



# Toward Everyday Negotiation and Resistance Under Data-Driven Surveillance

🔗 Alex Jiahong Lu, University of Michigan

As sociologist David Lyon describes, we are now living in a “surveillance society” where surveillance has bled into every aspect of our daily activities, from macro-level Covid-19 contact tracing to micro-level personal health data self-tracking. More than ever, our ways of feeling, being, and living have been quantified, collected, and aggregated by technologies and across institutions, which in effect feeds into various types of social control, classification, and domination. With the prevalence of the Foucauldian trope of the panopticon, such data-driven surveillance seems so coercive that our bodies and movement become hypervisible and subject to scrutiny. Indeed, a growing amount of scholarship in HCI, CSCW, and neighboring fields has warned how varied modes of surveillance and automation perpetuate existing modes of oppression and exploitation along the lines of gender,

race, and class. In this vein, data representation is often positioned as the “truth” and evidence of our bodies and selves, and it is often impossible to opt out of surveillance society and its regime of data governance and control. This work asks, *How do individuals organize and navigate everyday encounters with data-driven surveillance? Where do the possibilities for negotiation and resistance lie?* This article is a call to action for us to denaturalize the tendency to see data-driven surveillance technologies as omnipotent and totalitarian with little to no opportunity for the surveilled to fight for control (or where the surveilled remain docile and disciplined).

Here, I discuss two cases from my past research investigating how individuals interact with data-driven surveillance technologies in different sites and contexts: the macro-level state surveillance of political

## Insights

- To better understand data-driven surveillance, it is important to look beyond its seeming omnipotence, instead attending to the power interplay embedded in the data representation of the surveilled, and the possibilities for resistance within the inevitable.
- Going forward, HCI and CSCW scholars can leverage the field’s intellectual stock to notice existing everyday negotiations and resistance practices under data-driven surveillance, and rethink coordination work and data abstraction as sites for supporting everyday resistance.

communication in China and the meso-level behavior surveillance in classrooms. While the surveillance mechanisms in these two cases are admittedly different—one concerns hegemonic state domination, the other concerns the networked form of multiple logics of control in education—I intend to show how similar forms of everyday negotiation and resistance are embodied in both. I unpack the temporospatial gap between what is performed by surveilled subjects and what is captured by the surveillants. In this gap, resistance could occur and power and resistance could coexist. And it is individuals’ ongoing negotiation in defending and probing this gap’s border that enacts what Anselm Strauss described as the “negotiated order” under surveillance. Such negotiation makes critical space for exercising conditioned agency and mobilizing everyday resistance.

**NEGOTIATING WITH THE STATE SURVEILLANCE APPARATUS**

XueXi QiangGuo (hereafter XueXi; the literal translation of *XueXi QiangGuo* is “learning for the rise of China”; *XueXi* means both “study” and “study Xi”) is a state-owned platform implemented by the Chinese government for the purpose of propagating political doctrine and tracking citizens’ political engagement. Since its implementation in 2019, XueXi has become one of the most downloaded platforms in China. Citizens who work in the public sector and those who are part of the Chinese Communist Party network are either mandated or encouraged to use the platform. (For a detailed introduction of XueXi, refer to my past paper [1].) As an official media outlet, XueXi provides a wide range of political news and content endorsed by the state. XueXi’s main feature lies in its “study point” system, which quantifies users’ activities on the platform (e.g., user check-in, official news and video consumption, content commenting and sharing, trivia challenge score, etc.). Individuals are ranked and categorized based on their study points, which is directly related to monetary incentives and professional evaluation in some organizations.

It is not surprising that XueXi has been widely considered in Western media, academic, and political discourses as a new addition to China’s ever-growing totalitarian surveillance infrastructure. I do not intend to overlook or understate the power asymmetry and the varied harms resulting from ever-growing state surveillance. However, this dystopian imaginary, in which XueXi is omnipotent in controlling political ideology and citizens are receptive and with limited agency, is far from perfect in practice. Introducing XueXi to governmental organizations and party networks was and is shaped by existing bureaucratic practices. In fact, citizens found themselves taking part in individual and collective activities to make sense

of how to fit this new piece of surveillance technology into the existing organizational and bureaucratic structure, what data is being collected on it, and what the individual and collective consequences of data collection are. Negotiation also exists over what group and organizational norms should be established under this new form of surveillance and how it should be aligned with the existing administrative practices—and more important, what the symbolic meaning of adopting the system is. This negotiation process is ongoing, and it is such coordination work that becomes critical in the making and remaking of surveillance infrastructure.

Under this surveillance mechanism, individuals’ study points on XueXi signify their political engagement and professional commitment to the surveillant. Study points therefore emerge as the data representation of individuals’ embodied behavior under state surveillance. Such data representation reduces individuals’ political and professional activities into calculable matrices that offer the “truth” and evidence of surveilled bodies’ behaviors. The data representation indicates whether the surveilled citizens consumed the required information, and if so, how much time they spent on particular pieces of content. The data representation itself does not, however, necessarily capture how the representation comes into being and the often complex process through which the data is generated and collected. This gap makes space for enacting one’s agency in responding to surveillance, despite the agency’s partiality. To this end, individuals employed various tactics in their use of XueXi. For example, some asked

their relatives to use XueXi on their behalf every day; some adjusted their phone settings so that the phone would stay on while playing official news videos in the background. Also, individuals often communicated with their social connections about tactics to get XueXi points. In these cases, while individuals appeared to comply with state-imposed rules, they did not necessarily accept the required discursive mandate. In fact, the intentions behind these everyday practices ranged from presenting an ideal image to the surveillant for recognition and endorsement, to avoiding targeted scrutiny from the surveillant, to displaying conformity to cover up the resistance to state-imposed values and norms.

Indeed, political scientist James C. Scott cautions us that individuals’ responses to surveillance is a spectrum between the binary of complete naturalization and overt public protest [2]. Here, the relationships between the state and citizens, or the surveillant and the surveilled, are much more ambivalent and implicated than top-down domination. In this case, while it is nearly impossible to wage public confrontation, passing as compliant

**While it is nearly impossible to wage public confrontation, passing as compliant subjects carves out a space for individuals to negotiate their subjectivity beyond the surveillant’s direct gaze.**

subjects carves out a space for individuals to negotiate their subjectivity beyond the surveillant's direct gaze. Attending to the (re)making and navigation of such limited spaces is critical in understanding the full landscape of surveillance beyond what lies in the public and visible, and to noticing how situated expressions of negotiation and resistance could look within the inevitable.

## NEGOTIATING WITH CLASSROOM SURVEILLANCE NETWORKS

Similar everyday negotiation and resistance can be seen in teachers' use of data-driven classroom surveillance systems. Turning from macro-level state surveillance to meso-level classroom surveillance provides a way to illustrate how everyday negotiation and resistance manifest in sociotechnical assemblages in which multiple logics of surveillance and control are entangled. ClassDojo is one of the most popular behavior-management platforms adopted by teachers in classrooms worldwide. Central to ClassDojo is its affordance of allowing teachers to categorize, quantify, and track student behaviors in the classroom through point-based positive/negative descriptors such as "working hard" or "being disrespectful" and then communicating the data to parents and school administrators. In this way, systems like ClassDojo break the enclosure of multiple surveillance spaces, including the classroom, home, and workplace. Meanwhile, they risk naturalizing behaviorist discipline and managerial discourse in the educational setting [3]. In my past work I have similarly cautioned how biases toward minoritized students could be legitimized and institutionalized through this surveillance mechanism [4].

Implementing such data-driven classroom surveillance, however, relies on coordination among different actors within the educational network. The broken enclosure of classroom space in effect leads to new visibility of teachers' practices in the classroom. The student behavior data that teachers use to track students indicates teachers' performance behind the classroom door that was otherwise invisible to parents and school administrators—whether teachers are taking good care of students and being professional in managing students. Similar to XueXi points, ClassDojo data emerges as the data representation of teachers' care work in the classroom that is often situational and relational. In a way, data representation on ClassDojo abstracts teachers' situated caring practices into quantifiable numbers that can be coded and measured through parental gazes and managerial discourse. Such abstract representation is where multiple logics of surveillance on teachers conflate and where constitutive norms of "professional" teachers operate.

While we can see teachers' everyday use of ClassDojo

as a process of consenting themselves to constraints imposed by surveilling gazes, I argue that this can also be a process for teachers to negotiate their subjectivity and autonomy in the classroom [5]. I found that teachers put effort into manipulating, and sometimes fabricating, their data representation. Teachers manipulate ClassDojo data points to ensure the data representations satisfy parents' and administrators' expectations, so that they are able to negotiate for more autonomy and strive for more room in how/what/when they care about students. For example, a middle school history teacher told me she sometimes has to intentionally collect more

behavior data on particular students than she should have, so that she is able to provide "evidence" to school administrators. In this case, the meaning of *evidence* is twofold. On the one hand, ClassDojo data constitutes the data representation of the teacher doing due diligence before escalating the case to school; on the other hand, these data points serve as the device for the teacher to prove that the escalation is necessary and thus strive for more professional resources to support her students. This seemingly paradoxical role of teachers speaks to their uneasy complicity in everyday negotiation and resistance. Yet it is perhaps such complicity in everyday resistance that makes the mobilization of resources and transformation possible "from within," what Anna Fisher described as *parasitic resistance* [6].

## THE WAY FORWARD FOR HCI AND CSCW

Indeed, the ongoing focus on how "successful" the resistance and negotiation is, what the material consequences of everyday resistance

and negotiation are, and whether the power structure and discursive practices are dismantled has engendered invaluable insights. In this article, my goal is to call for shifting the focus of inquiry to questions of what the symbolic meanings of everyday practical resistance are and how to locate the opportunities for HCI and CSCW researchers to rely on the field's intellectual stock to support everyday resistance practices and disrupt the hegemonic structure of surveillance mechanisms. Below, I unpack three possible starting points.

*Noticing everyday negotiation and resistance under surveillance.* As I have shown in both cases, everyday negotiation and resistance speak to the mundane practices that are often provisional and spontaneous. These practices are often underrecognized for not directly challenging the conditions of domination embedded in surveillance or not being motivated by political struggles. Here, thinking with Scott, what I call for is expanding our understanding of what resistance encompasses, especially those activities that occur under the guise of displaying conformity. Attending to the

---

**The student behavior data that teachers use to track students indicates teachers' performance behind the classroom door that was otherwise invisible to parents and school administrators.**

symbolic and practical meanings of these activities could allow us to notice what resistance to surveillance means and how resistance comes into being, while avoiding the trap of prioritizing the political consciousness, awareness, and intention of actors involved in resistance. This kind of noticing requires researchers and practitioners to step out of the dominant ways of knowing and seeing when analyzing and interrogating surveillance.

At the same time, it is worth noting that attending to possibilities and existing practices of everyday resistance and negotiation is not to romanticize resistance or suggest that resistance exists unconditionally. Instead, everyday resistance and negotiation are conditioned by the existing power interplay, and they are often “a politics of last resort” [6]. As Lindtner et al. correctly put it, we should embrace complicity as a strategic opportunity for resistance and intervention [7]. The question thus turns into, even though everyday resistance is incomplete and partial, how can we grasp these fleeting moments of opportunities to support the erosion and disruption of surveillance networks in moments of precariousness? How can we make use of the inevitable fissures and weaknesses of surveillance and logics of control? How can we notice and protect the fertility of resistance out of its seeming futility?

**Coordination work as a site for everyday resistance.** In the case of both XueXi and ClassDojo, we see surveillance as part of the ever-emergent sociotechnical assemblage, instead of as a device or logic that is coherent. In both XueXi and ClassDojo, new surveillance technologies are not omnipotent and perfect in their implementation. Instead, ongoing coordination work is required from each actor to negotiate how to situate this surveillance apparatus within the assemblage and how the materiality of the surveillance apparatus affects the arrangement of the assemblage. Attending to labor, embodiment, and digital materiality offers us to see the “messiness” of the surveillance assemblage and control through data. The CSCW and HCI scholarship has long been interested in the critical role of coordination work against technological deterministic tropes. If we think with Lucy Suchman, oft-coercive goals of surveillance are like standard procedures with a heuristic function, where they are “formulated in the interest of what things should come to, and not necessarily how they should arrive there” [8]. This is to say, the situated surveillance practices and circumstances depend on the coordination and articulation undertaken by each actor. And it is precisely this coordination work that allows individuals to take advantage of the contingencies of the local environment to negotiate the visibility of their embodied movements, thereby reenacting everyday resistance.

**Rethink abstraction as a site for everyday resistance.** Data-driven surveillance relies on abstracting individuals’ and groups’ embodied behaviors and ontological states, such as political engagement in the case of XueXi or the performance of students’ conduct and teachers’ care in the case of ClassDojo. Abstraction appears when, for example, quantification happens, and


therefore it is usually thought of as control practices. In this light, this article calls for denaturalizing the understanding of what exactly is under surveillance. I argue that what’s under surveillance is an abstract representation of the subject, a reduced abstraction of one’s multiple subjectivities, a series of snapshots of fragmented bodies. In a way, we can consider data representation as the boundary object between the surveillant and the surveilled. It simultaneously inscribes the imposed discursive practices and embodies the performance of the surveilled subject. This critical overview thus provides ground for a better grasp of the ambiguities around subjectivity as shaped and conditioned by external forces, and yet remains a site of possibility for agency and resistance. In line with what Roderic Crooks described as “interpretive resistance” [9], understanding how abstract representation comes into being, how meanings of data representation are reconstructed, and what power relations are reiterated or challenged can open spaces for us to locate the possibilities of everyday resistance going forward.

## ACKNOWLEDGMENTS

I would like to thank Tawanna Dillahunt, Mark Ackerman, Yuchen Chen, Sam Ankenbauer, and Shruti Sannon for their generous feedback and ongoing support of my work.

## ENDNOTES

1. Lu, A.J. and Xu, X. “Learning for the rise of China”: Exploring uses and gratifications of state-owned online platform. *Proc. of the ACM on Human-Computer Interaction* 4, CSCW1 (2020), 1–25.
2. Scott, J.C. *Domination and the Arts of Resistance*. Yale Univ. Press, 1990.
3. Manolev, J., Sullivan, A., and Slee, R. The datafication of discipline: ClassDojo, surveillance and a performative classroom culture. *Learning, Media and Technology* 44,1 (2019), 36–51.
4. Lu, A.J., Marcu, G., Ackerman, M.S., and Dillahunt, T.R. Coding bias in the use of behavior management technologies: Uncovering socio-technical consequences of data-driven surveillance in classrooms. *Proc. of Designing Interactive Systems Conference*. ACM, New York, 2021.
5. Lu, A.J., Dillahunt, T.R., Marcu, G., and Ackerman, M.S. Data work in education: Enacting and negotiating care and control in teachers’ use of data-driven classroom surveillance technology. *Proc. of the ACM on Human-Computer Interaction* 5, CSCW2 (2021), 1–26.
6. Fisher, A.W. *The Play in the System: The Art of Parasitical Resistance*. Duke Univ. Press, 2020.
7. Lindtner, S., Bardzell, S., and Bardzell, J. Design and intervention in the age of “no alternative.” *Proc. the ACM on Human-Computer Interaction* 2, CSCW (2018), 1–21.
8. Suchman, L.A. Office procedure as practical action: Models of work and system design. *ACM Trans. on Office Information Systems* 1, 4 (Oct. 1983), 320–328.
9. Crooks, R. Cat-and-mouse games: Dataveillance and performativity in urban schools. *Surveillance & Society* 17, 3/4 (2019), 484–498.

 **Alex Jiahong Lu** is a doctoral student at the University of Michigan School of Information. His research looks into individuals’ and communities’ everyday navigation and negotiation with data-driven surveillance and governance in different sites, as well as the oft-invisible labor embedded in this process.  
→ alexjlu@umich.edu