Surveillance & Society

Article

# Contested Care: COVID-19 Surveillance and Health Data in the Workplace

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## Abstract

Within the ongoing disruption of the COVID-19 pandemic, technologically mediated health surveillance programs have vastly intensified and expanded to new spaces. Popular understandings of medical and health data protections came into question as a variety of institutions introduced new tools for symptom tracking, contact tracing, and the management of related data. These systems have raised complex questions about who should have access to health information, under what circumstances, and how people and institutions negotiate relationships between privacy, public safety, and care during times of crisis. In this paper, we take up the case of a large public university working to keep campus productive during COVID-19 through practices of placemaking, symptom screeners, and vaccine mandate compliance databases. Drawing on a multi-methods study including thirty-eight interviews, organizational documents, and discursive analysis, we show where and for whom administrative care infrastructures either misrecognized or torqued (Bowker and Star 1999) the care relationships that made life possible for people in the university community. We argue that an analysis of *care*—including the social relations that enable it and those that attempt to hegemonically define it—opens important questions for how people relate to data they produce about their bodies as well as to the institutions that manage them. Furthermore, we argue that privacy frameworks that rely on individual rights, essential categories of "sensitive information," or the normative legitimacy of institutional practices are not equipped to reveal how people negotiate privacy and care in times of crisis.

## Introduction

Within the ongoing disruption of the COVID-19 pandemic, technologically mediated health surveillance programs have vastly intensified and expanded to new spaces. Beyond population-level initiatives established by public health departments and other governmental bodies, a diverse array of private institutions has introduced its own surveillance tools for symptom tracking, contact tracing, and the management of related data. While the deployment of health surveillance technologies has been—and likely will continue to be—a necessary approach for the reduction of COVID-19 transmission, these tools represent significant expansions of previous health data ecologies. As Ebert, Wildhaber, and Adams-Prassl (2021) have commented, the spread of health surveillance tools within workplace settings has raised thorny questions about datafication and worker privacy—questions that are poorly addressed by "privacy by design" and similar technosolutionist fixes. We are in urgent need of a new analytic vocabulary for considering how people and institutions negotiate relationships between health surveillance, privacy, and public safety during times of crisis.

Metcalf, Kathryne, Lilly Irani, and Verónica Uribe del Águila. 2023. Contested Care: COVID-19 Surveillance and Health Data in the Workplace. *Surveillance & Society* 21 (2): 139-153.
https://ojs.library.queensu.ca/index.php/surveillance-and-society/index | ISSN: 1477-7487

Here, we offer *care* as an analytic vocabulary that opens up critical questions for how people relate to their bodies and to one another—questions obscured by public health surveillance debates that pose privacy as a trade-off for safety. Taking the example of a university COVID-19 surveillance program, this essay examines how individuals and groups have negotiated the flow of their health data through various institutional and interpersonal settings. We draw from feminist surveillance studies as well as feminist science and technology studies to understand how labeling, classification, and reporting practices shape the way people—especially those from marginalized groups—become visible and invisible to one another and to the institutions in which they live and work.

Moving from critiques of technology design to an activity-centric approach in which privacy functions as a collective data practice (Dourish and Anderson 2006), this case study troubles accounts of privacy in which it is formulated as a fundamental and individual right, as well as theorizations that rest on stable and legitimate institutional norms governing information stewardship (see Nissenbaum 2010). Instead, we follow French and Monahan's (2020: 1) prescription for analyzing COVID-19 surveillance, tracking shifts in data practices in order to examine how terms like "privacy" are made to "contain and configure bodily vulnerability, stigmatization and marginalization, structural inequalities and violence, and disease construction and management." In doing so, we show how "sensitive" data, discomfort, and "privacy" concerns are relationally co-produced as people work through data infrastructures to orchestrate care, working within and against various forms of institutional friction (Bowker and Star 1999). Drawing on a year of qualitative research, this study details how labor relations, sociospatial politics, and the fear of data exploitation often named "surveillance capitalism" (Zuboff 2019; Doctorow 2021) structure how people understand what data are "sensitive," what can be shared, and with whom.

We propose care as an interactional and embodied mechanism for the management of labor, health, risk, and sociality. Care is a mode of analysis that highlights the importance of social reproduction in the organization of social life (e.g., Nakamura 2015; Gilmore 2007). Care scholarship attuned us to the variety of ways in which concerns for social reproduction—survival, not getting sick, making it to work another day—manifested for our informants as new informational systems were constructed around them. Care scholarship also directed our attention to the way big data practices of health surveillance promise care, and how those concerned with technology ethics, design justice, and liberatory projects ought to orient toward those processes (Taylor 2020; Müller and Kenney 2014; Puig de la Bellacasa 2011). Finally, we recognize that care is often capable of reproducing violence, and an attention to care's complexity demands that we resist attempts to understand these cruel tendencies as something "other than" or outside of care (Abdurahman 2021; Murphy 2015; Razack 2013). This account tracks care from the standpoint of marginalized campus informants, identifying tensions between their practices of care and those enforced and assumed by institutional surveillance.

We also note that "care" is an unsteady term in surveillance studies. David Lyon (2018: 550–551) has argued that surveillance constitutes a spectrum from care to control, and names surveillance for the purposes of health care as a common example of the former. While subsequent critiques (see particularly Harding 2018; Monahan 2021) have drawn out how this dichotomy is rooted in religious discourse and risks the naturalization of surveillant systems, the remaining role of "care" has remained largely unelaborated. Here, we do not present (health) care and control as binarily opposed. As substantial previous scholarship has shown, surveillant systems—including those oriented toward health care and medical management—historically reproduce and transform marginalization as a core function (Campbell 2002; Magnet and Rodgers 2012; van der Meulen and Heynan 2016). Epidemiological fantasies of "pathological omniscience" (Engelman 2022) in particular threaten to normalize the mass-scale collection of health data in new settings under the banner of public health (see also French 2014). Even costly health data collection efforts that fail to yield public health benefits may be continued because they can be used for speculative biotech development—exhausting public and private capital that could instead have been repurposed to provide resources to directly improve health outcomes (Valdez 2021). However, care has also functioned as a resource through which communities can work to mitigate the violence of surveillance, drawing together networks of support and contesting dominant moral geographies (Walsh 2010; Abu-Laban 2015).

This essay offers an empirical account of care as a relational practice that can include control and knowledge production, and details how care systems and infrastructures enable and constrain both. We consider the ambivalence of care throughout this essay, following which social relations are strengthened—and which are threatened—by a COVID-19 surveillance program. In our emphasis on care as a relational practice, we join other scholars who reject the notion of the informational inner sanctum on which rhetorics of individual privacy and related concepts often rely (see Nissenbaum 2010 for a critique of privacy's "individual" subject; see Wilson 2016 on the relationship between care's intimacies and informational infrastructure). Instead, we look to the messy, interdependent, and—here—economically structured data practices that make up caring as a form of practical ethics (Vora 2015; Mol 2008; Popke 2006; Kittay and Feder 2002). As Liu and Graham (2020: 1) have similarly detailed, technosocial regimes of COVID surveillance are not simply governed by the mental models or philosophical inclinations of autonomous individuals, but are made through "ongoing, dynamic, and relational" use in complex cultural and affective settings (see also Taylor 2020). As campus relationships were repurposed into the infrastructure of a campus COVID mitigation program, we found that our informants often sought to resist or to realign data flows with their own imaginations of community, care, and responsibility. This paper contrasts care from the standpoints of campus workers with care promised by the institution, showing the contradictions people navigated as they entered into campus screening, testing, and safety regimes.

## Case Study and Methods

Universities, like other educational institutions in the US, have frequently served as lightning rods in debates about workplace safety, disease surveillance, and data-driven COVID-19 mitigation programs. Amidst these heated arguments, the University of California, San Diego (UCSD) was one of the first US universities to announce a return to in-person instruction following the acute lockdowns of Spring 2020. On May 5th, 2020, near-simultaneous announcements appeared on the UCSD Health website (Buschman and LaFee 2020) and in a local newspaper (Robbins 2020) describing the Return to Learn (RTL) program. Drawing on the in-house expertise of epidemiological modelers, infectious disease specialists, and other public health researchers, RTL promised science-driven interventions aimed at reducing COVID-19 transmission on campus through the deployment of the university's "unique resources." As the *San Diego Union Tribune* described, "UCSD will become the first campus in the UC system and one of the first in the U.S. to broadly test students for the coronavirus—an undertaking it is well-suited to do. It operates UCSD Health, which includes two major hospitals and many clinics, all which are tied to one of the largest medical research programs in the U.S." (Robbins 2020). As this quote suggests, RTL—and other university health surveillance apparatuses like it—have frequently relied on technoscientific expertise as a proxy for the collaborative production of safe educational environments and the skillful management of workplace risk through health surveillance. However, the gap between expert "medical research" and the daily need for COVID-19 prevention as "healthcare" has loomed over this program, echoing a larger series of disjunctures between workers and employers, safety and productivity, and contradictory understandings of the "public" of public health.

Our analysis of this program employs institutional ethnography: a method that attends to people's actions and standpoints in relation to "ruling relations," drawing out tensions and contradictions useful for liberatory efforts (Smith 1987; Rankin 2017). Our approach also takes inspiration from Walby and Anaïs' (2015) elaboration of institutional ethnography for feminist surveillance studies, which directs our attention to how surveillance systems coordinate work practices in institutional settings. As they describe, rules, reports, documents, and managerial structures are the tools by which "surveillance translates the rich experiences of everyday life to a series of words, numbers, and classifications" that, in turn, constrain how everyday life can be lived (Walby and Anaïs 2015: 214).

We interviewed thirty-eight informants at UCSD between June 2020 and June 2021, ranging from first-year students to university faculty and staff across a variety of positions. We asked them to describe their experiences navigating RTL policies as well as their observations about the effects of its health surveillance technologies on their relationships in the workplace and (for residential students) in home and academic settings. These interviews were structured around discussions of—and occasionally experiments with—the university's health data tools, and often focused on people's own experiences with and interpretations of screening reports, test results, and other documents and data, revealing the tensions and contradictions that emerged between local practice and organizationally imposed forms. In practice, this opened conversations that revealed how our informants imagined connections between multiple tools and functions within RTL, and which elements of their practices were made visible and invisible through its surveillance of their health, location, and relations. Beyond interviews, we collected archival materials including news reports, official university statements, photographs of public space signage, and RTL program documents. We also kept autoethnographic fieldnotes (Adams, Ellis, and Jones 2017) on our own experiences as university workers. This research received approval from UCSD's Institutional Review Board, and all interview participants are described pseudonymously to protect their privacy.

Thinking also with Susan Leigh Star (1990), this project has sought to identify how what appear to be sensical, commonplace, and uncontroversial technosocial standards do not—and often cannot—account for the unanticipated experiences of those on the margins. Thus, our body of interviews overrepresents non-managerial workers, women, queer people, non-white people, and people who do not hold US passports. In speaking with them, we have worked to identify points of friction to better understand how power proliferates through quotidian infrastructures in ways that are both highly local and reflect broader patterns of unjust or marginalizing norms and practices. Such a sensibility drove our study recruitment: we asked participants to refer friends and colleagues who had described difficulties or anxieties negotiating RTL tools, and queried union and other organizational leaders who were likely to recognize areas of shared concern within their constituencies. By tracing these threads of discontent through personal and professional networks across campus, we sought to amplify voices marginal to UCSD's dominant design and epidemiological imaginations. We also note that our attempts to sample for diverse structural positions were not entirely successful despite outreach in Spanish and English through multiple campus organizations. We were unable to recruit workers in maintenance and food service or contractors who work within—but do not work "for"—the university.

The analysis that follows draws out a selection of themes that have emerged from our research, cutting across scales from everyday experiences to the political economic structures they occur within. We track how UCSD proposed to care for its students and employees; what care our informants desired from the university; and how they sought to care for each other through and against novel regimes of health surveillance. While we acknowledge that universities are an idiosyncratic type of workplace and that our sampling strategy purposefully does not represent "popular opinion," we argue that that the trends we observe here are likely to suggest similar mechanisms of care and harm in other forms of workplace health surveillance as they attempt to categorize and constrain a variety of bodies, identities, and experiences.

## Putting Care in Its Place: Building "The Bubble"

RTL relied on a set of distinctions as to who was enrolled—the "university community" (students, faculty, and staff)—and where particular rules applied ("campus"). These categories came to be known as "the bubble" in many official and unofficial university communications, echoing other attempts to "bubble" (seemingly) closed communities at the height of the pandemic (e.g., Los Angeles movie sets [Levin 2020] and the NBA bubble [Haislop 2020]). "Bubbling" is a sociospatial construction that figures the bubble's inhabitants as safe and secure, juxtaposed against a diseased and risky outside environment. At UCSD, this discourse often centered on the material care provided by campus—including free testing, in-house contact tracing, symptom screening, and other forms of disease surveillance alongside the availability of free masks and isolation housing—that was not available to others in the larger community or to UCSD affiliates residing outside of San Diego. In this section, we draw out the kinds of relationships that the perceived safety of the bubble relies on—as well as those it disrupts—in order to examine how the rhetorical construction of a health surveillance program necessitates particular imaginations of community and care. We find that the politics of the UCSD bubble functioned to reproduce longer histories of community formation and exclusion, through which the apparent beneficence of a public health intervention served to extend and naturalize preexisting social arrangements.

Importantly, "bubbles" rely on the twinned invocations of safety and risk as a mode of rhetorical justification for continued sociospatial segregation. The spatiality of the campus bubble has been a critical component of university communications from the beginning, locating COVID-19 risk in spaces rather than individual bodies: as the Chancellor was quoted in an early press release, "Return to Learn will leverage the ingenuity and expertise of our clinicians, molecular biologists, epidemiologists, bioinformaticians, and others to work toward a tailored map of where the virus is, and where it isn't" (Khosla 2020). This "map" has since been repeatedly deployed to demarcate campus as a safe space relatively free from the risk of infection present in the wider community. For example, during a spike in test positivity among residential students in January 2021, a UCSD administrator commented in a public presentation that "when we talk to the [infected] students, it's clear that these on-campus infections are actually off-campus infections... when we talk to them, it's clear that they're going home, socializing off campus, and bringing COVID back to campus... but campus is a really safe place, that's what these data demonstrate" (Martin 2020). While we do not dispute the facticity of these transmission events, her insistence in locating the spread of COVID-19 "off-campus"—even within the context of ill, on-campus residential students—is illustrative of broader constructions of safety and risk within the spatialized apparatus of RTL.

Many of the undergraduate students we spoke with echoed similar sentiments, often through an appreciation for how "safe" campus felt in comparison to other spaces they entered. However, this sense of safety was frequently linked to descriptions of off-campus spaces—and, critically, the people who inhabit them—as dangerous, creating fear and anxiety when they felt the bubble was breached. As one student described, he was frequently concerned when he saw people who "obviously aren't students here, or staff here" in the student union, alluding to the presence of particular unhoused community members who routinely spend time in and around the publicly funded university campus. While he was explicitly fearful about being in the presence of individuals who weren't routinely tested for COVID-19—as students and faculty were at that time—it's notable that he felt it was "obvious" who did and did not belong on campus. This student and others we spoke with created categories of "kinds of people" they visually identified and read as risky, thus meriting their continued exclusion from the shared space of a public university. The university reinforced these divisions through decisions to provide testing and masks for registered students and staff, but not members of the public using its libraries and other facilities. These tensions reproduce preexisting "town-gown" divisions, particularly within the perpetually inflamed conflict between wealthy and overwhelmingly white La Jolla and the more racially and economically diverse neighborhoods to the south (see Davis, Miller, and Mayhew 2003 on the cultural geography of San Diego).

Similar concerns became attached to campus workers who fell outside the bubble in other ways. As one student considered the presence of construction workers on campus, she commented that it made her "uneasy" because there were construction workers "everywhere—yeah, so that's another level of discomfort." Construction workers were not subject to routine testing or screening surveys administered by the university because they are categorized as contractors rather than employees, despite working in campus spaces (RTL administrator, personal correspondence, December 21, 2020). Similar anxiety about construction workers—a previously unremarkable presence on the rapidly growing campus—was a common thread in several interviews, as the boundaries of RTL surveillance accentuated a previously submerged hierarchy of employment status.

This unease occasionally extended even to employees who were subject to the full spectrum of UCSD's COVID-19 surveillance tools but who appeared "out of place" in other ways. For example, undergraduate student Vanessa described her discomfort and frustration with finding a janitorial worker in her campus apartment—what would have been a routine occurrence before COVID-19—because "he was just *there*." His presence was "strange" and "weird" to her, and clearly represented a source of moderate distress. While this alone is perhaps not notable, at the time of our interview Vanessa was employed as a "Triton Health Ambassador," a category of student worker whose job included confronting unmasked individuals and separating groups without appropriate social distance on campus. Her concern at being in an enclosed space with a (masked) janitorial employee stood in stark contrast to her own relative comfort working in close proximity to unmasked students and faculty. Such comments—and others like them, frequently focused on individuals in janitorial and food service positions—rely on an implicit distinction between a "campus community" composed of students and faculty and those who perform the maintenance labor that makes campus life possible. While these divisions are not always explicitly posed by the RTL bubble and its provisions of testing and screening, their invocation of "safe" and "risky" individuals as figured through ideas of who and what campus is "for" relied on distinctions between those who lived on campus and those who had to travel to it for work or other reasons.

Some interviewees were quick to point out these tensions, including one faculty member who described the bubble as predicated on "an infantile idea of community" that centered undergraduates at the exclusion of "all the people doing maintenance, the janitors, again, that are among the most vulnerable population with less insurance coverage," linking the inequities of the bubble to the larger political economy of the university. However, because these types of relations have been normalized through years of uneven allocation of resources and expectations about campus roles, many of our respondents tended to describe the bubble as a source of safety and comfort—until it disrupted other, more desired relations.

Several campus employees highlighted how intimate relationships fell outside the bubble, including tenured faculty member Alex. Alex described an attempt to secure permission from her department for her wife to join her on campus for a day in order to move a piece of unwieldy office furniture. Her wife was not a campus employee, and so was not registered in the RTL symptom screening system (described in more detail in the next section) that was required to enter campus facilities. While Alex offered campus administration several workarounds, including presenting a negative COVID-19 test, her wife was ultimately disallowed from accompanying her: "Our [department administrator] wrote back, 'I'm really sorry, you're not the first person who's asked. Unfortunately, the campus answer is no.' [...] I don't remember if she said it specifically, or if I took from it that it was simply not—simply that it was just too complicated since they didn't have a way to screen that person, they didn't have them in their system." Alex described this episode as particularly jarring because the only remedy her department was able to offer was coordinating for a student worker to assist her, putting her in close physical proximity with an individual outside of her household at a time when that was otherwise forbidden by university policy. While Alex's initial reaction was frustration about what seemed to be an oxymoronic rule, she also reflected on the strangeness of barring her family from campus more generally: as she commented, "it's strange there's sort of no way to acknowledge that [my wife and child] have a role on campus. It's not a formal role, but they're just part of it. It's a structure that exists in their lives, too." In this and similar complaints, the roles of family as care providers run against the assumptions made by campus policies that apportion care by employment or enrollment and, in turn, reproduce the boundaries of the bubble.

In this section, we showed how the provision of health surveillance tools like mandatory COVID-19 testing was experienced as care by many of our informants, the majority of whom were grateful to the university for its production of "safe," bubbled space. However, this care came at a cost: safe/risky dichotomies and heightened anxiety about who did (and did not) belong on campus reproduced preexisting forms of race and class inequality within the cultural geography of San Diego. They also exerted pressure on the care relationships unimagined by university administrators, but on which staff and students depend. As we explore in the next section, access to health information systems was also a significant locus of tension as system designs assumed health information flows that were at odds with how our informants wanted their information shared and stored.

## Imposing (on) Care: Reassembling Workplace Relations through Symptom Screening Surveys

While the previous section focused on how particular kinds of care and community formation were shaped by the sociospatial configurations of the RTL "bubble," here we examine more closely the information practices that represent the micropolitical and interactional mechanisms through which care surveillance technologies torqued relationships. In the process, we turn to look not simply at the kinds of relations disrupted by RTL but also at the new and altered connections made through it. We focus on the deployment of UCSD's symptom screener, a three-question survey that asks users about current symptoms, recent COVID-19 exposures, and work location, and shares the results with supervisors. Similar screening tools have become commonplace over the last three years across a variety of healthcare, educational, and workplace settings within ongoing COVID-19 surveillance programs. While such surveys appear to be a relatively innocuous and privacy-preserving approach to the management of health data, we find that they institute sets of information relationships that frequently come into conflict with people's own existing or emergent relational strategies and the information flows their care practices rely on.

Throughout most of the pandemic, UCSD's screening tool has been a daily event for many students and staff as a mandatory precondition for entering university facilities. Upon completion of the brief form, the user is presented with a timestamped graphic of either a green thumbs up, marking them as safe for campus activities for the current day, a red thumbs down, indicating that they must quarantine and/or undergo COVID-19 testing before returning to campus, or a yellow thumb, which initiates a follow-up phone call from the UCSD Center for Occupational and Environmental Medicine. For UCSD employees (including student employees), the thumb graphic is also automatically sent to their supervisor/manager. While this prompted frequent complaints from our informants as an apparent violation of HIPAA's (the Health Insurance Portability and Accountability Act) privacy rule, it is important to note that the health data self-generated through this and similar surveys does *not* constitute protected medical information because it is not mediated by a covered entity (typically a clinical institution or medical insurance provider). Like information from a FitBit, this type of health data lacks clear protections and is, as such, vulnerable to a variety of unanticipated uses. Rather than dismissing appeals to HIPAA, we argue that for some they indicate an attempt by our informants to voice and legitimize a source of discomfort with the role of the university's health surveillance in their lives.

HIPAA aside, most of our informants were not concerned about the information recorded by the screening tool: while many admitted a sense of minor imposition while completing the survey, they were frequently quick to describe its questions as "reasonable under the circumstances." However, while the specific data collected were not a significant concern, several people expressed confusion, frustration, or anxiety about how this information was shared with their supervisors. Across a variety of discussions with workers occupying positions from librarian's assistant to tenured faculty, our informants described how the screening tool's notifications had uncomfortably shifted the carefully choreographed social and professional communication practices that otherwise structured their workplace relationships—particularly with managers.

For example, Meredith—a teaching assistant (TA) for a large class with multiple instructors—described feeling distressed that the screening tool only provided information to her advisor, the instructor of record for the course. Because she also came into contact with other members of the instructional team and anticipated meeting with students as courses returned to in-person modalities, she felt that her "green thumb" should be shared broadly as a sign that she was currently safe to interact with, asking: "But what about all the other people? Like, I guess, the rest of the instruction team plus the students that I come into contact with? So why is my advisor the main point of contact once I'm like, you know, once I'm reporting some sort of symptom? Why is that person the main point, and not all the other people? I think that's really strange to me." As Meredith had earlier discussed, this confusion figured on two axes: first, she felt that if she were experiencing symptoms, she "would have told [her] supervisor anyway"—the fact that this information was technologically mediated through the symptom screener did not appear to her to add useful information or introduce new imperatives for careful communication about her health. More important, however, was the fact that the information flow patterned through the symptom screener mirrored the hierarchical flow of communication assumed by the university's organization of labor, in which decisions about the allocation of Meredith's labor (here including work in physical proximity to others) are assumed to be made by her supervisor. Sharing information only hierarchically through the mediation of the screening survey represented a troubling information practice not because it was insufficiently "private," but in fact the opposite—Meredith preferred to share her health status more broadly and was frustrated by the imposition of a system that, as she understood it, was designed to protect community health but instead functioned only as a tool of managerial power.

In contrast, Jean, a teacher with a UCSD-affiliated primary school, was particularly apprehensive about how information collected by the screening survey might shape her supervisor's opinion of her, particularly regarding her health and fitness to work more generally. As a frequent migraine sufferer, she reflected on how:

> I don't know how to answer the question [about symptoms] because frankly, it's a migraine, it's not COVID. But guess what? "I have a headache" comes up [on the screener]... there's something about, like, you know, your supervisor is being notified—it's just sort of like this watchdog feeling of like, well, I guess my boss got an email today saying I have a headache. [...] So if I'm frequently one of the people that has the "you shouldn't go to campus" thing, what's that going to mean when we do in fact report back?. [...] I'm like, is it gonna be looked badly upon if they're constantly thinking I have a headache? Again, you know, it's just, how is that going to be interpreted? How is that going to influence people's impressions of me? You know, all of that. [...] When it's going to your supervisor, it does feel very personal, especially when the person is going to be, like, responsible to do your performance evaluations.

Because her school had undergone several top-level administrative changes during COVID-19, Jean did not feel she had yet developed a strong relationship with her new supervisor, nor a good sense of how they would react to particular situations. This underscored her concern about being the "kind of person" who had frequent changes in health that may need to be reported, and how that perception would shape her professional reputation. Her concern is suggestive of how patterns in health data can be used to impute medical conditions beyond those they specifically describe, linking the screening survey to larger issues regarding health and workplace disability discrimination. However, Jean also repeated throughout our discussion that she was glad that the survey was in place, and sincerely hoped it would stay—in some form—through her upcoming return to in-person instruction. These conflicting desires and anxieties raised a variety of further questions about how the information was being "looked at"—metonymically linking how the data are "seen" to how she is "seen" as an employee.

Jean's and Meredith's concerns converge on the question of whether the symptom screener data are used to take care of the university and its liabilities or to care for the people within it. Jean's account details how relationships are transformed or imposed in part through this technology. However, like Meredith, Jean's primary anxieties were not about the particular content conveyed through the tool: instead, she described concern about who would look at the data, when, and why. When privacy theories attempt to fix certain information as inherently sensitive and belonging to an individual, they misdirect attention to data as a kind of individual property rather than just one medium of enacting social relations, including power relations. Confusion, frustration, and anxiety about how survey data were "being looked at" outside of situations of acute COVID-19 risk featured across a variety of discussions, suggesting that the complexities of health data interpretation within interpersonal relationships and the entangled choreography of cooperative work are a needed supplement to accounts of data as an individual property right, with special protections for universalized categories of "sensitive" data.

## Resisting Relations: The EPIC Medical Record Backlash

While symptom screeners and bubbles troubled relationships between individuals, UCSD's information infrastructure projects also made possible new relations between people and *institutions*—relations that were not necessarily wanted. People on campus variously and simultaneously relate to UCSD as an employer, a visa sponsor, a landlord, an educational entity, and as a lab where they conduct research. Each of these institutional relationships implies certain social norms and regulatory restrictions, as well as different norms and obligations of information sharing. During the pandemic, however, the university repeatedly violated expectations held by many. In response, some people on campus wondered if they had become *experimental subjects* rather than agential university researchers as a result of how their health data flowed through the R&D partnerships that led to the development of a contact tracing mobile phone application, as well as the transition to an electronic health records (EHR) system to monitor compliance with UCSD's vaccine mandate.

The tension between institutional roles heightened as campus leadership announced that RTL's experimental interventions into campus work and life would be published as research, and would be repurposed as the basis for "research-based" health surveillance programs in other spaces. Was UCSD collecting information to care for its community or to conduct funded research? Campus communications presented these goals as one and the same. Such mappings of local participation in scientific knowledge making to futures of a universal humanity are common ideological projects, but they are not always successful in persuading target groups (Redfield 2002).

The administration's narrative of campus as a site of biomedical innovation was backed by its record-breaking accumulation of research grants and contracts—crucial for generating "indirect costs" that fund the operations of the university. In faculty town halls and on campus websites, leadership highlighted the influx of research dollars and the campus' research achievements during the pandemic (e.g., Franklin 2021). This funding included a much-vaunted contract with the State of California to help develop what became CA Covid Notify, the state's contact tracing mobile phone app (Johnson 2020). UCSD piloted the software among the campus population early on, heavily advertising to encourage students and employees to adopt the app and holding workshops to solicit feedback on communication and interface designs. Through the deployment of these systems and related "innovation talk" by the institution, some informants began to anxiously understand campus as a site of epidemiological and infrastructural experimentation.

These anxieties found expression in private discussions, university town halls, and in our interviews. For example, an announcement from the Chancellor regarding "record-breaking" research funding sparked an exchange on one department mailing list. "I'm not feeling super excited about becoming an experimental test subject for extensive health monitoring by my employer, who will then use it to develop a quarantine surveillance plan that it will shop around to other institutions," one graduate student wrote to the list. Out of view of top-level administration, others began to circulate memes that articulated similar worries. One faculty member sent the second author an image featuring a set of latex gloved hands holding a white mouse in front of UCSD's iconic campus library (see Figure 1). A sign superimposed in the foreground announced "Danger: Unsafe Space" with a stick figure of a worker picking up a box, pain lines radiating from their body. Underneath this collage were the words "unprecedented and audacious," quoted from the Chancellor's announcement. The lower half of the image challenged the Chancellor's novelty claims with an archival photograph of a patient-filled room, recalling the precedent of earlier pandemics such as the Spanish Flu.

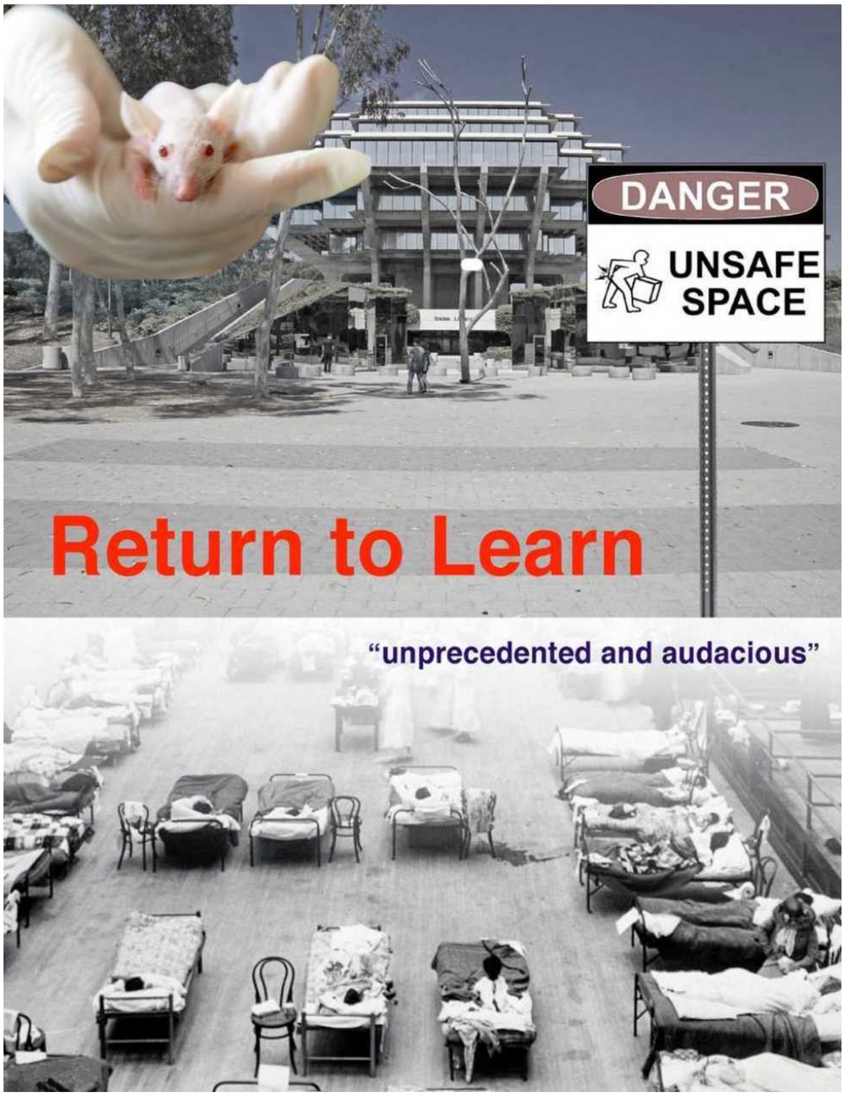

***Figure 1:*** *A meme produced and circulated by a UCSD faculty member in late 2020. The top half depicts the UCSD campus library, an "unsafe space" hazard sign, gloved hands holding a laboratory mouse, and the words "Return to Learn." The bottom half depicts a historical photo of a patient ward, with the words "unprecedented and audacious."*

These experiments reorganized flows of information that some, looking to history, feared would produce marginality and stigma. Tess, a graduate student, expressed concerns about who would have access to her health records if she were to test positive for COVID-19 early in the pandemic, when much remained unknown. She recalled the AIDS crisis as well as her experiences as a transfeminine person reliant on the university medical system in order to explain her feelings about campus data collection and how she anticipated others might react. "Really early [in the AIDS crisis]," she explained, "the kind of unprotected information about testing that happened… people were being forcibly outed for certain things because of discrimination [against AIDS patients]." This led her to a series of questions about UCSD's data analysis and data-responsive actions:

> What happens in this reporting system that UCSD is doing if you do test positive? [...] How does the structure of the university get activated? How do they control your body in that sense? What are you going to be required to do in order to remain a part of the

> UCSD community, or a student, or employee, or whatever your status is—like, I don't really know what happens, like, if somebody were to test positive, and then how that positive test is then shared or used to then control bodies.

Tess here alludes to the ways queer bodies have been subject to myriad forms of control, often through mechanisms that have relied on the mobility of medical data through health care and research settings (e.g., Epstein 1996). While clinic-administered COVID-19 test results—unlike symptom screening survey information—*are* protected medical information under HIPAA, RTL's experimental ethos made her concerned about how that data seemed likely to travel.

As the pandemic proceeded, campus leadership announced changes to the university's institutional data flows that again reconfigured the landscape of institutional responsibilities. Employees who were not previously patients of the university health system found themselves subject to UCSD's provision and supervision of vaccines and health records, all stored in the campus' EHR system operated by Epic—the same cloud database in which the campus hospital's patient data were already stored. Although students' health and employment records had always been bridged (a result of previous vaccine mandates required by most public educational institutions), many faculty were startled by this proposition: the university was their employer, not their health care provider, and those who were patients of the university hospital wondered if their employer could now or in the future access their patient records. The norms of information disclosure between employees and their employers seemed suspended when UCSD implemented a *medical records* system to monitor compliance with a *workplace* policy.

These experimental imaginaries recursively contributed to anxiety about shifts in other data practices. As campus administration began to require vaccines and testing, it also created accounts to track compliance in its hospital's Epic EHR. Those who opted out of storing their testing and vaccine status in Epic would not be allowed to access free on-campus testing. This became a flashpoint for many workers, prompting a campus faculty association town hall meeting. In a subsequent open letter summarizing town hall concerns, faculty wrote:

> A significant portion of the town hall consisted of participants comparing communications through Academic Senate webinars and with relevant administrators attempting to understand the details of how employee records would be organized, made available, and deleted in the present and future. There was a lack of clarity on whether employee data would be used for biomedical research by UCSD health researchers or by private companies contracted by (or in partnership with) UCSD and whether employees would be given the opportunity to consent to contributing their data to such projects. (UCSD Faculty Association Board 2020)

The letter also argued that by denying free testing for those opting out of Epic, campus coerced those without other healthcare options—such as contingent lecturers—into consenting into campus' health data storage.

These fears tracked existing data sharing agreements between other universities and technology companies in which patient data have been used to fuel speculative health technology research. The University of California, San Francisco had participated in data sharing with Google as part of Google's medical machine learning research and development program (Wachter and Castle 2020). University of Chicago, another medical center that partnered with Google, shared health records with patient notes attached; a patient later sued Google and the university over concerns that Google could combine patient notes with other data it has available, deanonymizing medical records in the process (Davis 2019). Given that Google and Apple had been included as development partners on the contact tracing app developed using UCSD as a test site, the uncertainty of the rapidly evolving COVID-19 crisis raised fears that conventional guarantees of privacy may not be respected, or may be breached by accident or fervor.

At a time when norms were in flux, some used an everyday understanding of the political economy of the university, informed by queer histories of disability, to make sense of what norms might emerge through these new information flows. Privacy preferences were something people actively negotiated amidst how they imagined the pandemic, care, social stigma, and medical data economies might develop into the future. While UCSD institutional discourses routinely posed the campus medical system and administration as medical caretakers and innovators using feats of experimental technoscience to protect the population as a community within a bubble, these messages did not go unchallenged. From the perspective of some campus workers, caretaking was incompatible with the fact that UCSD was repurposing their health data, bodies, and relationships as fodder to develop health technologies to be sold on to other institutions, including through the development of CA Covid Notify. These anxieties refigured UCSD as an employer and tech corporation invested in workers not only as labor for the day-to-day operations of the university but also as material for the realization of data-rich financial futures. The denial of free testing to those opting out of medical records linkage, faculty argued in their statement, amounted to a denial of workplace safety measures for those who did not wish to participate in such uncertain futures.

## Conclusion: Caring With, Through, and about Health Surveillance

Despite the contentions we've described so far, epidemiological surveillance is undoubtedly necessary within the ongoing COVID-19 crisis—so much so that people sought on-campus testing in institutionally unsanctioned ways. In January 2021, UCSD added vending machines with self-administered COVID-19 tests to several campus facilities. The majority of vending machines were placed in residential buildings (generally removed from more "public" areas of campus), and all required a university ID to use. Only two weeks after the first machines were placed, an email from RTL administrators to the student body announced that "sharing is decidedly not caring" (Student Affairs 2021a), linking to a policy that threatened disciplinary action if students' "friends and family" utilized the free vending machine tests rather than the $65 off-campus testing site. Several weeks later, a second email announced that "**sharing is NOT caring**"—now with bolded, capital letters—continuing that "while it may seem like a compassionate act to provide a friend or loved one with access to testing, using another person's ID not only constitutes actual medical fraud, it also poses a serious threat to our public health and contact tracing efforts" (Student Affairs 2021b). We note that by sharing tests, people prioritized providing interpersonal care in the form of material resources over maintaining the integrity of the campus' health research data.

With the promise of care, public health has been refigured as an intensified surveillance project, imposing new forms of health data collection, new mechanisms of regulating mobility, and through them, new social arrangements. In this essay, we have tracked the tensions between the institutional and interpersonal forms of care that have arisen with, through, and against UCSD's COVID-19 surveillance program. As we have examined, these modes of data collection have reshaped both micro and macro social configurations on campus: our interlocutors described frustrations ranging from the exclusion of family members and conflict with managers, to the harsh delineation of the campus from the surrounding community, to anxieties about seemingly expropriative biomedical research. Cutting across scales, we find that the deployment of health surveillance tools has privileged or mandated some informational flows while making others difficult, illicit, or impossible. In this way, symptom screeners, medical database linkages, and free-testing regimes "torque" how people care on campus (Bowker and Star 1999), twisting social relations into the institutional forms enforced through sociotechnical systems. Here, preexisting care relations at work on campus—collegiality, managerial intimacies, the provision of health care and the management of workplace safety by the university—were repurposed as the infrastructure of RTL. Torque well-describes many of the tensions we've explored: people chafed at being cared for in ways they hadn't previously or didn't ask for, as with informational flow to supervisors or to researchers, and were frustrated when more desired care was denied, as in community divisions and the inability to screen family members.

We suggest that an attention to the forms of care shaped and delimited by data flows is an important supplement to surveillance studies accounts of health surveillance systems: while interpersonal relationships have always been a necessary social infrastructure of institutional and urban life, they have often been ignored or devalued in analyses that privilege the role of bureaucratic institutions and their representations (Elyachar 2010; Sopranzetti 2017). Beyond specific critiques of the technologies deployed at UCSD, we suggest that an attention to the care relations that data collection tools assume and enforce is likely to open important questions about desirable and undesirable forms of care supported by surveillance assemblages. For example, while public health projects are often represented as governmental care for the population, sharing COVID-19 contact tracing data with US law enforcement simultaneously conscripts police into public health infrastructure and threatens community trust in public health institutions (Molldrem, Hussain, and McClelland 2021). This demonstrates how the innate possibility for violence contained in care (see Abdurahman 2021; Murphy 2015; Razack 2013) can be actualized through the substitution or expansion of caring actors even as data collection and use policies remain otherwise the same. Examples proliferate: in Israel, phone-based contact tracing technology has been used to accuse Palestinians of participating in violent acts based on their location; and human-rights activists have reported COVID-19 technologies and policies provide cover for controlling the movements of activists in India and China (Burke et al. 2022).

Facing the long tail of the COVID-19 pandemic and already witnessing rumblings of the next, contact tracing and other health surveillance strategies are likely to remain urgently needed tools to protect life across a variety of institutional settings. However necessary, these efforts are inevitably also reliant on pre-existing institutional dynamics, and as such are prone to warp care towards institutional definitions. We suggest that more research is needed to understand how these tools function as a form of (health) care, how they torque preexisting care relations, and how these processes can and do enact harm—particularly on those most marginalized.

## Acknowledgments

We would like to thank everyone who provided feedback on this work, including Caroline Jack, Manuel Shvartzberg Carrió, the UCSD Critical Data Studies Working Group, and audiences at ICA, CSCW, and the Future of Privacy Forum. We would also like to thank the campus staff who assisted us in understanding the organizational transformations in response to the pandemic. This work was supported by the National Science Foundation (award #2035541).

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