

Automating Care: Online Food Delivery Work During the CoVID-19 Crisis in India

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ABSTRACT

On March 23, 2020, the Government of India (GoI) announced one of the strictest nationwide lockdowns in the world to curb the spread of novel SARS-CoV-2, otherwise known as CoVID-19. The country came to a standstill overnight and the service industry, including small businesses and restaurants, took a massive financial hit. The unknown nature of the virus and its spread deepened anxiety among the general public, quickly turning to distrust towards any “outside” contact with goods and people.

In the hopes of (re)building consumer trust, food delivery platforms Zomato and Swiggy began providing digital solutions to exhibit care towards their customers, including: (1) sharing delivery workers’ live temperatures alongside the workers’ profile inside the app; (2) mandating the use of the controversial contact tracing app *Aarogya Setu* for the workers; (3) monitoring workers’ usage of masks through random selfie requests; and (4) sharing specific worker vaccination details on the app for customers to view, including vaccination date and the vaccine’s serial number.

Such invasive data gathering infrastructures to address public health threats have long focused on the surveillance of laborers, migrants, and the bodies of other marginalized communities. Framed as public health management, such biometric and health data gathering is treated as a necessary feature of caring for the well-being of the general public. However, such datafication practices - ones which primarily focus on the extraction of data from one specific community in order to mollify the concerns of another - normalizes the false perception that disease is transmitted unidirectionally: from worker to the consumer. By centering food delivery workers’ experiences during the pandemic and examining the normalization of such surveillance in the name of care and recovery, this paper aims to examine how new regimes of care are manufactured and legitimized using harmful and unethical datafication practices.

CCS CONCEPTS

• **Human-centered computing** → **Empirical studies in HCI.**

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KEYWORDS

Gig Workers, Politics of Care, Quantification, Platform Ethics, CoVID-19

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1 INTRODUCTION

Sitting in her living room in Indore, Madhya Pradesh, the young woman taps open her Zomato app - her go-to food delivery platform. She idly swipes through the listing of restaurants waiting for something to catch her eye (and her appetite). It has been a long summer in India, as much of the country continues to recover from the worst outbreak of CoVID witnessed throughout the global pandemic, and she is happy to see that many of her local restaurants are listed. She is excited to order her favorite Chicken Biryani for dinner. Since the rise in CoVID cases, she has been careful to avoid public places and almost exclusively eaten home-cooked meals. She proceeds to click through to the payment portal. Her thumb hovers over the “Yes, Confirm” button as she ponders the “contactless delivery” option now offered. Yes - given the many unknowns of the CoVID virus - in fact, she would prefer to avoid directly engaging with the delivery person. She chooses to pay online using her credit card and she designates a place near the front door of her home where the delivery person can leave her dinner.

Two minutes later, the app notifies her that Ramesh would be delivering her order. She taps on his name to pull up his profile. Ramesh has worked for Zomato for the past year to support his wife and two children. A column of little tick marks indicates that he wears a mask while conducting his deliveries, sanitizes his hands regularly, and has received his second dose of the CoVID vaccine. She notices that the last line is hyperlinked and clicks on it. Ramesh’s vaccine certificate pops up on her screen, complete with the serial number of the vaccine he received, as well as details of his unique health ID. Feeling reassured that her food is being delivered by a vaccinated delivery person, she returns to the tracking page where she can see precisely where Ramesh is on a map. He’s already picked up the Chicken Biryani. The little figure on a bike wearing a cape with the letter “Z” is moving quickly towards her home. Above his little avatar is “98.5 F,” his current body temperature. As she waits for the next pop-up notification telling her food has been delivered, she wonders what Ramesh knows about her and if he also prefers the new “contactless delivery” option.¹

¹This ethnographic vignette is based on the first author’s experience as a consumer based in India during the summer of 2021.

In this paper, we focus on the digital interventions developed by India's two food delivery giants - Zomato and Swiggy - to (re)build trust and care among their customers in response to the ongoing CoVID-19 catastrophe. In the pre-CoVID era, consumers participated in an app-based culture where interacting with and trusting strangers was normalized and formed the core business model of most platform intermediaries. However, the virus - with its ability to transmit easily and cause unknown harms to human bodies - disrupted this mediated trust. It induced a fear that quickly turned to distrust in any 'outside' contact of material and people.

Alongside many other platform apps operating around the world, India's Zomato and Swiggy introduced new safety measures to mitigate these fears. Some of these interventions include sharing food delivery workers' live body temperatures on the app (and later vaccination records), mandating the use of controversial contact tracing app, *Aarogya Setu*, for the workers [17, 49], and monitoring workers' compliance to wearing masks by requiring "selfies" at random intervals.

We analyze these changes on the food delivery platform apps to more closely examine how care, trust, and safety are operationalized and enacted. Specifically, we interrogate who benefits from the changes and who carries the burden of enacting the changes. In doing so, we reveal asymmetries between the platform app company, its customers, and the delivery workers who enable the whole system to be successful. What first appears as practices of care are instead revealed to be *performances of care*, which prioritize the efficient exchange of "good" feelings between the platform app and the customer, rather than real solutions to ensure the safety of workers and customers during the CoVID-19 pandemic.

Through interviews with food delivery workers working during the pandemic in India, we examine how Zomato's and Swiggy's strategic deployment of "care" to regain their dwindling consumer base came at the expense of the safety of delivery workers. We foreground the direct experiences of food delivery workers in order to understand:

- (1) How power differentials between the company, consumer, and workers affect the "practice of care";
- (2) How companies optimize the use of quantified data to quickly implement "care practices" on their platform;
- (3) The cost to workers, and society more broadly, by normalizing the performance of care on platform apps.

We begin by interrogating the production of virtues like "care" and "trust" in technoscience through frameworks outlined in feminist science and technology studies (STS), human-computer interaction (HCI), anthropology, and sociology. Through analysis of 13 in-depth interviews with food delivery workers in India, we show how the well-being of customers, both in terms of their protection from CoVID-19 and enhanced feelings of trust and safety, relied on the pathologization of food delivery workers. Such pathologization serves to justify and normalize harmful datafication practices, including the constant surveillance of workers and their health and the sharing of private health data with customers. Specifically, we demonstrate how platforms' attempts to simultaneously scale trust and personalize care - through the heightened surveillance and monitoring of food delivery workers embodied labor - generates a

narrative of CoVID which suggests that transmission is unidirectional from the "dangerous" delivery worker to the "good" customer. We end by discussing how these practices reveal that what appears to be transparent information sharing is, in fact, rooted in colonial, casteist, and classist formations.

2 BACKGROUND AND RELATED WORK

Starting with the launch of Zomato in 2008, there has been an extraordinary growth in app-based, on-demand food delivery platforms in India. Over the last 5 years, the duopoly of Zomato and Swiggy have rapidly spread from metropolitan centers to smaller cities and towns in India. Venture capitalists and technology investors referred to work in the hyperlocal food delivery industry as "recession proof" [53] and heavily invested in these start-ups companies.

On-demand food delivery platforms are rapidly redefining the traditional model of food delivery work. The scalable and profitable business models of automated, machine learning-enabled intermediary technology platforms promise standardization, convenience, and speed [34]. Prior to the rise in app-based food delivery platforms, the consumer would place a food order directly with the restaurant for delivery (or customer pick-up). The person receiving the order was typically employed by the restaurant, mediating the interaction between cook and customer. The person delivering the food was also employed by the restaurant, subject to whatever labor protections and benefits of such employment. Platform intermediaries have digitized and automated the process of restaurant selection, food ordering, and food delivery. Food orders may route directly to the kitchen, coming through a small printer or screen that displays the customer's order. The food delivery worker no longer directly works for the restaurant, but operates as an "independent contractor" doing deliveries for many restaurants for orders received through another small screen.

In light of their growing ubiquity, it is important to recognize that such delivery apps have also transformed how we conceive the world. For example, our perception of distance and time have been transformed. Whereas a decade ago we would have expected a package delivery to take at least a week, we now expect our Amazon packages within the 2-day "Prime Delivery" window. "Local" becomes whatever geographic area falls within the delivery zone: the area between us and that which is accessible and traversable by delivery workers - an area that is mediated by social access and privilege [56]. Delivery platform apps also have the capacity to shape our perceptions of care, from who is cared for to how that care is provided.

The importance of "care" is especially poignant in light of the CoVID-19 pandemic during which the world has witnessed mass death, as well as economic decline and unemployment. In this case study, the term "care" itself is seldom used by the two food delivery platforms to describe their practices. But, as we show in the analysis below, a closer look at platforms' measures to curb the spread of CoVID-19 disease takes a generic, non-structural form that expresses what is culturally understood as "care." Given this understanding, "care" is an etic term in this analysis and serves a methodological function that enables us to unpack the underlying politics that can otherwise remain less noticeable.

The exploration of “care,” and in particular the politics of care, is not new. Care has traditionally been presented as “an ethic, a relation, a form of labor,” [66] or one that is understood largely as a private act and responsibility within the domain of the home and family [21, 26]. Critical and feminist scholars have countered such conceptions by bringing care in the public domain and a social issue, wherein “[t]he provision and availability of care has become a practical problem” that extends beyond such hyper-personal boundaries [21, p.248]. Critical and feminist scholars have highlighted the “inequalities perpetuated by care... a political project beyond the interpersonal” and the ways in which some (white, men, etc.) are prioritized over others (people of color, women, etc.) [19, 31, 60, 66]. As Tronto’s work shows, the exploration of care is an examination of both interpersonal and structural relations, between individuals and institutions without being strictly dyadic or individualistic [61]. Put simply, care is a practice “aimed at maintaining, continuing, or repairing the world” [60, p.103].

There have been calls to “unsettle” care [40] - by unbraiding its entangled concerns, breaking it down into its constituent practices, and attending to its messy, “non-innocent” politics [32, 38, 47]. As a political project, it is necessary to identify the ways care - and the constituent care practices - is rooted in hegemonic structures, like racism, classism, casteism, sexism, and ableism, as well as the ways in which it sediments these structures [40]. Paying scholarly attention to care serves as a way to uncover the mechanisms, both structural and interpersonal, which drive privilege, as well as the ignorance required for those who have the means to avoid seeing the needs of those without [35]. As described by Martin et al:

“Care is a selective mode of attention: it circumscribes and cherishes some things, lives, or phenomena as its objects. In the process, it excludes others. Practices of care are always shot through with asymmetrical power relations: who has the power to care? Who has the power to define what counts as care and how it should be administered?... Care organizes, classifies, and disciplines bodies... care makes palpable how justice for some can easily become injustice for others.” [38, p.627]

During moments of crisis, care is invoked as a means to legitimize unequal and unjust practices that further deepen existing inequalities. Ghosh looks at the use of *care* and *crisis* to justify the use of human subjects to test and refine the vaccine for yellow fever at the turn of the 19th century. Specifically, she interrogates how “public good” during the time of a health crisis is sufficient to justify the loss of human life as a “righteous sacrifice” necessary for the survival of others. In the case of Walter Reed Yellow Fever Commission’s vaccine experiment, the death of, often financially desperate, contract nurses, rank and file army personnel, and local Cuban volunteers was a *necessary* and *noble* sacrifice for the lives of other American soldiers who could remain and complete construction of the Panama Canal, thereby securing the United States’ economic control of the Americas [23].

Care is also a means to justify and mask dehumanizing forces, such as carceral power used by the state to criminalize and imprison racialized subjects. *Carceral care work*, as coined by Nguyen, refers to the use of care-giving practices, including the interpersonal

and community relationships and social institutions necessary to do care work, as a means to criminalize and brutalize [42]. She examined the United States’ antiterrorism framework, Countering Violent Extremism, and its use of social service providers to surveil racialized communities, by using social service provision such as providing mental health services, to identify and monitor those at the margins. This care work, done in partnership with policing institutions (e.g., local police, the US Department of Homeland Security, functioned to increase community policing and extend it into “intimate spaces of everyday life,” while simultaneously reifying the stereotype that racialized bodies are threatening and worthy of surveillance [42, p.581].

The reality of India’s gig work economy is marked by a class and caste divide amongst its customers and workers [28, 45] and manifests caste, class, and religious hierarchies. While there are limited studies which capture the full workforce of gig platform delivery workers, one small study of workers across the Delhi-NCR region in 2019 found that the majority of respondents (approximately 57% of 158 interviewed) identified as Hindus in the General Category [4].² This is partially explained by the capital resources necessary to enter gig delivery work, including a smartphone and consistent data access to receive assignments through platform apps and a motorized scooter to complete deliveries [4]. Platform company ads, especially for on-demand care work services, explicitly invoke imagery associated with higher castes, such as bodily adornments like mangalsutra (necklace) and sindoor (vermillion red cosmetic powder) that are traditional markers of marriage among *Savarna* Hindu (typically Brahmin) women, in an attempt to erase caste distinctions of workers available through the platform [48].

However, the erasure of caste distinction is neither a move towards castelessness nor growing social acceptance. On one hand, members of the most advantaged castes benefit from the erasure of caste distinctions, as it makes invisible the privileges and power held by those in the upper castes [65]. It also obfuscates the long history of “gig” or informal work in the Indian economy, largely held by those with no or low caste and class power and have historically had little to no economic security or collective power, disassociating contemporary gig worker labor issues from its long history of exploitation [55].

Instead, delivery platform workers are experiencing acts of social exclusion, regardless of their actual social category. As one writer observed, individual practices such as restaurants prohibiting delivery platform workers from using bathrooms to wash their hands or buildings barring delivery workers from using the elevator during the CoVID-19 pandemic are tied to Brahminist understandings of “purity and pollution” [7]. These exclusions are justified as necessary to minimize contact between delivery platform workers and restaurant workers and consumers in order to contain the spread of disease.

²There are several thousands of subcastes in contemporary India. In 1992, the Anthropological Survey of India documented 4,635 communities, of which some have several sub-castes [52]. The GoI classifies castes and subcastes into one of four categories: Scheduled Castes (SC), Scheduled Tribes (ST), Other Backward Class (OBC), and General Class (GC). Scheduled Castes and Scheduled Tribes refer to the most disadvantaged socio-economic groups, also commonly referred to as Dalits, and certain indigenous tribes (ST). OBC includes castes which have also experienced economic or social disadvantage. GC includes castes who are considered to be economically and socially advantaged, both historically and currently.

When platforms' care practices involve constant surveillance of workers, in order for customers to feel "safe," they not only evoke the logics of contemporary urban gentrification, but also find themselves reiterating the too-familiar lines of British colonial classification and codification of the Indian "native" population into their *essential type*³ - that resulted in some castes and tribes being deemed 'criminal' which were in constant need of surveillance and control [43]. Food delivery platforms have the capacity to reify these classification norms in digital forms by playing on some of the sedimented stereotypes of classist gentrification and colonial othering that already circulate in India's existing social relations. When food delivery platforms collect data and monitor the actions of some bodies for curbing the transmission of the virus, such actions also work to pathologize those "other" bodies [3].

Care during the time of CoVID-19 is especially important to unsettle because the gravity of the dangers (e.g., illness, death, economic uncertainty) can easily mask, if not justify, the more "non-innocent" aspects of care. It is also important to note that care is practiced and mediated through technology, especially digital technologies, in ways that can amplify and codify the asymmetries more quickly and more completely.

Digital technology is itself a political project. Yet, as tools based on the quantified data and rooted in "aperspectival objectivity," digital technology is presented as "rational" and "objective," and thereby "fair" and free of "idiosyncrasies" [16]. Like care, digital technology must be "unsettled" in order to address the ways that past forms of hegemonies - that operate in the form of ableist norms, racialized violence [5], gendered discrimination, and imperial legacies [29] - that are not only endured but also reanimated through contemporary technology production, design, and use [6, 30, 33, 63].

By unsettling the "care" expressed and enacted on and through a digital delivery platform app, we are able to reveal the underlying asymmetries of power between the delivery workers, customers, and the companies which mediate their relationship. Transformed to be suitable for digital platforms, the safety protocols adopted by Swiggy and Zomato highlight the prioritization of efficient and scalable solutions over measures that would actually protect the well-being of workers and customers.

3 METHODOLOGY

For this research we focused on the duopoly of Zomato and Swiggy because of their prominent market share, sizable operational area in India, and popularity. The two companies are synonymous with food delivery in India. By the end of 2018, Zomato and Swiggy reported daily orders of 1.2 million and 1.5 million [12], respectively. Zomato now operates in 556 Indian cities [46] and Swiggy in 500+ Indian cities [10]. In addition to operating in metropolitan centers of India, the two food delivery platforms also have a strong presence in smaller cities and towns.

In this paper, we use semi-structured in-depth interviews with food delivery workers on these two platforms to understand how the CoVID-related changes on the two platforms were experienced by delivery workers.

³Castes were classified and codified by stereotyped characteristics that made sense to the British colonizer. Some examples include characterizations like "trusty Parsi," "schemy Brahmins," "martial Rajputs," etc. In essence, this classification made moral characteristics a genetic trait that was passed down within a caste lineage.

The first author conducted 13 in-depth interviews with food delivery workers in India. The findings for this paper emerged from 13 interviews conducted in August 2020, less than 6 months after the first nation-wide lockdown. After the initial interview, the first author remained in contact with the interview participants and conducted several follow-up interviews with nine of the participants. The follow-up interviews were conducted until December 2020. The first set of interviews lasted approximately 60 minutes and were conducted over audio calls in Hindi. The follow-up interviews lasted between 15-30 minutes. These interviews (primary interview and follow-up conversations) were recorded, translated, and transcribed by the first author.

Interviewees were first recruited through social media platforms, including YouTube, and through a small labor collective in Bhopal, Madhya Pradesh. Remaining interviewees were recruited through snowball sampling where the research participants connected the first author to other food delivery workers. All interview participants identified as men below the age of 30 (See table in appendix). The interview sample aligns with observed demographic distribution of India's gig-work sector, including food delivery and ride hailing work, which are considered to be male-dominated spaces.

The interview transcripts were coded for analysis. Relying on the grounded theory approach, codes were developed based on emergent themes from the interviews themselves [9]. These codes were refined through several coding iterations until theoretical saturation was achieved. A simultaneous literature review process also informed the thematic analysis.

All the research participants were reimbursed for their time. Pseudonyms are used in this paper to protect workers' identities.

4 FINDINGS

Equipped with basic knowledge about CoVID-19's symptoms and method of transmission, many businesses and service platforms adopted some common strategies to curb the spread of the disease. For example, in India, Zomato's founder preemptively announced changes to the food delivery platform to allow customers to opt for "contactless deliveries" to reduce the need for physical contact between the delivery worker and the customer [24].

While these changes were in response to public health guidelines and mandates, they were also necessary for delivery platform apps as a means of *demonstrating* care, trustworthiness, and safety. However, an examination of which practices were implemented and integrated into the platforms reveals the politics of care: for whom the changes were intended, whose reassurance was paramount, and ultimately whose safety and health needed protecting at the expense of the privacy and well-being of others.

4.1 Ensuring Safety and Protection against CoVID-19: Changes on Delivery Platform Apps

By mid-March 2020, a week before India's Prime Minister Narendra Modi would announce a "total ban of coming out of [your] homes," [22] delivery services were already starting to implement "contactless delivery" practices. Zomato announced its change on March 13th through a tweet from its founder [24], while Swiggy announced

its institutionalization of contactless deliveries via customer newsletter email around March 12, 2020 and their blog on March 19, 2020 [57]. In both instances, the primary objective of contactless deliveries - as emphasized by the two companies - was to maintain a safe physical distance between customers and the delivery workers and thereby minimizing the likelihood of contracting the disease through food delivery [27].

Due to initial speculations about fomite, or touch-based, transmission, delivery platform apps also sought to eliminate the unprotected exchange of any physical materials between individuals, including cash. By the end of March 2020, Zomato and Swiggy were encouraging customers to use “contactless payment” options, connecting online bank accounts to the app to complete payment in lieu of cash payments for deliveries. Both contactless deliveries and payments were measures taken in accordance with public health guidelines and promoted the protection of restaurant and delivery workers and customers.

Despite these early changes, as well as the classification of food service workers as “essential workers,” [13] Swiggy and Zomato experienced a 70% decline in orders within the first 10 days of the government-mandated lockdown [50]. This was due in part to the closure of most restaurants, as well major cities being shuttered to food delivery. However, loss of consumer trust in food delivery amid concerns of any contact with strangers, also drove many people to avoid dining out in any fashion (e.g., dining in restaurants, ordering take-out, or having food delivered to one’s home) [11].

Food delivery platforms like Swiggy and Zomato attempted to directly communicate with consumers, through emails, social media announcements, and push notifications through the apps. They regularly reminded customers that delivery workers were masked at all times and sanitized their hands regularly [39]. These frequent safety-related communications served as a way for the platform companies to establish trustworthiness with their customers [51]. As time progressed and lockdown restrictions eased, other practices were put into place to ease customer anxiety, including mandatory masked selfies for platform app service providers.

Zomato and Swiggy monitored workers’ mask wearing practices through already available in-app mechanisms such as live selfie requests. Worker selfies have been a required component of platform delivery work prior to the pandemic as a means of addressing worker fraud, particularly the issue of unsanctioned individuals operating off of a single worker account [36]. Swiggy and Zomato, having adopted a similar mandate for its delivery workers, extended the purpose of the mechanism as a means to check for correct mask wearing practices. The selfie request would be sent to the delivery workers at random intervals and had to be completed within a very small window of time, usually less than a minute [41, 54]. Failure to upload a selfie on the app within the given time period would result in fines and penalties for the workers. And, while facial recognition technology is typically used for identity verification, by 2021, Swiggy announced it also automated verification of both correct mask-wearing and use of Swiggy gear (e.g., wearing the Swiggy shirt and using the Swiggy delivery bag while conducting deliveries) using Computer Vision technology [54].

Swiggy and Zomato workers were also required to download the CoVID-19 contact tracing mobile app, Aarogya Setu. The app was developed and promoted by the GoI and was mandated to be

used by all government sector employees [18]. Aarogya Setu relies on a smartphone’s bluetooth and GPS features to track CoVID-19 cases in a vicinity, thereby identifying any potential hot spots, by scanning through a database of known cases and mapping them. Aarogya Setu was one of the union government’s main strategies for timely identification and prevention of SAR-CoV-2 spread. Despite its public-oriented intentions, the app is not without controversy, and has raised serious privacy and data protection concerns among civil society advocates [17, 49].

The platform companies instituted another safety measure on delivery workers: before logging into either Swiggy or Zomato, delivery workers had to share a daily self-declaration of health and hygiene that included confirmation that Aarogya Setu was running in the background of their phones. Delivery workers interviewed in this study reported that without completing this self-declaration, they could not log into Swiggy or Zomato.

By April 2020, food delivery platforms announced it would be sharing body temperatures and health certificates of restaurant staff and food delivery workers to “ease customer anxiety” [14]. Zomato and Swiggy partnered with local restaurants to check food delivery workers’ body temperatures at the time of order pick-up and report it on their end of the delivery platform [14]. It became the responsibility of the restaurants to ensure that the food order was not handled by any delivery worker whose body temperature was “above normal.” The delivery worker’s body temperature recorded by the restaurant was then made available to the customer through the app. After several design changes on the apps, on Zomato the delivery workers’ body temperature could be seen hovering over the tiny figure on the app depicting the delivery workers’ physical movements (see Figure 1). Swiggy placed the worker’s reported temperature towards the bottom of the screen on the app (see Figure 2).

Public health guidelines continued to shift throughout the year, as scientists learned more about the transmission and progression of the disease. Unfortunately, despite efforts to phase the “re-opening” of society after the initial national lockdown based on improvements in public health conditions, India experienced its largest surge in cases in April 2021 [15].

After the development and distribution of a vaccine, Swiggy [59] and Zomato [25] announced initiatives to encourage and assist delivery platform workers to become vaccinated, going so far as to boast near-perfect vaccination rates amongst its delivery workers [58]. To reassure customers their delivery worker is vaccinated, delivery workers upload their CoVID-19 vaccination records to the delivery platform app and these records are then made available to customers (see Figure 3 and Figure 4).

Each of these initiatives would indicate a robust practice of care on the part of Zomato and Swiggy: they made rapid changes to how their platforms, and their affiliated “partners” (restaurants and delivery workers), operate in order to align with public health guidelines. However, closer examination reveals significant *asymmetries* in the care shown to delivery workers and customers, as well as a focus on practices meant to *efficiently* address public concerns about the spread of the virus. Rather than being genuine demonstrations of care, based on the desire to serve and address issues in a way that can benefit and heal all involved parties, Swiggy and Zomato’s efforts are examples of a *performance of care*. As a performance,

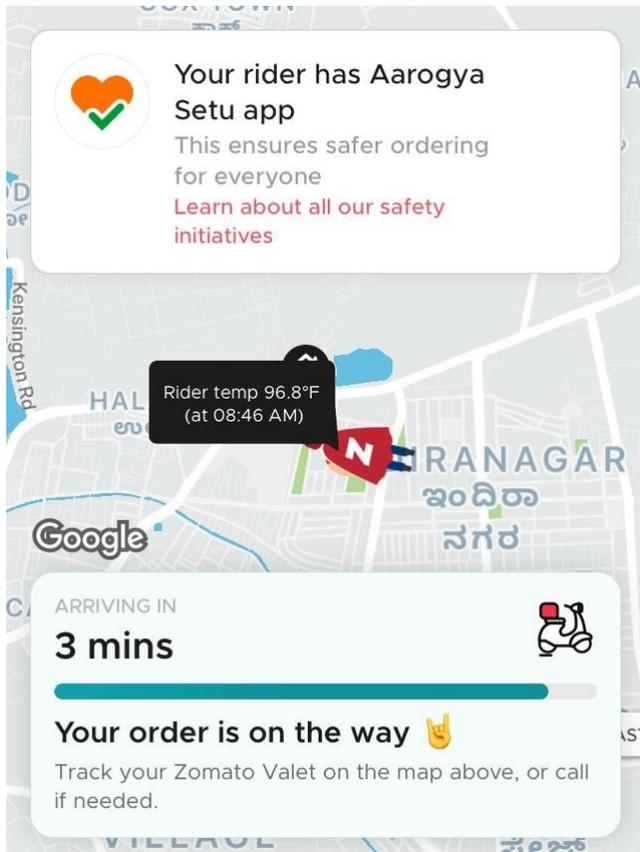


Figure 1: Delivery Worker’s Body Temperature and confirmation of Use of Aarogya Setu on Zomato App

the primary objective is to generate “good” feelings of trust and safety among customers. Rather than attending to the well-being of all parties (e.g., restaurant workers, delivery platform workers, customers), the focus is primarily on customers being reassured of their own safety.

At a time when there is great uncertainty around the origins and transmission of the disease, the changes adopted by Zomato and Swiggy, as well as the messaging used to communicate these changes to their customers, served to position workers as a danger to public health, requiring constant monitoring and surveillance. Ultimately, this has led to further normalization of constant, automated monitoring of worker behavior, while being rationalized as being for the “greater good”.

4.2 Asymmetry of Care

During the early months of the pandemic, Swiggy and Zomato were regularly communicating with their customers about the importance of user health and the resultant changes in the app to ensure customer well-being. At the onset, many of the changes, while oriented towards reassuring customers to remain active on the platform, worked to protect both delivery workers and customers. However, as the pandemic progressed, safety measures were instituted and enforced differentially and with limited resources to

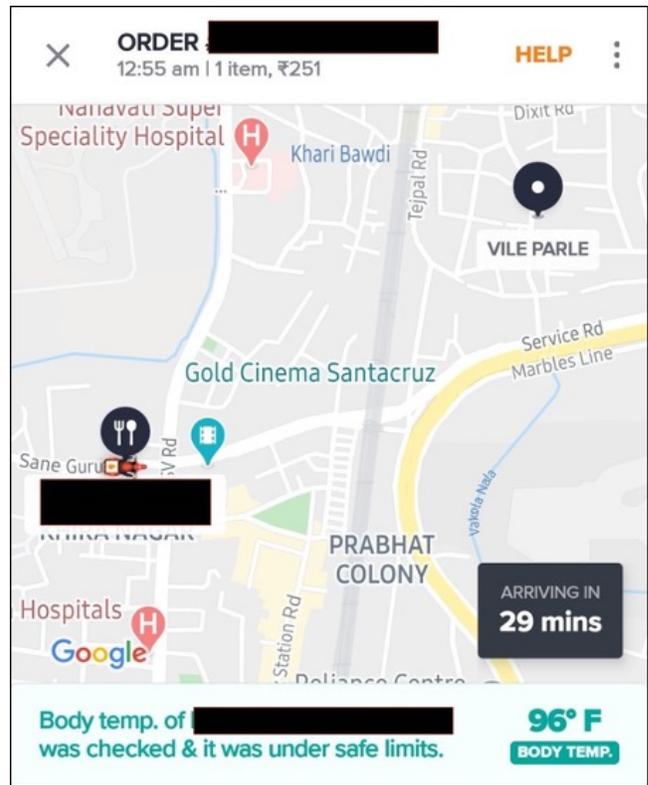


Figure 2: Delivery Worker’s Body Temperature and Confirmation of Use of Aarogya Setu on Swiggy App

support the success of such protective measures. Much of the responsibility for the safety of all involved with the food delivery process (e.g. the participating restaurant, food delivery worker, and the customer), landed on the shoulders of the food delivery worker.

One clear example of this are the many steps delivery workers were expected to take to “prove” they were uninfected, or at least asymptomatic. Delivery workers had to log into - and have running in the background of their GPS-enabled smartphones - the contact tracing app Aarogya Setu. They had to sign daily declarations stating they were not experiencing any CoVID-19 symptoms. Correct mask usage was mandated and monitored. Later, delivery workers were required to upload their vaccination record. Also, delivery persons experienced persistent reminders to adhere to public safety guidelines:

“We receive regular messages from the company about [CoVID prevention and safety]. When we log in daily, the app sends us a pop-up reminding us to check for any symptoms - headache, fever, dry cough, etc. The app reminds us to sanitize our hands regularly and wear a mask. We also have to upload a selfie of ourselves when we pick up the order. That selfie must show that we’re wearing a mask, Zomato’s brand logo t-shirt, and carrying the Zomato delivery bag.” – Siddharth, Bhopal, Zomato food delivery worker for 1.5 years

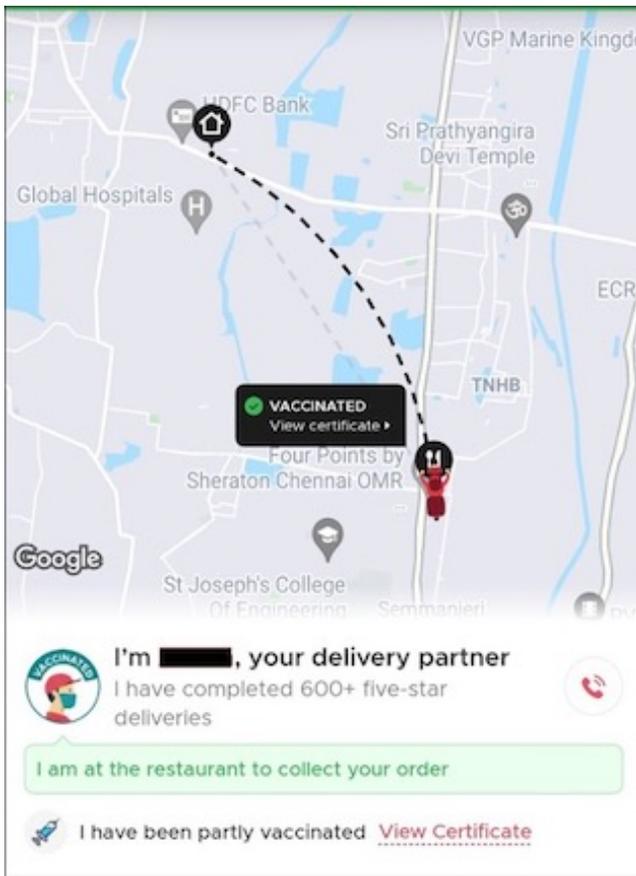


Figure 3: Vaccination Status of Delivery Worker on Zomato app

Customers, on the other hand, were not required to adhere to any such safety protocols. For a customer to use Zomato or Swiggy, they did not have to simultaneously run Aagya Setu or any other contact tracing app. While a delivery worker's CoVID status could be monitored and traced by customers, no similar information was available on the app to reassure delivery workers that the customers were also healthy or asymptomatic. This may be for practical purposes: food delivery was a necessity for those strictly isolating at home due to infection or exposure to CoVID-19. The “essential” designation of food delivery reflected the expectation that food delivery workers be exposed to possibly infected customers for the good and functioning of the overall community.

An asymmetry in care remains. While “essential” food delivery workers could not expect to be free of any risk of infection, limited actions were taken to maximize protection for workers in light of these conditions. For example, customers did not receive any reminders about sanitizing their hands or wearing masks while meeting their delivery person. If a customer arrived at their front door without a mask, delivery workers had no means of enforcing this public safety measure. Customers could not be reported or have their access to their platform temporarily revoked or limited if they repeatedly failed to adhere to public safety guidelines.

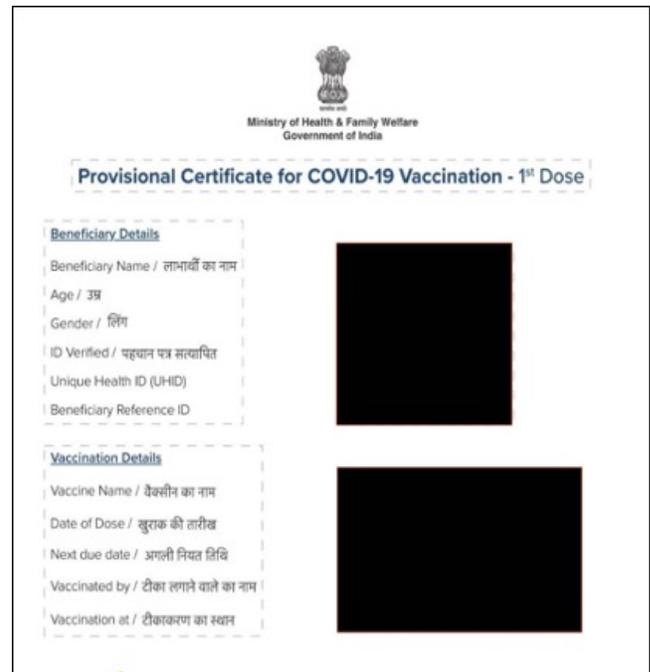


Figure 4: Vaccination Certificate issued by Ministry of Health and Family Welfare (Government of India) shown to Customers on Zomato app

Contactless delivery was implemented as a way of protecting both delivery workers and customers, but customers were not required to adhere to physical distancing guidelines in order to receive their food. Failure to adhere to contactless delivery resulted in punitive measures for the delivery worker in the form of additional labor and delays, while the customer was unaffected. As described by one interviewee:

“..But a lot of other customers who order contactless deliveries wait at the door to receive the order. Then what is the point of contactless delivery? Then we have to ask them to click a picture with the package... A lot of times it has also happened that the customer comes in front of me to receive the order so I have uploaded the picture with the package in their hand. In this case, I also received a call from the company asking me why I did this, and I had to explain to them that there was no space to keep the package and the customer only wanted the package to be handed over so now I will have to take an image with the package in their hand. Then I was told to first change the order type on the app and talk to the company to change the order. This entire process would take up 10 minutes of our time - to change the delivery from contactless delivery to regular delivery. – Shahid, Bhopal, Zomato food delivery worker for 1.5 years

While the food delivery platforms regularly communicated with the customers about workers' mask compliance and hygiene practices, delivery workers were often left to obtain Personal Protection

Equipment (PPE) on their own. Including times when access to PPE was extremely limited or very expensive due to undersupply, delivery workers were largely expected to find and purchase their own gloves, sanitizers, and high-quality masks. All delivery workers interviewed reported they used their own masks and hand sanitizer and did not feel they could rely on the food delivery platforms to provide them. The companies reimbursed a limited sum of money for the purchase of masks and hand sanitizer, but most workers interviewed found it to be insufficient:

“If we buy a mask for Rs 100 [USD 1.33] or Rs 150 [USD 2.02], then it lasts for about a month. The small hand sanitizer costs Rs 50 [USD 0.67] and the kind of work that we have to do, it gets over very soon. After every order we have to sanitize our hands and after giving the order to the customers as well. So it gets used up really fast. As far as gloves are concerned - they can be used for a day. We can use the gloves as much as we like for the whole day and once we take them out of our hands we have to throw them out... I mean it's good that they gave us Rs 100 [USD 1.33] but it was insufficient for us.”
– Bhanu, Bhopal, Zomato food delivery worker for 1.5 years

The reimbursement process created additional work for the delivery workers who would be required to upload a photo of any PPE purchased, along with a printed copy of the bill before they would receive their PPE allowance. Given that the reimbursement maximum was Rs 100 [USD 1.33], some did not go through the additional steps to receive such a small reimbursement:

“..the company has told us to buy our own masks and raise the tickets for the same so that we can be reimbursed for the same directly. So some people did it and some others did not because the mask costs Rs 10 [USD 0.13] or Rs 25 [0.34] at the most - so what's the point of raising the ticket for this?” – Mubarak, Zomato and Swiggy food delivery worker

When masks were provided directly by Zomato or Swiggy, they were neither consistently distributed to all workers nor were they sufficient to protect the delivery workers:

“The quality of masks was fine - it wasn't very good and wasn't very bad. But ma'am, I did not take it. The masks were not comfortable. They were very small masks. If someone had a big face then the mask would just not fit them and would lead to ear pain. Since the masks were not comfortable we did not take them. We were using our own masks when working.” – Bhanu, Bhopal, Zomato food delivery worker for 2 years

One key feature implemented on the app was showing the body temperature of the delivery worker on the delivery tracking element of the app. Presented as a “live” body temperature reading, it was intended to reassure the customer that steps were being taken to actively monitor delivery workers for any emerging CoVID-19 symptoms, such as a fever. The responsibility of recording the body temperature ultimately was left to the restaurant fulfilling the customer's order. However, as restaurant workers had limited

oversight by the platform app, such a responsibility was irregularly fulfilled:

“At other restaurants, they would just enter some random temperature value. Some restaurants would not even check the temperature, others did not even have the machine or the hand sanitizer. We would just go there, pick up our orders and then come back. Only at some big restaurants, the temperature tracking used to happen.” – Shahid, Bhopal, Zomato food delivery worker for 1.5 years

The quote above shows that while the customers were being assured of workers' good health, the mechanisms to monitor the health were at best, sporadic. While there were several governance mechanisms in place for the food delivery workers to monitor themselves, the same was not true for other actors in the network. Neither the restaurants, nor the customers were monitored in the same way that the food delivery workers were to undertake all necessary precautions. The closer look at the labor that undergoes in platforms' performance of care reveals the asymmetry in the two food delivery platforms' care provision.

4.3 From Care to Surveillance

Delivery workers recognized the success of the platform delivery app, and therefore greater amount of work and pay for themselves, was based on the customer believing the delivery person was behaving within public health guidelines:

“Generally, [the customers] prefer... like if the person is coming from outside, they probably think he may be infected. So orders have dropped... I haven't worked earlier but now more things have been included, one has to take a lot of precautions.” – Shahrukh, Bhopal, Zomato food delivery worker for 1 year and 10 months

The emphasis on customer perception - as opposed to mutual adherence to public health guidelines to maximize the safety of both customers and delivery workers - has resulted in an excess focus on the delivery worker's health (or perceived health). Customers could track the body temperature and vaccine records of their delivery person, as well as where they were en route with the food order, within the app. This excessive focus on the delivery worker, however, is more indicative of increasing worker surveillance and control, rather than care for either the worker or the customer. This is best illustrated by the “live” body temperature tracking feature. The effectiveness of this safety measure promoted by Zomato and Swiggy is dubious at best when it comes to identifying CoVID-19 (in the delivery worker) or preventing infection (by the customer). Food delivery workers generally worked outside, moving between the restaurant and the customer. Their body temperatures were affected by the ambient outdoor temperature and their level of movement and activity. The nature of their work often resulted in live body temperature as an insufficient indicator of healthiness:

“..since we work so hard in the heat, because of the sun, our body temperature rises... Sometimes if our temperature was high then we would request [restaurants] not to feed anything in their computer. We would wait outside for five minutes before getting our temperature

checked again. After 5 minutes of rest, our temperature usually came back to normal.” – Shahid, Bhopal, Zomato food delivery worker for 1.5 years

Delivery workers also noted the impossibility of providing live temperature tracking information to customers. Delivery workers were not expected to regularly update their body temperature, nor were they given tools to be able to do so:

“..not all the restaurants were open but some of the bigger restaurants in Bhopal - around 5-7 of them - had started operating and they used to have this temperature screening machine. The live temperature recording used to happen at the restaurant. The restaurants used to update our body temperatures on the apps. The temperature screening used to happen at the restaurants only.” – Ram, Bhopal, Zomato and Swiggy food delivery worker

“Who will keep following the rider to check their temperature every 4 hours? If I am logged in for 12 hours then who will meet that rider for 3 times - no one will do it... I can vouch for it that no one will meet the rider three times in a day to check their temperature. If someone does meet that rider then that would possibly be once during the day and that too on some days not all days.” – Rahul, Bhopal, Zomato food delivery worker for 2 years

Despite understanding the theatrics of reporting body temperature or showing a masked face in a selfie, delivery workers found themselves strongly compelled, if not outright forced, to participate in this performance of safety and care; failure to do so would result in their worker ID being blocked from the app. If a restaurant measured a live body temperature higher than the expected 98.4 degrees Fahrenheit, a delivery worker may see their ID blocked from the app for 2-3 hours. If a worker failed to submit a selfie of themselves wearing a mask within the allotted time frame, they may face fines and other penalties.

The tension between public safety during a pandemic and general worker compliance is illustrated in the use of mandated selfies. The use of worker selfies by platform companies is not an innovation created by the pandemic. Since 2019, companies like Amazon, who utilized third-party “independent” workers to complete the last leg of delivery, have required selfies and photos of the delivery to ensure the person completing the delivery (and accessing private homes and businesses) is who they say they are in their worker account; and to ensure the delivery item was not stolen or otherwise mishandled. The use of selfies during the pandemic seemed like a good way to regularly check-in with workers to make sure they were adhering to masking guidelines. However, Zomato and Swiggy also use selfies to check for more than mask compliance: they also process the selfies to make sure delivery personnel are wearing company-branded shirts and using delivery bags with the correct logo. Just as a delivery person may be fined for not wearing a mask correctly, they may be fined or otherwise penalized for not properly representing the company during their deliveries.

Rather than producing reliable information for delivery workers and customers to use to determine their risk of contracting

CoVID-19, this constant monitoring of workers acts to further normalize worker monitoring and surveillance. On the surface, these new measures by Zomato and Swiggy can be argued as necessary to maintain some normalcy while simultaneously slowing the transmission of the virus. However, under closer examination, it is apparent that using public safety as justification, workers are monitored and penalized for other, non-health related infractions, such as compliance with company branding and representation standards. Over the two years since these changes were introduced, such surveillance and monitoring of food delivery workers is now normalized - even stabilized - in the food delivery ecosystem, going unquestioned.

4.4 Scaling Care: The Automation of Reassurance

The safety measures adopted by Zomato and Swiggy are limited in their ability to reduce the spread of CoVID-19, both because of how they are unevenly or sporadically enforced and because they are ineffective in identifying carriers of the disease. Yet, as the pandemic continues into its third year, with multiple new variants causing new surges in cases and death, no other protective initiatives have been undertaken, nor have existing protocols been assessed for their efficacy.

Most businesses are reliant on public health agencies, both local and global, to provide the guidance on how to mitigate the risks and harms of contracting CoVID-19. However, it is platform apps like Zomato and Swiggy that decide which guidelines should be incorporated into their app as a feature. Of the many other changes that could have been made to ensure delivery worker and customer safety, Zomato and Swiggy adopted only a handful. Prioritization appears to have been given to customer safety over delivery worker safety, with delivery workers bearing the majority of the burden to manage everyone’s risk of contracting the virus.

Another common feature of the safety measures adopted by the platform apps is the scalability of the change. From safety reminder pop-up notifications to checking delivery workers for correct mask usage to penalization for having too-high a body temperature, these are actions which are automated, and therefore scalable to manage all delivery workers operating on the app.

For example, body temperature is limited as an indicator of good health or the presence of CoVID-19. An individual may be asymptomatic, and therefore have a “normal” body temperature reading, while still carrying and spreading the virus. The level of activity and the outside temperature also affects a live body temperature reading, temporarily raising the body temperature of an individual, despite being perfectly healthy. Yet for all its failures, it is a quantifiable and convenient metric of health that can be used as a threshold to determine participation (or penalization). It can be easily and quickly measured and entered into the app. It is a standardized measurement that the public generally trusts as accurate and reliable, and one that is difficult for workers to dispute as unfair or incorrect. Zomato and Swiggy, as well as many other platform apps, indulged in internet thinking for scaling trust that operated through a form of information exchange and relied on precision-oriented measurements (like body temperature) that could be standardized and controlled [62].

The enforcement of mask wearing (and appropriate company branding) through selfies is made possible through the application of machine learning technology (specifically innovations in computer vision). If each individual selfie had to be checked by another person, its adoption across the platforms would have been highly unlikely. However, automated and real-time review of submitted photos permits the platform apps to enforce their mask-mandate more completely.

By appropriating the available scientific knowledge of the symptoms and transmission of CoVID-19, the two platforms developed digital fixes to codify and standardize the meaning and metrics of care by operationalizing safety in very specific ways. It used pop-up messages sent to individual workers and attempted to manage the public safety compliance of individual delivery workers through selfies. The digital fixes of the two platforms' care regime reduced the problem of collective health to single bodies. These care practices transformed into complex new mechanisms of control over already precarious food delivery workers.

5 DISCUSSION & CONCLUSION

In this paper, we analyzed the responses to CoVID-19 by India's predominant food delivery platforms, Zomato and Swiggy. We focused on changes to the app intended to mitigate customers' fears about the risk and harms of contracting CoVID-19. We highlighted the overreliance on visualizing tracking data that served as a proxy for transparent operations, and in turn, trust and safety. By centering workers' experiences and analyzing platforms' many public health-oriented practices, our analysis deconstructs this materiality of visibility and uncovers significant asymmetries in the practice of care between workers and customers.

If care is indeed a practice that is "aimed at maintaining, continuing, or repairing the world" [60, p.103], what are the ethics of care? How is it done or directed to be done and for whom? What does care hide or make visible? Asking these questions allows us to politicize the seemingly innocent measures adopted by these platforms to mitigate the risks and harms of CoVID-19. Instead of understanding care as a virtuous moral disposition, our analysis has followed the calls of feminist STS scholars to "unsettle" care and to attend to its non-innocent politics [40]. Attending to the messy politics of the performance of care demonstrated by Zomato and Swiggy, we are able to render visible the inherent classist and casteist violence that normalize constantly surveilling some bodies (and not others).

We show that rather than being genuine demonstrations of care that follow public health mandates to keep all involved parties safe from the threat of a highly communicable disease, platforms primarily focused their efforts on increasing surveillance of delivery workers and making this tracking visible on the app to increase a sense of safety and trust among customers. This performance of care primarily aims to generate "good" feelings of trust and safety among their customer base to keep the business afloat. We demonstrate how this performance of care focuses excessively on workers' health through increased surveillance and monitoring of their laboring bodies. For this, the platforms appropriate existing scientific knowledge about CoVID-19 and quantify and standardize workers' health into easily trackable and visualizable indicators to

be efficiently and quickly incorporated into the existing platform. While the customers are reassured of their safety, the food delivery workers remain excluded from receiving similar consideration for their health and well-being.

Additionally, the invocation of care justifies what Poster refers to as multi-surveillance, where digital systems shift *who* is capable of doing observation on *whom* [44]. Unlike traditional forms of surveillance, consumer-driven surveillance of workers operate at a very large scale (e.g., the number of consumers who are able to monitor workers) and can focus on minutiae (e.g., how someone passes along a bag of food or whether they smiled enough). Companies are able to frame this increased and expansive monitoring as an objective way of improving efficiency or customer experience. Workers can face material consequences, ranging from punitive fees to expulsion from the app, for deviating from not only company policies, but also for not strictly aligning with casteist, racist, and sexist norms [8, 64]. Driven by metrics like number of deliveries completed or ratings received for tasks, this constant "control by quantification" can have distinct and material impacts on the worker, such as heightened psychological and physical anxiety [20].

Through their seemingly innocent practices of care that rely on excessive monitoring of workers, the two food delivery platforms reify discriminatory norms that already circulate in India's existing social relations. The platforms present these changes as evidence of their care, trustworthiness, and safety towards customers, yet food delivery workers continue to remain excluded from the platforms' performance of care. The extraordinary circumstances of the pandemic have normalized this inequality in the name of larger public health. In this age of AI and ML enabled care, the marginalized continue to remain excluded from the "public".

Ultimately, we reveal how the celebration of "good" feelings like safety and trust, when accessible differently across social strata, is not only a problematic asymmetrical distribution of actual care, but also the dangerous reanimation of structural inequality [1, 2]. Feelings of care and safety have the potential to make underlying discriminatory practice appear ambiguous and fuzzy - if they appear as problematic at all.

Through this critical unpacking of the performance of care by food delivery platforms in India, we aim to bring attention to the importance of critically interrogating the promises of technological systems. While the social computing and HCI community is sharply critiquing colonial injustice and masculinist narratives in the design and use of tech systems, they continue to gain new currency through the many promises of happiness, care, trust, and safety [37]. However, by asking critical questions about the who (who does the care work?), how (how is it directed to be done?), and whom (for whom is it done) of technological platforms' contemporary practices of care, we can interrogate what is revealed and what remains less noticeable by these practices [40]. We advocate for a critical understanding of what is assumed and what is ignored and the resultant human costs that go into the characterization of fairness, accountability, and transparency in social computing and HCI.

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7 APPENDIX

The table below provides a detailed breakdown of all the 13 interviewees.

<i>Participant</i>	<i>Food Delivery Platform</i>	<i>Work Experience</i>	<i>Location</i>
P1	Zomato and Swiggy	2 years (full time)	Kolkata, West Bengal
P2	Zomato	1.5 years (full time)	Bhopal, Madhya Pradesh
P3	Zomato	2 years (full time)	Bhopal, Madhya Pradesh
P4	Zomato	2.5 years (full time)	Bhopal, Madhya Pradesh
P5	Zomato	2 months	Jind, Haryana
P6	Zomato and Swiggy	1.5 years (full time)	Bhopal, Madhya Pradesh
P7	Zomato	3 years (full time)	Kolkata, West Bengal
P8	Zomato	2 years (full time)	Bhopal, Madhya Pradesh
P9	Zomato	2 years (full time)	Bhopal, Madhya Pradesh
P10	Zomato	1 year 10 months (full time)	Bhopal, Madhya Pradesh
P11	Zomato	1.5 years (full time)	Bhopal, Madhya Pradesh
P12	Zomato	2 years (full time)	Bhopal, Madhya Pradesh
P13	Swiggy	3-4 months (part time)	Navi Mumbai, Maharashtra

Table 1: Participant Details