

CRITICAL PERSPECTIVES

Difference Work: A Conversation with Lilly Irani

Lilly Irani
UC San Diego
lirani@ucsd.edu

Monika Sengul-Jones
UC San Diego
msengulj@ucsd.edu

Lilly Irani is a cultural theorist and a computer scientist, a professional mix which gives her an analytical edge in addressing the socio-cultural politics of programming microwork platforms in the “service economy.” This conversation discusses her ethnographic and praxis-based research on Amazon’s Mechanical Turk (AMT). AMT is an Internet-based software that facilitates the distribution of micro-“Human Intelligence Tasks” (HITs) requested by users registered as “requesters” to be completed by users registered as “workers” (sometimes called “Turkers”), who may earn pennies for their work at the discretion of the “requester.” Irani researches AMT and collaboratively designed and maintains an online tool, Turkopticon (TO), to enable workers to report their experiences with “requesters,” good and bad, as a form of collective, mutual aid.

~ MSJ

MSJ: One of your main field sites, Amazon's Mechanical Turk (AMT), is broadly described by Amazon and by industry titans as a "technology" instead of, for instance, a contracting or outsourcing company. This rhetorical categorization in part paved the way for the proliferation of start-up mobile phone applications and Internet software marketplace in the United States such as Uber, Taskrabbit, Handy, even a freelance marketplace like [what was formally called] oDesk [now Upwork].

The classification of these as "technology" companies is significant because, as you point out in your Winter 2015 article in *South Atlantic Quarterly*, the work they broker is a kind of piecework (2015b). The practice of paying workers a fixed rate for a unit of work or an action performed is not new. However, in your essay, you note there's a distinct difference in the "speed," "scale," and "technical means through which diverse workers are rendered into computation resources, directly feeding the algorithms of entrepreneurs and Fortune 500 companies alike" (Irani 2015b, p. 226). The algorithmic processes differentiate newer digitally-mediated forms of labor from other forms of piecework, such as hiring homeworkers to sew or even cold-call marketing leads. Why is the distinction between older and newer forms of technological piecework significant for understanding contemporary forms of crowdwork labor?

LI: The first difference is one of scale and ease of deployment. Systems like AMT reduce the cost and risk of becoming an employer of pieceworkers or outsourced service workers. Piecework is a very old form of organizing production within homes and families, dating at least back to European craft guild systems. Systems like AMT, however, make pieceworkers available to anyone with a computer and a US bank account. Potential employers don't have to find the workers, transport materials to them, or transport the work output to sites of sale. The AMT website builds the assembly line, payroll, and contract structure; employers can access pieceworkers in a few clicks and abandon them even more quickly. The pieceworkers are already available in one place—the AMT website—and are already organized for the employer to access.

Amazon offers cognitive pieceworkers as a plug-and-play module, easily accessible to, and disposable by, employers.

This is only possible because of the massive suffusion of Internet infrastructures connecting our homes to Amazon and to employers—Internet cable, payment infrastructures, bank protocols, for example. AMT's labor relations are microstructural mechanisms that rely on global forms of connectivity and coordination. These relations are also only possible because Amazon pushes the risk generated by these cadres of new, inexperienced employers and their ever-changing experiments out to workers. I'm thinking with Gina Neff's work on *Venture Labor* (2012) and the individualization of social risks of innovation industries here. The site's interface also shields employers from seeing the conditions under which workers work—are they trying to make ends meet? Working at home to care for children or a family member? Anthropologist of microfinance Megan Moodie (2013) argues that microfinance works in much the same way—by hiding the gendered work of making ends meet and keeping the home together in economies of microfinance.

The second difference is how being classified a “technology” company, as compared to a “labor” company, financially benefits companies like Uber, Taskrabbit, and Amazon. Venture capital investors, or VCs, estimate how much a company will be worth in the future; they routinely value technology companies more highly than labor companies. VCs assume technology companies need more investment to set up at first, but that those companies will scale up their profits without scaling up their operating costs. To act as “technology” companies, microlabor companies must convince investors, first, that their labor force is of little risk and of little cost, and second, that their technology confers an advantage over other companies. Hiding the AMT-like labor is key to how these start-ups are valued by investors, and thus key to the speculative but real winnings of entrepreneurs.

We can deconstruct how technology as a social category lets companies elide labor, but we also need to consider that we as analysts

also elide the labor and social relations mediated by technology. The category “technology” does cultural and financial work, mobilizing subjects, citizens, value, and visions of progress.

For people committed to social justice, the financial stakes of such classifications of technology and labor suggest a new way that the politics of representation matters. Representations are not only a question of epistemology, but also part of the production of financial value. Our tactical media practices can work in the speculative terrains of financial futures. I was once on a panel where a crowdsourcing CEO scribbled to himself in his notebook: “NO CONTROVERSY.” I realized then that possibility of a controversy could weaken his pitch for investment funds. Digital labor start-ups do better when they look like technology companies with a low-risk, infinite labor supply. By helping workers become visible, by showing how they organize, and by creating friction we can contest anticipatory knowledge in order to affect companies’ bottom lines today.

MSJ: Tell us about the hidden workers—the “Turkers,” as they call themselves. You describe their skills in an article on *Turkopticon* (Irani and Silberman 2013) based on four years of participant observation of MT. I was struck by your description of the range of skills they have as professionals. How did getting to know Turkers affect your understanding of crowdwork?

LI: Getting to know Turkers has really expanded my sense of how much of what these workers accomplish goes unrecognized and uncompensated. It’s one thing to say that Turkers doing data-processing work should share more broadly in the value employers get from their labor—through profit-sharing, for example.

It’s a whole other thing to recognize how AMT sets up this labor market platform to make workers available, but at the same time workers themselves are organizing their own forums, teaching new workers, educating employers, and doing free task design consulting for employers

to sustain AMT so they don't lose the opportunity to work from their homes. This is free labor in the sense that the digital labor scholar Tiziana Terranova (2000) has written about it. But, unlike the AOL moderators Terranova describes, the AMT workers who step up as leaders don't always do it for the satisfaction. Many also rely on AMT as a form of work they can do at home while caregiving for family members or to make ends meet; they worry that employers will disappear if they don't get good work on AMT. The social factory depends not only on getting us to have fun and fulfillment as companies tap our communication and relations for profit, but also conditions of precarity that make us fear that we'll lose work if we don't fill in the gaps to keep employers and platforms working well.

MSJ: I want to return to the work of the AMT software, which as you've helped us to understand, has been described as a "technology" that solves a problem, a classification that makes invisible embodied labor involved. In your article in *New Media & Society* (Irani, 2015a) you ask how a software management system such as AMT, which Amazon describes as "artificial artificial intelligence," plays a crucial and under-recognized role in facilitating these labor relations. You propose that "the sociotechnical configuration of AMT does cultural work; this cultural work happens not only through talk or co-present social interaction, but also through the relational politics of interface and systems design" (Irani, 2015a, p. 721). You are arguing that the software is a vortex mediating these cultural meaning of work! Can you elaborate how you've developed this analytic of software as conduit of culture?

LI: Well, honestly, I think the analytic emerges more out of the mud and mess of practice than from a prism drawn gleaming from the heavens.

MSJ: An appropriate metaphor, indeed, for demystifying "the cloud."

LI: Amazon launched Mechanical Turk in 2005 not as a labor service, but as a computational service of "artificial artificial intelligence" alongside its

cloud storage and computing services, S3 and Elastic Cloud. My question became: What is at stake when a company pretends that many, many workers are simply software or an algorithm?

I backed into this analytic of the software doing cultural work from my experiences with computers as a kid, traversing the Internet to connect to worlds through the screen, and then as a software designer when I worked at Google. I was doing design at Google in California when the company was opening offices in India. I witnessed a swirling vortex of screen-mediated contact and the anxieties that came out of it: US software workers worrying about their jobs getting outsourced to India, US designers drawing on stereotypes to make sense of Indian job candidates they interviewed on the phone, Google using software to farm out data processing work of various sorts to temporary workers without access to the central campus. Google's engineers and managers could believe in the company mission "don't be evil" only because architectures of invisibility—screen-mediated Indian workers, temps quarantined elsewhere on campus—allowed a bunch of engineers to believe that they were making the world a better place, as they often say. These architectures include spaces, infrastructures, extractive relationships, and ideologies about race, gender, and work that shape the production of value and difference.

MSJ: How so?

LI: For example, Google would check all the advertisements to appear on its search results to make sure the ads did not link to pornography or alcohol purchases. They could not fully automate this work—artificial intelligence couldn't decide with confidence in certain cases—so they hired workers in India to check. While the advertiser was waiting for their ad to get approved, I had to design the interface that explained to customers that Google was checking the link without letting them know that humans were doing it. The customer probably thought that Google engineered some magical algorithms; this perception is good for business

and good for the stock price. This perception also sustains America's confidence that engineers are the source of so much value that we need to boost STEM majors. Similarly, AMT allows employer-programmers to appear as technological wizards even as the cognitive and physical labors of Turk workers power that magic. In this way, AMT mediates the production of difference between these innovators and the workers they rely on but know little about and often stereotype as unskilled—it does difference work.

MSJ: This reminds me of an argument in your essay for *South Atlantic Quarterly* (2015b) about fragility—how “fragile” the boundary is for maintaining the subjectivity of the entrepreneur, who is “dependent on the Turker as mediated through AMT's interfaces” (p. 233). Fragility suggests that things could be otherwise.

Which brings us back to Turkopticon, which you describe as “an activist system that allows [AMT] workers to publicize and evaluate their relationships with employers” (Irani and Silberman 2013, p. 611). How did you come to develop Turkopticon as a scholarly activist project?

LI: Turkopticon was an attempt to interrupt the invisibility of workers powering these algorithmic systems. Turkopticon grew out of a course project called Tactical Media taught by the late Beatriz da Costa, an artist trained in computer science and feminist theory and who worked collaboratively with scientists and engineers in a range of fields on projects about public and political aspects of science and technology. The course was part of a strange and wonderful intersection of feminist science studies, critical communication studies, mechanical art, and computation design that flourished at UC Irvine between ACE, the Arts, Computation, Engineering program, and the Graduate Feminist Emphasis.

At that time, da Costa and the historian of science Kavita Philip were also co-editing the book *Tactical Biopolitics* (Da Costa and Philip, 2010) and teaching in that interdisciplinary, tactical, and political mode. The ACE program was run out of a trailer. It admitted its last student a

few years ago, undone by funding cuts exacted in the name of a budget crisis.

Meanwhile, the tech press was celebrating crowdsourcing as a tool of mass collaboration. I was disturbed by how these celebrations erased the labor and masked precarity. But I wanted to know how Turkers understood their conditions and situation. I built on two lines of thinking: Haraway's situated knowledges (2003)—the idea that we need knowledge for social justice but can't claim membership in a category that gives us a standpoint for the whole category, and Patricia Hill Collins' (2009) writing on self-definition and self-valuation in black feminist thought.

MSJ: So this was an opportunity to question difference work by making something. How were you able to animate these lines of thinking with a live platform?

LI: I put out a survey on AMT itself, asking workers what they did and did not like about the work, and asking them to write a bill of Turk rights. I took off from the points of overlap among diverse workers—the platform offered workers no protection against irresponsible or abusive employers. I presented a sketch of employer rating software in class and da Costa said, “you should make that.” That was in 2008. Six Silberman, a programmer and mathematician interested in open source, stepped up to help build it. We built it. To our surprise, one Silicon Valley crowdsourcing CEO thought it was a great idea to “level the playing field” and helped us advertise it to their workers. That company, liberal in every sense, turned out to pay pretty poorly and would later get sued by its workers in a class action lawsuit. Truth is stranger than fiction. Over the years, the user base grew and workers stepped up to moderate comments and flag fraudulent reviews. Turkoption worked in the sense that many workers found it useful—20,000 workers use it each month. But it also provoked public debates about the politics of digital labor—much more so than if I wrote a paper and went around giving talks. Six finished his PhD and now works for the German union IG Metall. Turkoption remains active, sitting

there on servers 24/7 as living testimony to the fact that mutual aid is possible and our current digital labor forms produce gross inequalities.

MSJ: What has collaboratively making Turkopticon helped you to understand differently about work and the digital realm?

LI: The project has forced me to take seriously the simultaneously extractive and ethical dimensions of high tech. We have the crowdwork start-ups that won't pay minimum wage but are excited to have their workers have a third-party reputation system—these circumstances tuned me in to the ideologies of fairness and perfect markets that animate many engineers.

I've also learned that we need to account for the fact that our work can be read in ways that work against our political objectives. Workers pointed out how we, as Turkopticon's designers, could be complicit in devaluing their skills when journalists cast AMT as a "digital sweatshop" and Turkopticon as "union 2.0" (Brandom, 2013; Cushing, 2012). These news stories reiterated a trope about creative, entrepreneurial designers saving poor, exploited workers. The trope obscured broader forms of worker skill, community, and collective action. Some workers even noted that these awareness-raising articles attracted new employers who wanted to hire workers at low wages.

Turkopticon has also been good to think with over the years as I read other writers working on digital labor and related issues. As a practice, TO forces me to confront the strange entanglements of software, IRBs, work, and labor policy—and it helps me ask different questions about what I read. As I read Haraway on response-ability (2008), I could experiment with thinking about TO as a technology that grafts some response-ability onto AMT. As I read Jenny Reardon's work "On the Emergence of Science and Justice" (2013), I consider her critique that IRBs de-politicize and legitimize biotech; AMT offers a different side. IRBs are actually the one institutional modality for holding employers (when they are academic researchers) accountable for low or unpaid wages. Practice

constantly spills over our categories of analysis.

MSJ: What's been the biggest challenge?

LI: Maintenance and repair. A problem with research and development, hackathons, and innovation models, as far as I can tell, is that they are built on the seminal model of change—researchers come up with an idea, demonstrate it, and then move on, leaving the rest of the world to sustain it, adopt it, nurture it, or pick up the pieces (see Cohn, 2013). Regimes that reward the constant production of prototypes, patents, and papers can squeeze out the energy to sustain lasting projects. Especially since I've started as a professor, TO would be dead if not for the efforts of code maintainer Six Sllberman, the moderators who daily debate how to keep mutual aid going, and the server administrators at UCSD who upgrade the operating systems and deal with power outages, etc. as a part of their jobs. Mutual aid takes infrastructure, and infrastructure is always labor. Progress is never just an "idea that matters," despite TED's tag line. There's a larger discussion starting to happen in this direction, and it is centered around the question of what feminist computing practices look like. We need theories that emerge out of specific struggles and experiments, but that take technology seriously once again, understanding technology not just as that which subjects us, but as configurable media, as a seductive object of hope, and as an object of collective labor.

MSJ: Where do you think this positions interventions through/in feminist STS?

LI: There's a danger of high-tech industries co-opting feminism as a way of generating more diverse experiments in value production—innovation par excellence—without addressing how the jobs with the most women and people of color, from building maintenance to human resources to technical writing, are devalued.

Companies and venture capitalists want diverse coders and

CEOs—more diverse masters of technology—to the extent that it helps them develop new product lines and sources of value. We've seen, however, that being a master of technology really is also being a master of other people's labor. We need to resist the co-opting of feminism into the production of value. Leigh Star and Lucy Suchman decades ago instead turned feminist attention to the distribution of value and labor (Star & Strauss 1999; Suchman et al. 1999). We need to turn our attention to how the categories "creativity" and "innovation"—categories Kavita Philip analyzes as "the technological author" (2005)—smuggle in and valorize kinds of exploitation

As we do this, we might take seriously the labors of sustaining required for making otherwise. When we talk about making worlds in feminist STS, we often go to the joys of art, prototypes, and fiction. I'm thinking of Lisa Nakamura's interview with Donna Haraway, "Prospects for a Materialist Informatics" (Nakamura 2003), for example—a discussion that features practice-based work. One way that Turkopticon is a bit different from a lot of the practice-based work discussed in that conversation is that people actually use TO as a practical tool and rely on it as infrastructure. Much practice-based work has focused on questions of epistemology and relations, but for me TO opens up questions of the labors and infrastructures that sustain worlding in long duration. It needs different kinds of collective labor and infrastructure to endure than a film, a painting, or a performance. There are many kinds of labors of worlding. We need to theorize its distribution and also the struggle for resources and time to do this work.

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Bios

Lilly Irani is Assistant Professor of Communication & Science Studies at University of California, San Diego. She is a co-founder and maintainer of digital labor activism tool Turkopticon. She is currently writing a book on the cultural politics of entrepreneurialism in transnational India. Her work has appeared at ACM SIGCHI, *New Media & Society*, *Science, Technology & Human Values*, *South Atlantic Quarterly*, and other venues. She has a Ph.D. in informatics from the University of California, Irvine.

Monika Sengul-Jones is a Doctoral Candidate in Communication and Science Studies at the University of California, San Diego, where her dissertation research focuses on socio-technical interfaces of and

gendered cultural narratives about paid writing work in English. She received her MA in Gender Studies at Central European University. She has received funding from the Rotary Foundation and Wikimedia Foundation for her research.