance to ask: Do I/my peers belong here?, questions prompted by the open and visible participant-driven approach of the program.

The *marketplace* rested on the willingness of employees both to make aspects of their work available to others ("work requesters") and to opt in to work on others' projects ("work producers"). One question is why work producers choose to perform work for others when it wasn't a job requirement?¹ We heard a range of reasons for why people opted in as workers. A participant in China aimed to increase opportunities to perform change management work, which is her preferred kind of work but is something she rarely has an opportunity to do in China. An employee in India, faces a one month code-freeze, and as an "industrious person" who likes to stay busy, he looked to the marketplace as a valid and interesting way to do so. Another participant who described himself as "all about efficiency" described being turned off by requests that appeared too bureaucratic or ill-composed. "And I think, okay, what are they really trying to accomplish here? And what is actually going to happen? And I think nothing. Nothing's going to happen and it's going to be frustrating. Close it. Move on to the next one." Others were attracted by the potential to try out new

¹ In this section we particularly examine the work producers. Below the experience of requesters is also included.

kinds of work, to expand their horizon. Each of these demonstrates how encountering options for the kind of work they could perform encouraged a reflection on who they understood themselves to be and what mattered.

For external, paid workers in the *crowdwork* system², the theme of “flexibility” emerged strongly – the ability to work remotely and outside organizational bounds in order to fulfill, for instance, the role of father and husband by managing a work-at-home arrangement. One participant felt his engagement gave him a chance to think about and figure out how to solve complex problems whereas another took it as a chance to focus on a particular kind of work he already knows well. Both reveal ways in which the opportunity to select their work encouraged their reflection on the kind of worker they understood themselves to be. The preference of the latter participant offers a valuable comparison to the lives of those enmeshed in the social configurations of traditional organizational life. He specifically contrasted the kind of work he likes with that which he does not, namely, being a “team lead” where he’d be expected to take on additional responsibilities. A hallmark of traditional employment is the performance appraisal. This appraisal typically includes a factor considering evaluating leadership potential, and the expectation that “successful” workers are those that demonstrate leadership ability is not uncommon. “In personnel actions and judgments, we see the embodiment of an organization’s cultures, resolving the contradictions of command and inclusion. The individuals who make up the organization are the signposts of its values, artifacts of this resolution.” (Batteau 2001, p. 735) While there was a reputation system built into the crowdwork program, it was based on people’s record in being selected or completing the work as asked for in the system. Being a crowd worker gave him a chance to avoid the kind of evaluation he might face internal to organization.

We also saw evidence of how these arrangements could be in tension with people’s professional identities. For example, the crowd work system is designed to support short-term execution work. The question of how to ensure quality work surfaced repeatedly and is in fact one of the most frequent topics more generally in discussions of crowdsourcing. In contrast to a common view that crowd workers are trying to get by with minimal effort and game the system, said one participant “I don’t like to deliver poor quality work because I’ve been in IT long enough to know that if that happens, someone somewhere is going to wear it. And that I guess is my empathy with the general IT population that we shouldn’t let each other down like that.”

We see then in this section some of the ways in which open and crowd work systems are impacting workers’ identities and roles. In each case, encounters with others’ ideas and with potential work to be performed caused them to reflect on their own sense of self, their own priorities. Overall the open and crowd work systems encourage people to re-imagine their identities and roles, from what it means to be “industrious”, to being a “research scientist” or a “software developer”, a “father” or “team lead.”

Relations and Work

² In this section we focus on experiences of the external work producers. Experiences of work requesters will be addressed below. We do not currently have sufficient data on the internal employees engaged with the crowd work system of work producers.

Open and crowd work mechanisms also have the potential to shift the way people experience and enact their relationships with others in the workplace and with their organization.

The *crowdwork* system we investigated was developed to fit with existing organizational processes; it was designed to take small bits of work that would have previously been done by a “retained team” of IT service delivery personnel and put them out to the crowd who was either elsewhere inside of or external to the organization. In this kind of system, participants enter into a *requester-producer* relationship. As the crowd workers were not part of the retained team, it gave rise to the need to manage an “insider-outsider” relationship, creating at times an “us and them” relationship on the job. The expressed wish by an external worker that all the communications between requesters and workers would happen through the provided online forum so as to ensure transparency and fairness illuminates this point, and is contrasted to the complaint of a work requester: “That’s one of the things that has really killed us, in that you know you can’t pick up the phone, you can’t send ’em [an instant message], they’re not invited to your meetings, they’re not part of your team, they’re kind of a one-off contractor that you really can’t- ... collaborate with on a real-time basis.” Referring to the kind of insider knowledge gained through full-employment and longer term collaborations as “tribal knowledge,” another remark by requesters was the difficulty in specifying the work requirements. One requester said, “...there’s lots of shortcuts you can take when you’re using a member of your own team, from the level of details to the terminology to use...” The crowd workers lacked the tribal knowledge that the retained team members shared by virtue of working together over time (see Moore et al., 2014 for a related analysis). Consequently, communicating with crowd workers, compared to retained team members, tends to require extensive articulation of background knowledge that working teams can take for granted. This led requesters to complain continually about the unmeasured overhead required in writing detailed work specifications for crowdworkers.

Despite this divide between “team members” and crowd workers and the anonymous representation of crowd workers (known only by aliases), relationships did develop between requesters and producers. Anonymity is not the same as being without relationship. (See also Martin et al., 2014.) A telling example surfaced in a discussion we observed amongst requesters. Suspecting the producer had simply uploaded the wrong final document, a requester had tried to reach out to the participant to correct the error, but she received no response. When others asked which producer it was, the others’ agreed that this seemed uncharacteristic for this worker and began suggesting different ways of trying to follow up. They worried, the worker may have “fallen off the face of the earth”, and wondered if perhaps he or she had taken a full-time job and was not longer working through the system.

Further, the crowdwork system provided a bridge between the organization and those who had previously been employed there. Said one worker who left to be a stay-at-home dad while his wife returned to work, “I’ve had such a long association with IBM. It allows me to maintain that sense of community that I’ve had previously.... It allows me to continue the relationships that I’ve already established.” At the same time, the crowdwork system is a far cry from a sociable workplace, as was already suggested in the earlier comments about the limits of communication. Said one crowd worker: “You don’t build relationships for just doing work, piece work. It’s almost like being in a factory sometimes and the work is coming

down the conveyor belt. You don't know the people who sent it down the conveyor belt and you don't really know where it's going after that... It [crowdwork] is a fairly soulless industry."

In the *crowdfunding* system, one of the most common criteria used to evaluate investment options was consideration of who would benefit from the project. People evaluated the proposals in terms of their "altruistic" nature or their degree of "selfishness", for instance. The proposal for an offsite event for a particular group within the lab caused some to view it as counter to the spirit of the program. Summarizing a general view, one investor stated: "My view on it is that if it has a larger focus- a lab-wide focus, the return on my investment is greater. More people are impacted hopefully positively and that was a better funding choice than something that was really very narrow and specific." However, what specifically constituted an adequate "lab-wide focus" was a matter of interpretation. Indeed employee's perceptions of each other's proposals became the basis for reflecting on similarities and differences within the lab. In some cases this may have enlarged a sense of difference between people, differences that would have otherwise remained submerged. For instance, as a chemist's response to many of the computer-science-driven analytics projects was: "They don't get what I do, I don't get what they do." Other people experienced the range of projects instead as an expression of a more general sense of commonality or shared interest. The proposal to host an offsite event open to one segment of the population evoked feelings on both sides. Whereas numerous participants felt it was not worth their own investment and was even counter to the collectivist spirit of the initiative, others acknowledged its scientific merit, and felt it worthy of support even if they wouldn't directly benefit.

The *marketplace* for change management activities was designed in part to overcome cross-divisional barriers; participants were united in their common orientation to and use of the change management methodology across regions, divisions, and roles. In the pilot we found that work requesters and producers indeed reached beyond regional and organizational lines, and prior work relationships. We did not find work producers filtering for or targeting opportunities based on whether they knew of the work requester or not. Similarly, work requesters expressed satisfaction in selecting people to work with who were previously completely unknown to them. "I think there is a big difference [working through the marketplace]" commented one work producer, "it's - normally, it's who you know and who you've spoken to, where you would get to do interesting work, to be honest. It's not as open as this one is. And the fact that I can work with people from across the globe [...] it seems more open, more transparent way of getting work or even finding out about it [...] This is direct interaction with the requester and I think it's fantastic, it's a great concept." As in the crowd work system, then, the marketplace included a dimension of managing outsider status. However whereas before we heard more clearly of the limitations of that challenge, here that possibility is rendered more optimistically. "I don't know their background, they don't know mine.... So it was kind of leap of faith" said one participant, "It's very rare for me to work with someone who has no idea of who I am. That is very brave of them..."

In this section, we see how some open and crowd systems are impacting the relationships among workers. The crowdwork system created somewhat of a sense of "us and them" as teams of employees coordinate their work activities with external individuals whose availability is less predictable, and yet at the same time prompted participants to

recognize other, perhaps more basic forms of commonality. Organizational crowdfunding enabled employees to initiate new projects affecting their fellow employees, as well as, to support each others' proposals through a nontraditional form of participatory budgeting. And the marketplace enabled employees to collaborate with colleagues across the organization whom they would not have otherwise met. Overall, these systems are reshaping the workers' networks of colleagues both within and without the organization.

Authority and Control

For systems used internal to organizations, the question of who authorizes the performance of the work emerges. The threat to managerial regimes is one of the potentially more profound consequences of these systems. Inviting employees to choose what work to spend time on disrupts management control over their labor.

Within the *marketplace*, the question arose as to who, if anyone, needed to approve employee's time to participate. We could have designed the system so that when someone applied to a request, the system would route an approval request to their management before they could be selected. We proposed instead having the system route a notification to let the manager know that a member of their group had applied or been selected for a work effort, but not to track approval. If the manager did have a concern, they would have to take it up directly with their employee rather than having the system institutionalize and systematize that authority system. Indeed, none of the participants we spoke with voiced particular difficulty or anxiety around verbally checking with their manager regarding their participation, and a number brushed this off completely. "My discretionary time is my own, I don't have to ask anyone."

Producers in open and crowd work systems may enjoy greater control over the kind of work they perform. As we see in some of the statements above, in the *crowdwork* system we studied, participants selected those work requests for which they thought they could be most successful, would give them the greatest flexibility, or those that would provide the most interesting challenges. However, some requests are so specifically defined that there appears to be little leeway in how the work is performed. Further, requesters remain the final arbiters of quality. And the work was also performed under shorter term contractual commitments compared to traditional forms of employment. The fragility of this commitment played out from both sides. On the one hand, a requester indicated that they could "dump [workers] any time we want to," that is, when there is less work for them to do or when budgets are strained. On the other hand, producers could also dump the requesters at any time. Another requester explained: "a guy that has been part of a couple of [work] events and all of a sudden he disappears. Okay, because there is no commitment. Okay, I mean he could find some other project he wants to work on, he gets bored with you, he gets pissed off, he just leaves." Recall in the previous section a case in which a producer unexpectedly "fell off the face of the earth." The crowdwork system prohibits long-term contracts between requester and producer, yet this is something that each party often seeks.

Members of a particular service delivery unit were mandated to adopt the system and tasked with distributing a fixed percentage of their overall workload to the crowdwork system. The effort it took to accomplish this successfully was not insignificant, and many

were unhappy with being required to use the system. “There is an Executive Edict that says: Thou shalt do [Crowdwork].” As with any organizational mandate, the deployment of the crowdwork system reinforced these workers’ team leads’ and lower-level managers’ positional authority (or lack thereof) in the organization. This also meant that within the crowdwork system, the requesters themselves do not necessarily hold all the power.

The *crowdfunding* program departed from traditional structures of authority and control by enabling a novel form of bottom-up decision making. And there was ample enthusiasm from participants about that possibility. One participant offered a particularly philosophical statement:

I’m a big fan of letting people voice what they want. I think that the only way to ensure prosperity for the greater good is to ensure prosperity for the individual. ...When you extrapolate that to crowdfunding then now all of a sudden you let individuals influence their immediate communities rather than, you know [headquarters] sending down policies for us, that you know, they are 2500 miles away.

In other words, the employees tended to perceive the crowdfunding program as empowering for them and not as just as another corporate initiative or stunt.

Some employees speculated that crowdfunding might be a way to counter some of the undesirable effects of the organizational bureaucracy and internal power relations of the workplace. One said, “... people always have vested interests, right... And so, you know, if it in any shape or form if there’s a feeling that it’s going to infringe on their territory then most likely they’re going to (nix) it, right... But doing it this way [crowdfunding] you probably - you can sort of minimize that, I think.”

At the same time, the crowdfunding program also required the proposer, and the team of volunteers they gathered (if any), to completely drive the project once it came to execution. So while this put a good deal of control in the hands of those proposing the work, it also put the onus more fully on them to complete it. This couldn’t be done, in many cases, without garnering support from some senior people in the organization, and gaining that support became part of the work. One year later, in fact, we see that not all the efforts which achieved their investment targets and were allotted funding have succeeded, suggesting that they may well have faced additional barriers in the doing of the work.

Crowdfunding also highlighted relationships of authority and control in the organization. Many proposed projects were in reaction to things that used to be available and no longer were, that people perceived had been taken away. Somewhere between a protest vote and an accommodation, the crowdfunding program was used as a route to shine a light on these losses, acting as a voice as if saying “hey, we want these things back!” The way in which the proposals themselves acted as signifiers of employee-organization relationships was expressed more wistfully in this statement by a long tenured employee evoking the ‘good old days’ which he perceived as being more supportive of far-reaching scientific work: “You know, we have lost that ... So in many ways this sort of enables at least *the scientists in us* to go and do something that is not really IBM’s bread and butter.” Another concern that surfaced was the worry that this form of decision making would substitute for other models of funding and decision making in the everyday work and the scientific efforts of the lab.

What I'm worried about is if they're going to come, then all the research projects are going to go to some sort of approach like this.... You know, I mean we already have to justify our projects. I mean some of them are dictated out of need from [headquarters] internally. Others are not and we have to look for funding and bring money into the lab, but is it ultimately going to go to something like this? It's kind of scary to think it would be.

In this section shifts in structures of authority and control were explored. In all three cases, employees gained some autonomy in pursuing opportunities of their choice. The marketplace helped people extend their network by working with previously unknown colleagues across the organization. In the case of organizational crowdwork, producers exercise a degree of control in deciding which work requests to accept, and in theory, in how that work was performed. However standards of acceptance and quality remained outside their control. And, requesting employees experienced less control over how to manage their work in that the use of the crowd was mandated from above. The organizational crowdfunding system was felt to enable more “democratic” ways of budgeting resources, but also demanded of people that they be accountable for their own success. Overall we see disruptions in managerial authority in which frontline workers are gaining greater discretion in selecting particular work requests to perform or projects to fund.

WORKPLACE REIMAGININGS

Experiences of work go to the fundamental bedrock of ourselves as people, as collectives, as culturally constituted beings. These explorations of people's experiences in using open and crowd work systems inside of organizations illuminate ways work is being transformed, and in turn transforming how people perceive themselves at work and as workers vis-à-vis their colleagues and the work itself. Open and crowd work systems also affect the basis for and experience of relating to others at work and the workplace as a social environment. And they create fissures in assumptions about who has the authority to initiate, manage and control the work. In turn this leads us to question the centrality of “the organization” as the primary site of and means for driving the core economic activities of the industrial and post-industrial eras, including innovation, development and the movement of goods, services and expertise.

This look at the gentle winds of change emerging inside of organizations may be suggestive of a larger storm approaching as more and more work may be performed by 'strangers', both across an organization and beyond. While not an entirely new phenomenon – subcontracting and outsourcing have been with us a long time – this further dis-intermediating of work from centralized organizational apparatus, may suggest greater change on the horizon. The threat of technological unemployment, the rise and greater visibility of the independent workforce, and ethos spreading (and facing resistance) of collaborative and peer-based models may lessen the managerialism of bureaucratic models, on the one hand, while reducing the value and effect of work-based social ties on the other.

By shining a light on these dynamics, we aim to ensure that the scope of ethnographic understanding in industry is expanded to include these important shifts in work and workplace culture. Ethnographic practitioners are themselves enmeshed in workplace relations, which are subject to the same dynamics and changing mechanisms of work. And as participants in business, our job as social analysts and practitioners to look closer and understand deeper so as to create the kind of knowledge that leads to better business strategies and a better society.

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NOTES

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