



**Selected Papers of #AoIR2024:
The 25th Annual Conference of the
Association of Internet Researchers**
Sheffield, UK / 30 Oct - 2 Nov 2024

THE TECHNOPOLITICS OF WAITING: CASE STUDIES OF AI TRAINING IN CHINA AND HOMELESS SERVICES SYSTEMS IN THE U.S.

Pelle Tracey*
University of Michigan, School of Information

Ben Zefeng Zhang*
University of Michigan, School of Information

Patricia Garcia
University of Michigan, School of Information

Oliver L. Haimson
University of Michigan, School of Information

Michaelanne Thomas
University of Michigan, School of Information

**The first two authors contributed equally to this work.*

Introduction

Many theorists of the information economy have argued that digitization has resulted in a “speeding up” of our experience of time (i.e. Gleick, 1999). In contrast, we contend that for many, especially those with less power, the techno-utopian vision characterized by datafication and Artificial Intelligence (AI) instead produces a state of prolonged waiting. In doing so, we contribute to a growing body of work (Slota et al., 2022; Miceli et al., 2020) investigating how “logistical media” (Peters, 2015) order the lives of people working on, and worked on by, emerging technologies. We draw from two “chronographies of power” (Sharma, 2014) to illustrate how, even across differences in context, data and AI produce experiences of time characterized by the persistence of waiting. In doing so, we demonstrate how the “long-standing but mistaken belief, hegemonic in Silicon Valley, that automation will deliver us more time” (Wajcman, 2019) belies the highly stratified temporal impacts of automation, datafication, and AI.

Suggested Citation (APA): Tracey, P., Zhang, B.Z., Garcia, P., Haimson, O.L., & Thomas, M. (2024, October). *The Technopolitics of Waiting: Case Studies of AI Training in China and Homeless Services Systems in the U.S.* Paper presented at AoIR2024: The 25th Annual Conference of the Association of Internet Researchers. Sheffield, UK: AoIR. Retrieved from <http://spir.aoir.org>.

This work draws from two ethnographic studies examining the production and implementation phases of data-driven technologies. Specifically, we focus on the contexts of AI training in China, and the deployment of homeless services technology in the U.S. In the rapidly evolving world of AI, AI trainers—the people who meticulously perform tasks like data annotation—are vital, yet overlooked and unacknowledged (Wu, 2023; Zhang, 2023). The promises of AI bypass these contributors, relegating them to precarious conditions, a subordinate role to machines, and, importantly, endless waiting. On the other side of the Pacific Ocean, the homeless services system is increasingly sociotechnical, deploying algorithms and dashboards to help confront a massive and growing crisis. These tools promise to increase speed and efficiency; however, in practice, they leave many waiting for resources that may never arrive. Weaving together both narratives, this paper articulates how attending to waiting provides a new lens to understand how power operates across sociotechnical contexts, while contributing novel empirical work in key sites for understanding datafication and AI.

Methods

Ethnography reveals the intricacies, significance, and politics surrounding both the development and implementation of data-driven systems. Over 9 months of in-person ethnographic fieldwork, the second author studied AI production in China, a pivotal site in global AI production. To explore AI trainers' everyday professional experiences, they relied on multi-sited ethnographic fieldwork conducted in several underdeveloped regions in China, including working as an AI trainer intern at an AI data annotation center for 9 weeks. Their work role involved hands-on participation, observing different projects and tasks, attending team meetings, and dining with colleagues. The data for this paper is grounded in 16 formal interviews with AI trainers and over 150 pages of field notes and online archives.

The second study, conducted by the first author, examined data-driven governance in the homeless services system in an East Coast U.S. city. Through 13 months of in-person ethnography and 60 formal interviews, the first author investigated the everyday functions and impacts of data-driven governance at an outreach center, while volunteering at the site preparing food, talking to guests, staff, and other volunteers, and observing data work. Following an ethnography of infrastructure approach (Star, 1999, 382), the first author examined field notes and transcripts alongside policy and technical documents, and histories of the homeless services system. Both authors anonymized all data in this paper to protect interlocutors' privacy and ensure their safety.

Waiting derived from “hybrid management” and the promise of accuracy

Study one contributes the concept of “hybrid management” as a hybrid form of labor control. Managing technical accuracy in AI training represents a case of hybrid forms of control, as workers are being controlled and managed by both traditional factory-like criteria and gamified platforms but enjoy the benefits of neither. The lack of security and benefits in traditional settings and the flexibility of the platform settings, leads to additional and excessive waiting among interlocutors.

One of the field sites also implemented a facial recognition clock-in system and mandated workers to use the system to record their attendance. The record both captures attendance and qualifies workers for the 200 yuan (\$27.80) monthly “perfect attendance award.” Such incentives are important, as Business Process Outsourcing companies often have a strong desire to retain workers to ensure consistency in task performance and data quality. Such clock-in systems ensure that workers are physically present in the data center for a prolonged period, even though their pay is often based on piecework. Workers tolerate spending idle time in order to get the monthly bonus and be assigned to new tasks. This idle, unpaid time in the center can amount to days or even weeks in the center not actively working. In addition to waiting for new tasks, workers also wait for feedback from more powerful actors such as quality inspectors, stand by for rules to be established, and wait to be assigned to new projects. To achieve a desirable technical accuracy, some clients demand workers to prove they have spent a certain amount of hours on given projects. Even if they finish early, workers still need to ensure that they log enough screen hours resulting in additional unpaid waiting.

Waiting for housing

People experiencing homelessness are constantly being made into data. The interlocutors the first author spoke with described being counted as they access services and during annual Point-in-Time counts; measured and sorted as they seek subsidized housing; and timed as they navigate the shelter system. At every turn, someone was handing them a form, or asking them questions, and many were unaware of the extent to which their lives were tracked and digitized. While such recordkeeping—the assemblage of “file selves” (Harre, 1984)—is characteristic of bureaucracy, data have proliferated and taken on new urgency in an era of automation and data dashboards (Tracey, Garcia, and Punzalan, 2023). This datafication promises to make homeless services more efficient. But for interlocutors, waiting remained a persistent feature of daily life.

People visiting the outreach center described waiting for a shelter bed; for a shuttle to take them from the shelter to an intake center; for their caseworkers to process forms; for the soup kitchen to serve the coffee; and perhaps above all else, for the black box of the housing system to work. Coffee might be ready in a few minutes, while the housing system could take months or even years. While someone curious about the wait time for coffee could get an answer easily, the length and structure of waiting processes for housing and shelter were typically a mystery. This information asymmetry charged the experience of waiting, as often interlocutors had no idea how long they would be waiting for, making it difficult for them to make plans or long-term decisions.

Conclusion

Waiting, in both contexts, carries multiple meanings. In one sense, interlocutors waited for some immediate outcome, such as a shelter bed or the assignment of a new task. But in another, they wait in the hope of something more abstract and substantial—a slightly better future. Our findings suggest that the technologies which mediated the

experience of waiting in the first, more immediate sense, also impacted how interlocutors conceptualized the future. Our work also illuminates that despite the promise of data-driven technologies, pervasive waiting serves as evidence of an enduring residue—an unequal power structure. While data and AI create immediacy for some, for others, they produce a sense of being outside of time, waiting indefinitely for a better world that may never materialize.

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