

Standing Out from the Crowd: Emotional Labor, Body Labor, and Temporal Labor in Ridesharing

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ABSTRACT

CSCW researchers have become interested in crowd work as a new form of collaborative engagement, that is, as a new way in which people's actions are coordinated in order to achieve collective effects. We address this area but from a different perspective – that of the labor practices involved in taking crowd work as a form of work. Using empirical materials from a study of ride-sharing, we draw inspiration from studies of the immaterial forms of labor and alternate analyses of political economy that can cast a new light on the context of crowd labor that might matter for CSCW researchers.

Author Keywords

Crowd labor; affective labor; immaterial labor; work practice; sharing economy; ride sharing.

ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

INTRODUCTION

CSCW has, since its inception, been concerned with the ways in which information technologies are and may be deployed in order to support the coordinated actions of groups and collectives. Accordingly, recent commercial and cultural interest in forms of what we might call crowd-work have been of interest to CSCW researchers, be it studying collective forms of content production as in Wikipedia [3, 21, 27] or platforms for incorporating distributed human activities into information services such as Amazon Mechanical Turk [19, 21, 31]. Most recently, a related form of distributed crowd-based service delivery has sustained research attention, which is the use of information technologies to make physical services in the world available to subscribers, in the way that, for instance, ride-

sharing services like Uber and Lyft can help people get where they're going, and space-sharing services like Airbnb can mediate between renters and tenants for short-term accommodation. Services of this sort are often glossed under terms such as the sharing economy, given the ways in which they focus on a mediated access to resources; for our purposes, we frame them as a form of crowd labor for the way in which algorithmic processes insert themselves into a labor relation.

In this paper, we examine crowd labor and in particular sharing economy services in order to understand aspects of the human experience of algorithmically mediated work. In particular, drawing on a number of recent studies in and around HCI and CSCW [e.g. 2, 18, 19, 20, 21, 22, 35], we want to examine in particular the kinds of human practices that make up this emerging labor relationship. Key features of this relationship include the rhetoric of “casual” or “secondary” employment, which often vacates traditional labor concerns; voluntarism, personal engagement, and granularity are fundamental features of crowd labor, alongside the obvious concern with algorithmic mediation. We investigate how human and social practices sit alongside apps and algorithms in this new form of technologically-mediated work, using empirical data drawn from a survey and interviews with Uber and Lyft drivers in the United States, and concepts from feminist political economy to contextualize and understand our findings.

In this work, then, we focus on labor considerations beyond simply its physical resources. Specifically in the range of studies that we broadly label as emotional labor, from the early and influential work of Chicago School sociology and of specific individuals such as Arlie Hochschild [15] to more recent accounts of affect theory coming largely from cultural studies [11, 17], a substantive body of research has addressed the way that emotional performance plays a significant role in one's engagement in labor and economic life. From providing “service with a smile” to liking one's workplace on Facebook, the range of ways that employment relations draw not only on a workers physical and intellectual but also emotional and affective resources has been broadly examined, and turns out to be of particular concern, if to date largely underexamined, within the context of ridesharing practice. The second, related component is Sarah Sharma's studies of the cultural politics

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CSCW '16, February 27-March 2, 2016, San Francisco, California, USA
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ACM 978-1-4503-2922-4/15/03...\$15.00

DOI: <http://dx.doi.org/10.1145/2818048.2820026>

of temporality and work [34]. Sharma uses studies of a wide range of groups, from taxi drivers to yoga instructors, to examine how we think about and mobilize notions of time as a feature of contemporary life. For ridesharers, questions of working on one's own time arise in a complicated relationship with the temporal demands of riders.

We use these lenses to reframe crowd-work as crowd labor through an intimate engagement with ridesharing drivers, the humans located at the center of and performing the claims that ridesharing services make. Important questions have been asked about how labor relations are imagined to operate in crowd-work environments, including problems of representation, presence, and labor protection. Our analysis specifically focuses on the double life of social and economic value generation in the work of ridesharing.

BACKGROUND AND RELATED WORK

Our research here spans a number of areas of related work, some within CSCW and some from outside. We will begin by outlining some CSCW work in the area to examine the current state of the dialogue within the field, and then introduce some material from other areas that we would like to bring into conversation with this work to date.

Crowd Work in CSCW

CSCW and more broadly HCI have two engagements with crowd labor, engagements that live in a potentially awkward tension. We study crowd work, both in order to understand the nature of that as a human encounter with technology and in order to identify opportunities for productive design intervention; but we are also users of crowd work. Indeed, it has become common for HCI researchers to rely upon crowd labor systems for usability evaluation [2, 21, 35] including using crowd labor systems to investigate and transform aspects of crowd labor itself [29], forms and motivations for participation [20, 26] and the mediating role of algorithms [6, 22]. One particularly significant aspect of what we are here labeling as crowd labor is the mediating role of algorithms and algorithmic processing. Crowd labor typically involves a digital mediation between the parties to an interaction (rider and driver, requester and Turker, vacationer and landlord, or others as appropriate.)

The critical role of algorithms as mediating artifacts here is not unique to crowd work by any means, as Gillespie [11] has thoughtfully demonstrated, but algorithms play a particularly important role here because in various forms particularly search, matching, prioritization, and scheduling they are central to the very viability of crowd services. As Gillespie notes, one of the critical features of algorithms is that they operate largely in the background. This leaves all parties to the crowd labor interaction attempting to figure out what the algorithm did and why. Lee et al. [25] discuss the problems that algorithmic mediation poses for drivers in ridesharing services, who need to be able to determine how the algorithm makes decisions about ride allocation, attempting to account for the decision processes that lie behind the observable actions in order to adjust their own

behavior accordingly, to maximize gain, to minimize hassle, to try to control their ratings, or simply to understand the system.

Ekbja and Nardi [8] coined the term *heteromation* to describe “technical systems that function through the actions of heterogenous actors”. For them, heteromated systems are built through an interspersed of human and machine actors. Another concept they advance is that of ‘inverse instrumentality’ where “certain large, complex technologies ... move to strategically insert human beings within technological systems in order to allow the systems to operate and function in intended ways” [8]. Sharing economy enterprises are a prime example of such heteromated systems where the human actor (and by extension human labor) is not replaced but reconfigured. This question of intermediation has also been a topic of concern for another set of researchers who focus on the relationship between workers and employers in crowd labor contexts such as Turkopticon [17, 19], Dynamo [29] and others. For these researchers, one of the primary concerns is the way in which the digital barrier between the two groups tends to reinforce traditional hierarchies, providing more control and more visibility to employers than to workers. This has led to efforts to create technologies that allow crowd workers to connect, communicate, and act collectively so as to begin to level the playing field. One of the important pieces of context here is the way in which crowd labor in online systems like Mechanical Turk but also in ridesharing systems and the like frame workers as independent agents engaged in work for hire, and indeed often eliminating the crowd service itself from the labor relationship altogether.

Feminist Political Economy

A range of approaches can be employed to historicize the phenomena of HCI and CSW, including perspectives from information systems and user experience design. We find political economy to be a useful framework that focuses on legal, economic and social conditions surrounding and informing the interaction between humans and machines. While Karl Marx's critique of the division of labor and formation of the *proletariat* within capitalist systems is pivotal to understanding modern day work, his analysis did not address “value-producing” work or reproductive labor and care labor dominantly performed by women globally. Prominent activists and theorists such as Silvia Federici [9], Dalla Costa and Selma James [4] contested this invisibility of unpaid domestic labor, giving rise to feminist political economy, a field of analysis that widens the economic sphere to include such forms of work that remain unintelligible to dominant economic discourse.

Building on this, feminist scholars J-K Gibson-Graham's “The End of Capitalism (As We Knew It)” [10] asks a provocative question. Why, after so many years of critical analysis and resistance to the operation of global capitalism, does it seemingly remain so difficult to disrupt it? Their answer is perhaps even more provocative. Echoing the

thoughts of Federici and others, they¹ suggest, the reason that it has turned out to be so difficult to displace capitalist economic relations is that they actually aren't as common, extensive, or central to everyday life as we think. Whether pro-capitalism or anti-capitalist, they argue, political economists frame their debates in the same terms – monetary exchange, capital accumulation, wage labor, employment relations, financial investment and speculation, productive capacity, and so forth – all marked by what is visible and obvious as remunerated. However, this leaves much of everyday life outside the frame of political economic analysis. It's not simply that it misses what Keith Hart [14] called “the informal economy” – forms of economic exchange conducted “off the books” but also domestic labor, emotional labor, care labor, acts of mutual support, everyday community engagement, the landscape of communal life, the natural everyday process of getting-along, and informal systems of collective action, none of which are within the frame of either capitalist or anti-capitalist analysis. In fact, we might argue that this missing domain constitutes the majority of life. If the topics and objects to which traditional political economy attends constitute only a small sphere of daily existence, then perhaps it's not surprising that anti-capitalist action hasn't made much of a dent in the world.

What they all call for, then, as a feminist political economy, is a widening, or a diversification, in the kinds of things that we imagine constitute economic life. Some of these of course are traditionally gendered considerations such as child-rearing and the maintenance of the domestic sphere, but the deeper point is that the hegemony to be resisted is not simply that of capitalist economic relations but of the narrow and homogeneous considerations of what constitutes the objects of economic analysis.

Such a framework compels us to think of the relationship between work and labor, demanding not only for a diversification and expansion of the sphere of value generating activities dubbed as work but also asking whether all kinds of work is monetized labor and which forms of labor (and thereby laborers), then, are better compensated for the entirety of the work they do. Not only this, feminist political economy also exposes the gendering of work in professions that are traditionally attributed to the domain of the feminine and personal and hence either unpaid or vastly underpaid as compared to work that qualifies as actual labor.

The utility of this perspective for our analysis here is that it allows us to understand ridesharing especially but also other permutations in the Sharing Economy where the investment of the personal (in terms of one's body, personal possessions such as car, house or belongings) is central to worker's participation in them. The immaterial and material

personal as we illustrate later is indispensable and at the same time uncompensated for.

Under the broad umbrella of feminist political economy, we draw attention in particular to three concerns: immaterial labor, affective labor, and the cultural politics of temporality.

Theories of Immaterial Labor

Much relevant work is glossed under the label of “immaterial labor” – that is, all those aspects of labor relations that go beyond the material aspects of work and production. The term “immaterial labor” as used in the context of this paper dominantly draws from two historical formulations. The first is that of Maurizio Lazzarato [24] who further classifies immaterial labor into the production and management of informational content and cultural content. For Lazzarato, immaterial labor includes adjustment to higher level work related changes, company policies, negotiating obsolescence as well as activities to define normative work standards, fashion, tastes etc. in order to produce what he terms as mass intellectuality. These activities, as he explains, are considered outside of actual work. In the context of digital economies, Tiziana Terranova, for example, has employed Lazzarato's conception to discuss the invisible cultural and technical labor that “animates” digital media production [36].

The second formulation is that of Hardt and Negri, also leading voices of the Italian ‘Workerism’ movement, who dubbed immaterial labor as “that [which] creates immaterial products, such as knowledge, information, communication, a relationship, or an emotional response” [13]. Media theorists Mark Coté and Jennifer Pybus extend this definition to analyze the productive role of communicative acts in subjectivity building on the social media platform MySpace [5]. Their argument is useful in highlighting communicative acts as both immaterial labor and value-laden objects in networked societies where digitally mediated bodies perform the dual role of workers and citizens. In the context of ridesharing services, all immaterial labor (including the management of time, verbal and non-verbal communication, emotions as well as the appearance of drivers and cars – i.e. not the fact of the rideshare but the way it is conducted) are central to understanding how the much celebrated social experience of Uber and Lyft is created and maintained.

Body Work and Affective Labor

Affect theory [12, 17] turns the attention of cultural theorists to questions of affect and emotion as sites of cultural practice, including most especially the way in which affect is incorporated into labor relations. The maintenance and management of emotion – from the fixed smile of the airline cabin attendant to the enthusiastic engagement of the office manager at a corporate retreat, the construction of a “playful” office environment at a startup, the separation of political or personal thoughts from “professional” settings, or even the orientation towards

¹ Gibson-Graham is the name assumed for publication by a writing collective of two political economists.

“morale” as a central strategic concern for organizations, all speak to the way that emotion arises as part of a labor relation – it is a resource that the worker offers as part of the corporate endeavor.

The idea that emotions must be managed as a part of the service experience is not a novel observation, and indeed even classic studies of taxi drivers [7] discuss the way that a taxi driver’s personality and emotional deportment is part of the client encounter and hence part of the work of being a taxi driver. As we will see, however, this takes on new resonances within the frame of evaluation and ratings that are at the heart of algorithmically-managed ride-sharing [22].

The Cultural Politics of Temporality

Questions of time, time-management, efficiency, and control feature prominently in discussions about ride-sharing (and indeed other forms of crowd labor). Sarah Sharma [34] has usefully addressed this phenomenon. Her work focuses on the cultural politics of temporality – how time comes to be seen as a resource, and what cultural work is done in thinking about the management and articulation of time, such as, for instance, the way that people might make claims of status and achievement by their explanations of how busy they are. She explores a number of cases, such as that of corporate yoga instructors whose practice emphasizes mindfulness and disconnection from the pressures of the day even as it is conducted in office break-rooms and during lunch hours so as to minimally impact organizational efficiency. A second particularly relevant study she presents focuses on traditional taxi drivers.

On one hand, the taxi drivers whom Sharma interviewed talk about the way that driving is something that allows them to work on their own time. For those who work multiple jobs, for example, driving a cab is something that can be fitted in amongst other activities and provides a form of supplemental income in time that might otherwise be unproductive. And yet they also articulate the way that the actual experience of driving a cab is not in any way one of control over time. One spends a lot of time waiting, for a start, or being buoyed along on the temporal rhythms of others’ days. The temporal pressures to which one responds are those of the riders who need a cab or who need to get to a particular place by a particular time. The essence of driving a cab then, is to prioritize between these two notions of work temporality – “having flexible work schedules” versus “having a never-ending job”

With these perspectives in mind – the broad perspectives of immaterial labor and feminist critiques of economic life, and the more specific identifications of body, affect, and temporality as sites of labor relations, we now turn to look at the practices of ride-sharing in detail.

THE WORK OF RIDESHARING

Ridesharing, a subset of the larger “sharing economy” boom has been a topic of daily discussion and reportage for

novel stories of crime, sociality, regulation, labor disputes but also most importantly, the phenomenal growth of ridesharing pioneer Uber, valued at \$50 billion at the time of writing this paper. Uber, along with its biggest rival Lyft along with services such as Sidecar, Wingz, HopSkipDrive and others form the ridesharing economy or TNC (Transportation Network Companies) that essentially use an “online enabled platform to connect passengers with drivers using their personal, non-commercial vehicles.”² Uber’s financial valuation and global reach as a service provider far outweigh Lyft and others and all drivers interviewed for this study reported to have driven for Uber along with other companies, and so the terms Uber and ridesharing are sometimes used interchangeably.

For the purpose of this study, the first author conducted 18 semi-structured interviews with drivers from across the United States and observed multiple Facebook groups namely ‘Uber, Lyft Sidecar:R3Z Solutions’, ‘Uber Disgruntled Rideshare Drivers’ and ‘Uber Nation Drivers’ with consent from their founders. These interviewees were recruited from social media groups where ridesharing drivers communicate with each other on a daily basis about numerous things including best practices, incidents with passengers, car maintenance and company policies. Further, the first author also administered a survey to similar social media groups focusing on ratings as a reputation system to investigate trust mechanisms in ridesharing platforms. The survey received 121 responses from drivers across the country. Both the interviews and survey responses were coded and analyzed to understand the concerns of the driver community.

Survey Results

The first author administered a survey comprising 7 questions paraphrased from the FTC (Federal Trade Commission) workshop on ridesharing. All questions were geared towards understanding drivers’ perception of the trust mechanisms instituted within ridesharing applications and to solicit recommendations on improving them. While a detailed discussion of the survey responses and recommendations is beyond the scope of this paper, from the 121 respondents 47.1% drivers rated ratings as 1 (signifying extremely poor on the scale), 18.5% rated them as 2 (poor), 19.3% as 3 (average) and the rest 15.1% rated them as efficient and very efficient.

After coding the qualitative responses, we found “lack of awareness” (among passengers regarding what ratings mean) as the biggest factor affecting ridesharing transactions. Drivers also expressed that TNC companies are not building upon existing understandings of ratings

² See “Decision adopting rules and regulations to protect public safety while allowing new entrants to the transportation industry”, California Public Utilities Commission. <http://www.taxi-library.org/cpuc-2013/cpuc-decision-sept-2013.pdf> Retrieved 26 Nov 2013.

(from other platforms such as Yelp), safety and public behavior in taxis.

The primary purpose of our survey was to provide a backdrop for more detailed interviews, which amplify these themes. For the purposes of this paper and the results presented below, we will focus primarily on the interview data.

Laboring for Ratings

“Pleasing the passenger” is clearly an aspect of any ridesharing system, including traditional taxis, but it plays a much bigger role in crowd labor due to the specific intermediation of quantitative scores. Both Uber and Lyft employ a 5 star rating system that is available to passengers and drivers once the ride is completed. Both passengers and drivers have an option of rating the other party based on their experience in order to improve the quality of service of that driver or report exceptionally problematic passengers who you never want to be paired with again. The rating scale is also accompanied by a small text box where you can leave comments about the driver or passenger. As we understood from the survey responses, the biggest complaint that drivers have against ridesharing systems is that passengers do not understand how ratings work and what the implications of good or bad ratings are. (We might similarly observe that ridesharing users have very little idea of how *their* scores are used, although that has not been part of our study.)

To elaborate, since ridesharing companies themselves do not have a walk-through, tutorial or a short guide to the features in their apps, passengers use their prior knowledge of how 5-star rating scales work. As a driver mentioned, “Most passengers don’t understand Uber rating system. They are led to believe Yelp style rating. With Uber anything less than 5 stars is a failure.” As has been widely reported from the data released by Uber, 4.6 is the lower limit below which drivers are given a warning and a stipulated time period to improve their ratings, failing which they get deactivated. For Lyft it is even higher at 4.79. While Uber’s report mentions the top five complaints associated with low ratings, it does not comment on whether passengers are aware that within their rating system, unlike other known reputation systems, the rating threshold is much higher. To aggravate this, both Uber’s code of conduct and best practices listed by Uber trainers explicitly advise drivers “not to ask for 5 stars but to earn them”. As Rez LaBoy³, the owner and co-founder of R3Z Solutions, the biggest driver training company in the U.S. explains,

We focus mostly on the behavioral factors that contribute to ratings. It’s similar to a five-star restaurant. The restaurant isn’t asking for a five-star rating, but instead provides service that compels the customer to give them the ratings. We also tell the drivers to earn five stars rather than asking for five stars.

When asked to rate the effectiveness of the rating system as a means to promote trust between passengers and drivers, 45% drivers rated it as 1, indicating very poor, 18% rated it as 2 and another 18% rated it as 3, indicating poor and average respectively. Responding to how well passengers understood the rating system, most drivers said “not well”. As one response explained:

The whole rating system sucks! It frustrates drivers to no end because there’s no clear feedback about why riders down-rated you, when, or who. Some riders down-rate you because you “talk too much” while others down-rate you because you “seemed to ignore them”. In one day, I can get a whole bunch of happy riders who talk up a storm and seem to love the ride, and a couple who just sit there staring out the window; all I know is several of them gave me less than 5 stars for totally unknown reasons, and one gave me a 2-star rating. Either change to a simple “would you ride with this driver again?” question, or require them to say WHY they gave less than 5 stars and give that feedback to the drivers.

As this quote illustrates, since there is a differential understanding of how ratings work and as inferred from survey responses, drivers don’t proactively ask for five star ratings from passengers for various reasons. While some said that it seems too desperate, some others such as driver trainer Rez LaBoy said that one has to earn ratings and not ask for them. Activities that come under the ambit of constructing a positive experience included providing complimentary water bottles, mints, playing the music that passengers like, tolerating rude behavior, racial slurs, offensive remarks or even refraining from any discussion that might lead to disagreement including movies, music tastes, preferred sports players and so on.

In order to understand how communication is indispensable to the actual work of driving let us consider another instance. Again, according to the data published by Uber, the biggest reason for lower ratings is drivers not demonstrating an adequate knowledge of city routes despite most drivers actively using Google Maps or other GPS services. LaBoy, in his interview, also admitted to conflicts over choice of routes being a common complaint. One of the interviewees said that while they always used GPS for personal navigation, when driving for Uber and Lyft, even if they know a route better than the suggested one (which often includes using the freeway), they ask the passenger’s preference before taking the shorter route. What Don, a trainer with R3Z Solutions explained in his training strategy to drivers is that it is not enough to drive correctly but to

³ See the interview with Rez LaBoy here: ‘Meet the trainers helping Uber drivers boost ratings.’ NetworkerMedia. 11 May, 2015. <http://networkermedia.com/2015/05/11/meet-the-trainers-helping-uber-drivers-boost-ratings/>

“communicate the confidence that you know the route without probing passengers”.

Thus, while doing the daily driving work, both verbal and bodily communicative acts are intrinsic to performing one’s identity as a driver who deserves to be rated a 5. Not only this, as discussed earlier, in the absence of any formal communication and training programs offered by the companies themselves (keeping in line with their original claim that “anybody can drive”), drivers have to assume all responsibility of preparing themselves as independent contractors to maintain their reputation while the number of drivers in a given city increase. In one interview, a driver who was one of the first drivers with Lyft recalled how the company started city wise Facebook groups that were called “Lyft Lounge” to encourage and offload mentoring responsibilities onto drivers who would eventually guide the new members in the group. Eventually, he said, the company’s official representatives exited but the groups continue to thrive and serve multiple functions as knowledge making, sharing and venting spaces. All the interviewees reported that these social media groups had been useful in supporting and informing their driving practices.

A factor that makes this entanglement of ratings and affective performance more complicated is the number of concerns that may affect the affective relationship between driver and passenger that are outside the driver’s control. Drivers are not in control of the traffic or the incoming customer’s mood and context at the moment of encounter, so while their body and emotions become two major assets to rely upon, they must do so in contexts that they cannot entirely manage. As was evidenced from our observation of Facebook groups over a period of 3 months where drivers were communicating on a daily basis, it wasn’t as simple as just “always being nice”. John⁴, a relatively “new” driver (as self-described in the post) posted on the group about his low ratings although he was being “real friendly and offering mints and everything”, to which a more experienced driver, Rahman responded, “...don’t overdo it. Customers don’t care about the mints and always being cheerful looks fake. Just drive them safely and follow the map.” Similarly, as reported by Gina, another driver who had barely clocked four months at the time of the interview, although she kept mints, perfume, wipes, lipstick and anything that people might need on a weekend before entering the club, she had to actively offer it to people because they wouldn’t touch them on their own. It’s not only the management of positive but also negative affect that drivers actively deploy to create emotional bonds as well as to distinguish themselves from the ridesharing company in the ride duration. Beth, a driver from Florida State explained that while making conversation about her life, she told customers how she got laid off from her

⁴ Informant names are pseudonyms.

government job and was using this as means to pay her bills. Similarly, Facebook groups that are a popular avenue for drivers to communicate, are also named to characterize the conversations within. Groups like ‘Happy Uber Drivers’ and ‘Happy Rideshare Drivers’ explicitly discourage venting or complaining about fares, rides etc. while groups like ‘Uber Disgruntled Rideshare Drivers’ become obvious spaces for unhappy ridesharing conversations.

Sam, one of the first drivers in the areas between Nashville (TN) and Jackson (MS) told us that while newer drivers often faced hostilities from taxi drivers because of the increasing number of ridesharing drivers in the area, because of the social capital he has accumulated in over two years of driving, he is well known among customers and other drivers as a reliable and friendly driver. Elaborating on the social capital generation, drivers also participate, comment on posts and build a reputation in the Facebook groups we have observed. One driver who declined to be interviewed because he hadn’t disclosed his driving job to his full-time employers regularly posts his earnings and a screenshot of his ride summary. These adjustments that drivers make are not limited to verbal communication. Bernie, a recent retiree in Orange County (CA) who has been driving for Lyft to keep himself busy recalled that since TNC drivers were banned from entering the local airport at the time of the interview, after receiving a ride, he would immediately call the passenger to coordinate a pickup location outside. “Once”, he said, “I was about to drop a lady at the airport and the cops stopped us. They asked me if I was an Uber driver and I said no. I told him I was just dropping my aunt off. When they asked the passenger, she already knew what she had to say. So we were saved a fine!” A female interviewee reported that she restricted her driving hours to daytime although driving at night pays much better. Another interviewee driving in the Bay Area narrated how he almost got assaulted while dropping a ride off at 2 am in the morning. These incidents add to the increasing corpus of news reports about Uber and Lyft drivers getting physically harmed that drivers also share on the Facebook groups.⁵

In that sense, as we signal through the instances listed above, each driver is constantly contextually performing for their customer as well as for the surrounding environment to execute every ride. This performance requires a combination and alternation of positive and negative emotional display, empathy generation, building one’s social capital as well as taking bodily risks.

⁵ See: <http://7online.com/news/search-for-teens-who-beat-uber-driver-in-brooklyn/808123/and> <http://www.ctvnews.ca/canada/passengers-charged-after-ottawa-uber-driver-assaulted-1.2438300> (These are just representative of several other cases of driver assaults.)

Transforming Space and Self

In the first author's interview with Don, the driver who drove through the city of Baltimore during riots in May 2015, Don extensively discussed the importance of creating a memorable experience for those who ride with him. Don was one of the first drivers in Baltimore and said that it was because of the "extraordinary experience" that he provided, his passengers often remembered him, bolstering his own image as an entrepreneur. Don later said that once a ride gets over, he sends a text message to the passenger that contains his name and a link to his other business as an energy consultant. When asked why creating his own brand mattered, he explained,

The trust that you build in this system can carry over to other systems...a driver in San Francisco uses his car as a mobile shop to sell jewelry and he is making up to \$200,000 a year. It's an advantage for me to brand myself. Did I get paid for the article on Baltimore? No. But, that kind of moved me into other opportunities based on the reputation I built through Uber.

An interviewee said that she carried flyers for her salsa-dancing class inside her car and when passengers asked her what she does apart from ridesharing, she casually told them she practiced salsa and gave them a flyer. The flyer also contained her name and number as a referee implying, that if passengers wanted to pursue dance lessons, they could contact her directly and request a ride with her. On the other hand, drivers often remind each other in group discussions that bad behavior, incidents of violence and any negative publicity could hurt Uber or Lyft as a brand, thus affecting customer demand for their rides.

The issue of micro-branding, then, produces a curious situation where due to driver-passenger communication, the combination of the social and financial implications are unequally transferred. While drivers represent Uber and Lyft in the work they do, as independent contractors they not only bear all the repercussions of their own interactions but also suffer if the company at large receives negative publicity. On the other hand, because of the surplus availability of drivers and the pervasive potentiality of anyone to become a driver, existing drivers have to self-discipline and produce community knowledge in order to mitigate immediate damage to their own profitability.

Not only this, the taxi as a space and the driver as controlling actions within it are constantly skirting legality as they try to balance ratings/popularity/likeability with legal compliance. We illustrate this through two complaints widely reported by numerous participants in the survey. The first is what is commonly referred in driver discussions as "squeeze" or when passengers insist on allowing more people in the backseat of the car than legally possible, implying that they can "squeeze in". If the driver refuses to comply with passenger demands, they risk being rated low and if they allow it, they risk being fined heavily if apprehended by the police. The second issue highlighted by

several drivers, concerns open alcohol containers. As mentioned earlier, drivers work longer and late hours on the weekends, especially to and from bars and restaurants transporting drunken people who prefer ridesharing rather than driving because they are drunk. Communicating with drunken passengers, especially those who bring open beer cans or other kinds of alcohol poses a big challenge for drivers again because they risk losing ratings if they play by the rules. Besides these two major issues, drivers often risk car impounding because many cities in the United States have legislated against ridesharing operations inside airports. Not only this, five interviewees reported having driven minors around because at the time of ordering a ride, passengers do not state who is going to actually ride in the car. Thus drivers assume different kinds of risks either while complying with regulation or going against it in a bid to maintain their ratings and passenger safety

In terms of the perception of the owners towards their vehicles, when asked if they felt differently towards their vehicles after they started driving for ridesharing, 16 of the 18 interviewees said no. This is an important insight because it marks a break from the leasing model within traditional taxi businesses to a model where opting for Uber or Lyft's financing programs is perceived to be risky by ridesharing drivers. While for Sharma and for traditional taxi drivers, the taxi is a non-space [1], a liminal waiting space between two other places, as witnessed in several conversations on related Facebook groups and confirmed with our interviewees, drivers reported that they still felt that their car was their personal space which they shared time and again with passengers. Not only this, before Lyft decided to rebrand itself and get rid of the furry pink mustache on its cars, personalization was a huge aspect of riding with Lyft drivers. As reported by CNN in 2013⁶, themed cars such as DiscoLyft, Cookie Wars Lyft, a driver who dressed like Batman and another driver who took selfies with his passengers were among the many creative strategies employed by ridesharing drivers to create a personalized experience through the creative transformation of vehicle space. Even beyond the extravagance of themed cars, four of our interviewees described the attention to upholstery and interiors in their cars which in turn led customers to compliment them, hopefully contributing to their ratings.

The final way that the self must be aligned to the needs of ridesharing concerns temporality and flexibility. The ability to work flexibly is often touted as a key feature of crowd labor, the flexibility here coming both from a freedom from regulation – a major source of revenue for corporations operating in this area – and a flexibility of participation, particularly with respect to time invested.

⁶ See: 'Lyft cars get creative -- and a little weird'
<http://edition.cnn.com/2013/07/29/tech/mobile/lyft-cars/>

However, in common with taxi work (as discussed earlier in our discussion of Sharma's analysis), ridesharing work is also thoroughly dictated by time management starting from the reorganization of work time as on-demand to working the longest hours on weekends to understanding paid work time by minutes and miles. As respective city markets start getting saturated and drivers have to take shorter rides, a common complaint is that since drivers don't always know the drop-off destination, sometimes they drove more to reach the passenger than the actual distance of the ride. Two interviewees reported that they immediately call the passenger to determine the ride's viability. A driver who posted a picture of vomit in his car lamented that being refunded for the clean-up doesn't cover the amount of driving time lost (especially if it's a weekend night) in the process. Don, a veteran and the driver who drove through Baltimore city when riots occurred in 2015 explained that his main motivation for switching to Uber fulltime was that he could drive at nights when his children were asleep and attend their soccer matches during the daytime. Lucrative driving time, in that sense, clashes not only with rating troubles (as discussed later in the paper) but also with safety concerns because rideshare driving is gendered and racialized work (who is driving, or which neighborhoods you must avoid).

DISCUSSION

As discussed above, ridesharing drivers and the ridesharing services themselves emphasize the importance of building a connection with riders and creating an experience that is not just efficient and effective but also pleasurable. Drivers do this in the context of a particular bodily intimacy, sharing a small space, sitting just a few feet from their clients, placing themselves in bodily proximity, and inviting clients into a space the personal automobile that is strongly identified with the driver.

Infrastructures of Disruption

Drawing on the discussion on immaterial labor, preparatory knowledge work and the conscious fashioning of self and space that ridesharing drivers constantly undertake, we suggest a critical unpacking of disruption as a phenomenon in the context of sharing economies. While technology driven real-time aggregation of work does a more efficient and instantaneous job at matching demand and supply in various service industries, the entire phenomenon cannot be entirely accounted for without acknowledging the material infrastructures – actual bodies, tangible threats, care routines of the self and vehicles, the availability of a “reserve army”⁷ of transient immigrant laborers, that realize innovative technological enterprise coming out of the Silicon Valley. The similarity between work and sociality among yellow cab drivers and their ridesharing counterparts

⁷ Marx uses the term “reserve army” or “industrial reserve army” to describe the mass of those seeking work, whose presence creates competition for jobs that can be exploited in order to keep wages low or avoid other labor demands.

remind us that bringing something into the realm of the ‘digital’ does not necessarily “disrupt” or produce entirely unprecedented work conditions and labor relations because ridesharing drivers continue to occupy other positions of race, class, gender and nationality that inform their ridesharing work. In our future work, we hope to nuance this finding by locating the specific communities that lend themselves to a host of sharing economies.

Disrupting Work, Ignoring Labor

From the discussion on feminist political economy's critique of the narrow spheres of waged work and from the responses we received in our conversations with drivers and trainers, we also propose that the Sharing Economy is feminist political economy's evil twin in the sense that, while Gibson-Graham propose to extend our understanding of economic life to include those aspects that are not governed by monetary exchange, the sharing economy seeks to bring many aspects of non-monetized engagement – engagements between friends, family members, citizens, and members of society, engagements typically not marked by labor relations or financial exchange – within the sphere of monetary transactions. So, where Gibson-Graham attempt to expand our view of “economic” life to include non-monetary transactions, many ventures in the sharing economy attempt to capture everyday relations in the sphere of the monetary.

Whether ride-sharing or staying in a spare room, sharing economy websites not only provide a platform for understanding casual interactions through an economic lens but they also produce a new normative understanding of monetized work. While the feminist political economists, though, wanted to disrupt and redefine the nature of economic life in order to incorporate everyday engagements, the sharing economy seeks to disrupt and redefine the nature of everyday social engagements in order to incorporate them into economic life in the terms already given. Rather than engaging in an expansion or diversification of how we think about economy, they seek to bring those other areas of everyday life under the umbrella of traditional economic analysis. In that sense, we suggest that while sharing economy enterprises are disrupting, highlighting and thereby extending what we recognize as a part of daily work, they also conflate care labor as a natural, inherent component of work, thereby by again erasing the distinction driving work and related work, making it impossible to ask what the passenger is really paying for. Uber does this in more explicit ways than other competing services since, as a driver mentioned, “Uber would just inform passengers that there is no need to tip because it is included in the fare.” Its interface does not even have a tipping feature unlike Lyft.

Given this situation, especially in ridesharing but also possibly in other forms of sharing economies then, we observe that there is a negative relationship between sociality and its associated economic functions. While tips

are optional and there is no monetary framework to recognize human investment, the fact that care labor has been monetized allows for passengers and the companies to deprive drivers of monetary incentives, pay and often even the opportunity to drive if they fail to demonstrate adequate friendliness.

Simultaneously, the “1099” predicament also compels us to rethink work expectations. When Boston based lawyer Shannon Liss-Riordan filed a class action suit against Uber for classifying drivers as independent contractors⁸ (characterized by the US “1099” tax filing form), a driver posted this on one of the Facebook groups we observed. Comments from over ten drivers denounced Riordan’s move reasoning that along with employee benefits, one would also have to sign up for fixed time schedules and a single full-time job – implying they would lose the flexibility that the current model provides of earning “as much as you drive” (as described by a driver) along with their day jobs. In this light, we might have cause to reflect upon the evolving nature of employment, the advantages and risks of alternate models that are emerging before regulation frameworks catch up and finally how we can aspire for more equitable arrangements in such a scenario. Further, if the fundamental move in sharing economy platforms is not so much to create a new way of doing an old job, but rather to bring within the domain of everyday labor the activities that might previously have constituted a domain of economic-but-not-waged exchange, then what is really going on is perhaps a redefinition of the boundaries of waged labor, also implying that rather than disappearing and becoming obsolete, the functions of human bodies and selves are being reconstituted vis-à-vis their role in economic production.

CONCLUSIONS

The question “what’s the W in CSCW” has generated a considerable amount of debate over the years, as the attention of researchers has shifted beyond CSCW’s initial concern with technologies in the workplace [e.g. 6, 33]. Although these debates have often generated more heat than light, and although we have no interest in revisiting them, they do set an interesting context here in at least two ways. One is that new services arising online might prompt us to recognize that even the styles of collaborative activity that have long been associated with social media and informal collaboration can themselves fall quite distinctly within the domain of traditional notions of “work” when monetized by platform providers in crowd services and the sharing economy. The second is that in digitally mediated settings, the particular set of concerns that we might want to draw from studies of labor relations may vary. That is, we might find that we need to look towards areas of labor relations and labor concerns that reach beyond traditional questions

⁸See: ‘The Lawyer fighting Uber and Lyft is taking the fight to four more companies’ (<http://www.businessinsider.in/The-lawyer-fighting-for-Uber-and-Lyft-employees-is-taking-the-fight-to-four-more-companies/articleshow/47903934.cms>)

of workplace rights and democratic processes, and turn towards other questions of labor that we have seen at work here.

So, in the case of ridesharing that we have been examining, we have seen how questions of emotional performance, bodily presence, and temporal alignment come to matter in the enactment of this particular form of crowd labor. While labor theorists have long observed the ways that these cast important light on traditional workplace activities, we find that they are only heightened in regimes in which individuals, in the forms of their own bodies and their own possessions, become the sites of engagement between clients and corporations. In many ways, this echoes a concern expressed by those who have studied digital economy settings that even in regular workplaces in the digital sector new aspects of the self, become enrolled in the labor relation [31, 33]. Here, though, we find this extending into work that is mediated by digital services – computer-supported in a very direct sense. This suggests an opportunity to reframe the debate around “work” in CSCW and allied areas. It gives new prominence to research on labor theory and its application to the digital economy.

We have found the broad umbrella of feminist political economy to be particularly useful here. This work encourages us to think differently about the nature of economic life and the relationship between monetary exchange and other forms of social transaction. It provides a framework for resisting, intellectually as well as in practice, aspects of the rhetoric of the sharing economy by asking, in whose economy does sharing emerge as way of thinking about how we interact, and with what consequences?

ACKNOWLEDGMENTS

We would like to thank our participants for their time and energies, Bonnie Nardi for her guidance on the IRB and Sanna Ali for her collaboration during the data collection phases of this work. Harry Campbell’s help was invaluable in reaching out to the driver community. Morgan Ames, Katherine Lo, Katie Pine, and Christine Wolf provided valuable feedback on earlier drafts. This research has been supported in part by the Intel Science and Technology Center for Social Computing.

REFERENCES

1. Marc Augé. 1995. *Non-Places: Introduction to an Anthropology of Supermodernity*. Verso, London, UK.
2. Michael S. Bernstein, Greg Little, Robert C. Miller, Björn Hartmann, Mark S. Ackerman, David R. Karger, David Crowell, and Katrina Panovich. 2010. Soy lent: a word processor with a crowd inside. In *Proceedings of the 23rd annual ACM symposium on User interface software and technology (UIST '10)*. ACM, New York, NY, USA, 313-322. <http://doi.acm.org/10.1145/1866029.1866078>

3. Susan L. Bryant, Andrea Forte, and Amy Bruckman. 2005. Becoming Wikipedian: transformation of participation in a collaborative online encyclopedia. In Proceedings of the 2005 international ACM SIGGROUP conference on Supporting group work (GROUP '05). ACM, New York, NY, USA, 1-10. <http://doi.acm.org/10.1145/1099203.1099205>
4. Marisoa Dalla Costa, and Selma James. 1972. Women and the Subversion of the Community. Falling Wall Press.
5. Mark Coté and Jennifer Pybus. 2007. Learning to immaterial labour 2.0: MySpace and social networks. *Ephemera: Theory and politics in organization* 7, 1: 88-106.
6. Andy Crabtree, Thomas A. Rodden and Steven D. Benford. 2005. Moving with the Times: IT Research and the Boundaries of CSCW. *Computer Supported Cooperative Work* 14, 3:217-251.
7. Fred Davis. 1959. The cabdriver and his customer: facets of a fleeting relationship. *American Journal of Sociology*, 65, 2:158-165.
8. Hamid Ekbia and Bonnie Nardi. 2014. Heteromation and its (dis)contents: The invisible division of labor between humans and machines. *First Monday* 19:6.
9. Silvia Federici. *Caliban and the Witch*. Autonomedia, 2004.
10. J.K. Gibson-Graham. 1996. *The End of Capitalism (As We Knew It): A Feminist Critique of Political Economy*. University of Minnesota Press, Minneapolis, MN, USA.
11. Tarleton Gillespie. 2014. The Relevance of Algorithms. In *Media Technologies: Essays on Communication, Materiality, and Society*, Tarleton Gillespie, Pablo Boczkowski and Kirsten Foot (eds), MIT Press, Cambridge, CA, USA, 167-194.
12. Melissa Gregg and Greg Seigworth (eds). 2010. *The Affect Theory Reader*. Duke University Press, Durham, NC, USA.
13. Michael Hardt, and Antonio Negri. 2000. *Empire*. Harvard University Press, Cambridge, MA, USA.
14. Keith Hart. 1973. Informal Income Opportunities and Urban Employment in Ghana. *Journal of Modern African Studies* 11, 1:61-89.
15. Arlie Russell Hochschild. 1979. *The managed heart: Commercialization of human feeling*. University of California Press, Berkeley, CA, USA.
16. Julie S. Hui, Michael D. Greenberg, and Elizabeth M. Gerber. 2014. Understanding the role of community in crowdfunding work. In Proceedings of the 17th ACM conference on Computer supported cooperative work & social computing (CSCW '14). ACM, New York, NY, USA, 62-74. <http://doi.acm.org/10.1145/2531602.2531715>
17. Eva Illouz. 2007. *Cold Intimacies: The Making of Emotional Capitalism*. Polity, Cambridge, UK.
18. Lilly Irani. 2015. *The Cultural Work of Microwork*. *New Media and Society* 17:5, 720-739.
19. Lilly C. Irani and M. Six Silberman. 2013. Turkopticon: interrupting worker invisibility in amazon mechanical turk. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '13). ACM, New York, NY, USA, 611-620. <http://doi.acm.org/10.1145/2470654.2470742>
20. Lilly Irani and M. Six Silberman. 2014. From critical design to critical infrastructure: lessons from turkopticon. *Interactions* 21, 4 (July 2014), 32-35. <http://doi.acm.org/10.1145/2627392>
21. Aniket Kittur, Bongwon Suh, Bryan A. Pendleton, and Ed H. Chi. 2007. He says, she says: conflict and coordination in Wikipedia. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '07). ACM, New York, NY, USA, 453-462. <http://doi.acm.org/10.1145/1240624.1240698>
22. Aniket Kittur, Jeffrey V. Nickerson, Michael Bernstein, Elizabeth Gerber, Aaron Shaw, John Zimmerman, Matt Lease, and John Horton. 2013. The future of crowd work. In Proceedings of the 2013 conference on Computer supported cooperative work (CSCW '13). ACM, New York, NY, USA, 1301-1318. <http://doi.acm.org/10.1145/2441776.2441923>
23. Airi Lampinen, Victoria Bellotti, Andrés Monroy-Hernández, Coye Cheshire, and Alexandra Samuel. 2015. Studying the "Sharing Economy": Perspectives to Peer-to-Peer Exchange. In Proceedings of the 18th ACM Conference Companion on Computer Supported Cooperative Work & Social Computing (CSCW'15 Companion). ACM, New York, NY, USA, 117-121. <http://doi.acm.org/10.1145/2685553.2699339>
24. Maurizio Lazzarato. 1996. *Immaterial Labour*. In *Marxism Beyond Marxism*, Sari Makdissi, Cesare Casarino, and Rebecca Karl (eds.).
25. Min Kyung Lee, Daniel Kusbit, Evan Metsky, and Laura Dabbish. 2015. Working with Machines: The Impact of Algorithmic and Data-Driven Management on Human Workers. In Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems (CHI '15). ACM, New York, NY, USA, 1603-1612. <http://doi.acm.org/10.1145/2702123.2702548>
26. David Martin, Benjamin V. Hanrahan, Jacki O'Neill, and Neha Gupta. 2014. Being a turker. In Proceedings of the 17th ACM conference on Computer supported cooperative work & social computing (CSCW '14). ACM, New York, NY, USA, 224-235. <http://doi.acm.org/10.1145/2531602.2531663>

27. Amanda Menking and Ingrid Erickson. 2015. The Heart Work of Wikipedia: Gendered, Emotional Labor in the World's Largest Online Encyclopedia. In Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems (CHI '15). ACM, New York, NY, USA, 207-210. <http://doi.acm.org/10.1145/2702123.2702514>
28. Gina Neff. 2012. *Venture Labor: Work and the Burden of Risk in Innovative Industries*. MIT Press, Cambridge, MA, USA.
29. Tyler Pace. 2012. Creative self-expression in socio-technical systems. In Proceedings of the ACM 2012 conference on Computer Supported Cooperative Work Companion (CSCW '12). ACM, New York, NY, USA, 359-362. <http://doi.acm.org/10.1145/2141512.2141620>
30. Andrew Ross. 2009. *Nice Work If You Can Get It: Life and Labor in Precarious Times*. NYU Press, New York, NY, USA.
31. Joel Ross, Lilly Irani, M. Six Silberman, Andrew Zaldivar, and Bill Tomlinson. 2010. Who are the crowdworkers? : shifting demographics in mechanical turk. In CHI '10 Extended Abstracts on Human Factors in Computing Systems (CHI EA '10). ACM, New York, NY, USA, 2863-2872
32. Niloufar Salehi, Lilly C. Irani, Michael S. Bernstein, Ali Alkhatib, Eva Ogbe, Kristy Milland, and Clickhappier. 2015. We Are Dynamo: Overcoming Stalling and Friction in Collective Action for Crowd Workers. In Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems (CHI '15). ACM, New York, NY, USA, 1621-1630. <http://doi.acm.org/10.1145/2702123.2702508>
33. Kjeld Schmidt. 2011. The Concept of 'Work' in CSCW. *Computer Supported Cooperative Work* 20, 4-5:341-401.
34. Sarah Sharma. 2014. *In the meantime: Temporality and cultural politics*. Duke University Press, Durham, NC, USA.
35. M. Six Silberman, Lilly Irani, and Joel Ross. 2010. Ethics and tactics of professional crowdwork. *XRDS* 17, 2 (December 2010), 39-43. <http://doi.acm.org/10.1145/1869086.1869100>
36. Tiziana Terranova. 2004. *Network Culture: Politics for the Information Age*. Pluto Press, London, UK.