

The Carceral State: Implications for Information and Technology Research and Practice

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ABSTRACT

This systematic literature review synthesizes published sources from the ASIS&T Digital Library and the ACM Digital Library to develop a definition of the carceral state and to show how the term has been used in contemporary technology-focused research. The carceral state concept has been adopted and applied widely in multiple areas of social scientific research to refer to the formal institutions of the criminal justice system proper and other social arrangements, ideologies, practices, and technologies that punish, surveil, and contain populations. Our review reveals a recent and increasing engagement with the carceral state in the collections surveyed. Encouraged by this increasing attention, this review is an attempt to introduce the carceral state as a guiding framework for tech-society research and to consider implications for advancing responsibility, reflexivity, and care in the creation and evaluation of information systems, programs, and services.

KEYWORDS

Carceral State; Surveillance; Technology; Information

INTRODUCTION

From the advent of personal computers to the ascendance of artificial intelligence, information technologies have been widely embraced as tools that improve the human experience. Nevertheless, critical scholars and community organizers have warned about the dangers of computing technology as a mediator of public life (Stop LAPD Spying Coalition, 2020). Technological practice (including research) runs the risk of supporting what Benjamin (2019) describes as *the New Jim Code*, where logics of presumptive criminality disguised as objective, value-free technology “penetrate every facet of social life” (3). Put another way, technological advances and data collection schemes have contributed to the criminalization, incarceration, premature death, and organized abandonment of large swaths of human society (Gilmore, 2007). Thus, this poster heeds Benjamin’s (2016: 145) call for an expansive understanding of ‘the carceral’ by foregrounding formulations of the carceral state and thinking through implications for the study of information and technology research. Specifically, we introduce the carceral state as a guiding framework and consider its implications for advancing responsibility, reflexivity, and care in technological practice. We anchor our argument in a systematic literature review of the ACM Digital Library and the ASIS&T Digital Library and offer a US-based definition of the carceral state built upon a wide range of works.

WHAT IS THE CARCERAL STATE?

Famously used by Foucault, the *carceral* refers to that related to jails or prisons, including the logics and practices of prisons, jails, and detention centers (Foucault, 1995). The term “carceral state” has now been adopted by scholars to describe how institutions, people, and processes embody the logistics, practices, and technologies of prisons (Martensen, 2020). Scholars, however, are also theorizing the carceral state as more than just the physical site of prisons or captivity. As such, the carceral state in this paper refers to the formal institutions of the criminal justice system proper and other social arrangements, ideologies, practices, and technologies that invest in punitive orientations (Benjamin, 2020; Tapia, 2018). Central here is understanding that the carceral state has now developed into a dominant modality of governance that informs the logic of state structures within the US (Sojoyner, 2023). That is to say, many aspects of contemporary public life in the United States are governed by carceral logics, marked by interactions with law enforcement, or treated as criminal matters. Researchers widely accept that the carceral state proper administers punishment and incarceration and restricts the lives of those impacted by it (Simon, 2007; Martensen 2020). Historically, however, the carceral state has also been about the construction of difference and criminality. The carceral state has a long history of policing Blackness that stems from the social construction of Black criminality, including the development of technologies of surveillance (Browne, 2015; Muhammad, 2010).

METHODS AND FINDINGS

To identify engagements with the carceral state, we undertook a systematic literature review (SLR) (Dillahunt et al., 2017) approach to analyze the ACM Digital Library and the ASIS&T Digital Library. SLR allowed us to explore and search for a specific theme (the carceral state) and identify gaps to make recommendations for future research and practice (Petticrew & Roberts, 2006; Pittaway, 2011). Particularly, we asked: How is the term “carceral state” used in information technology research in the ACM and the ASIS&T Digital Library? What are implications for

tech-society research agendas posed by the spread and uptake of this term in other fields of research? We searched for "carceral state" in both digital libraries to answer these questions and found 21 sources.

In the ASIS&T Digital Library, we found one book review, one long paper, and one research paper that included the term 'carceral state'. In the ACM Digital Library, we found mention of the carceral state in research articles (10), proceedings (4), and in a column, short paper, extended abstract, and book. We downloaded these sources and carefully reviewed them for their engagement with discussions about the carceral state, rating them on a binary scale of low or high engagement based on whether the source understood and applied the concept.

Venue	Low	High	Sources
ASIS&T Digital Library (N=3)	1	2	Costello & Floegle, 2020; Mehra, 2022; Wicket, 2023
ACM Digital Library (N=18)	9	9	Alkhatab, 2021; Ashktorab et. al, 2021; Baecker & Grudin, 2024; Bonhomme, 2022; Carrera et. al, 2023; Chordia, 2022; Dickinson et. al, 2021; Green, 2020; Hogan et. al, 2024; Noble, 2021; Ovalle et. al, 2023; Pearson et. al, 2024; Rossi et. al, 2021; Schmidt et. al, 2023; Showkat et. al, 2023; Sum et. al, 2023; Tan et. al, 2022; Warren & Salehi, 2022

Table 1. Sources Reviewed and Levels of Engagement with The Carceral State

Sources with a low rating mention the carceral state at least once but do not explore its implications on information technology according to our criteria. In order to receive a 'high' rating, the source must demonstrate a deeper understanding of how technology captivates, criminalizes, or otherwise displays bias unequally. Moreover, papers that received a high have a more explicit analysis of how technology is tied to the carceral state, even when not using the term explicitly. A good example of this is found in Chordia's (2022) review of transformative justice in HCI. As Chordia (2022) suggests, policing and community safety technologies (e.g. the Amazon ring camera) and software (e.g. Nextdoor) extend the surveillance reach of the carceral state and encode Black criminality in their application. Regardless of scoring, these 21 sources allude to a growing attention to identifying the relationship between the carceral state and technology, including in computing technology, machine learning, and data-intensive applications.

IMPLICATIONS FOR INFORMATION AND TECHNOLOGY RESEARCH AND PRACTICE

First, as an emergent framework in social scientific writing in a variety of fields that concern the interaction of public life, governance, and prisons, the carceral state represents a dynamic and expanding synthesis of research in a variety of fields, including criminology, anthropology, sociology, geography, and science and technology studies. The carceral state perspective offers new analytical frames to explore important topics in information science research, such as privacy and the pursuit of public interest technologies. Notably, the carceral state perspective is simultaneously empirical and theoretical: it attends to observation and descriptions of prisons, punishment, enclosure, and surveillance in their materials dimensions, as well as to logics, cultures, discourses, meanings, and theories of criminality, extraction, control, and immobility at any scale of space, time, or geography.

Second, information science research, with its central interest in the use of information and information technologies by key stakeholders and social groups, has unique objects, theories, and methods to offer the interdisciplinary study of the carceral state. Specifically, information science research has robust methods for studying informational phenomena in qualitative and quantitative modes, including ethnography, network analysis, and infometrics. Attention to the carceral state reorients scholarly attention to how technology forms a vector of carcerality, spreading logics of presumptive criminality and containment across sociotechnical networks.

Finally, the larger research project this literature review supports concerns the use of digital technologies by community organizers based primarily in working-class communities of color. Much of the work of these organizers is concerned with demonstrating harms in their communities produced by the datafication of the carceral state in all of its instantiations. As these organizers have insisted, technology-focused researchers can meaningfully support authentic, community-rooted efforts of seeking liberation (Serrano, Turner, Regalado, & Banuelos, 2022; Crooks, 2022), of not merely documenting harm but imagining alternatives to containment, punishment, and surveillance. Attention to the carceral state encourages responsibility, reflexivity, and care rooted in understanding both how individuals interact with technology and how it (intentionally or not) becomes an auxiliary arm of the carceral state.

AUTHOR ATTRIBUTIONS

First Author: Conceptualization, Formal analysis, Project administration, Writing – original draft, Writing – review & editing; Second Author: Formal analysis, Writing – original draft, Writing – review & editing; Third Author:

Methodology, Project administration, Supervision, Writing – original draft, Writing – review & editing; Fourth Author: Conceptualization, Funding acquisition, Methodology, Supervision, Writing – review & editing.

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REFERENCES

Alkhatib, A. (2021). To live in their utopia: Why algorithmic systems create absurd outcomes. *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems*.

Ashktorab, Z., Dugan, C., Johnson, J., Pan, Q., Zhang, W., Kumaravel, S., ... & Quigley, A. (2021). *Proceedings of the 2021 CHI conference on human factors in computing systems*.

Baecker, R. M., & Grudin, J. (2024). *Digital Dreams Have Become Nightmares: What We Must Do*. ACM.

Benjamin, R. (Ed.). (2019). *Captivating technology: Race, carceral technoscience, and liberatory imagination in everyday life*. Duke University Press.

Bonhomme, E. (2022). Black Radical Design. *Interactions*, 29(1), 20–22.

Carrera, D., Ovienmhada, U., Hussein, S., & Soden, R. (2023). The Unseen Landscape of Abolitionism: Examining the role of digital maps in grassroots organizing. *Proceedings of the ACM on Human-Computer Interaction*, 7(CSCW2), 1-29.

Chordia, I. (2022). Leveraging transformative justice in organizing collective action towards Community Safety. *CHI Conference on Human Factors in Computing Systems Extended Abstracts*.

Costello, K. L., & Floegel, D. (2020). “Predictive ads are not doctors”: Mental health tracking and technology companies. *Proceedings of the Association for Information Science and Technology*, 57(1).

Crooks, R. (2022). Seeking Liberation: Surveillance, Datafication, and Race. *Surveillance & Society*, 20(4), 413–419.

Dickinson, J., Arthur, J., Shiparski, M., Bianca, A., Gonzalez, A., & Erete, S. (2021). Amplifying community-led violence prevention as a counter to structural oppression. *Proceedings of the ACM on Human-Computer Interaction*, 5(CSCW1), 1–28.

Dillahunt, T. R., Wang, X., Wheeler, E., Cheng, H. F., Hecht, B., & Zhu, H. (2017). The sharing economy in computing: A systematic literature review. *Proceedings of the ACM on Human-Computer Interaction*, 1(CSCW), 1-26.

Gilmore, R. W. (2007). *Golden gulag: Prisons, surplus, crisis, and opposition in globalizing California* (Vol. 21). Univ of California Press.

Green, B. (2020). The false promise of Risk Assessments. *Proceedings of the 2020 Conference on Fairness, Accountability, and Transparency*.

Hogan, E., Mir, D., Cencini, A., O’Hara, K., Soosai Raj, A. G., Griswold, W., & Porter, L. (2024). Re-instatement of Pell Grants for incarcerated students: Implications for CS education. *Proceedings of the 2024 on RESPECT Annual Conference*.

Martensen, K. M. (2020). Review of carceral state studies and application. *Sociology Compass*, 14(7).

Mehra, B. (2022). The Digitally Disposed—Racial Capitalism and the Informatics of Value. SebFranklin. Minneapolis: University of Minnesota Press, 2021. 280 pp. \$27.00 (paperback). (ISBN: 978-1-5179-0715-0). *Journal of the Association for Information Science and Technology*, 73(9), 1356–1361.

Noble, S. U. (2021). The logics of (Digital) distortion. *Interactions*, 28(6), 41–45.

Ovalle, A., Subramonian, A., Gautam, V., Gee, G., & Chang, K.-W. (2023). Factoring the matrix of domination: A critical review and reimagining of intersectionality in ai fairness. *Proceedings of the 2023 AAAI/ACM Conference on AI, Ethics, and Society*.

Pearson, T., Strickland, C. & Israel, M. (2024). *RESPECT 2024: Conference for Research on Equitable and Sustained Participation in Engineering, Computing, and Technology*

Petticrew, M. and Roberts, H. (2006) *Systematic Reviews in the Social Sciences*. Oxford: Blackwell.

Pittaway, Luke. (2011). Systematic Literature Reviews. In *The SAGE Dictionary of Qualitative Management Research*, Richard Thorpe and Robin Holt (Eds.). SAGE Publications Ltd, 217–218.

Rossi, F., Das, S., Davis, J., Firth-Butterfield, K., & John, A. (2023). *AIES'23: Proceedings of the 2023 AAAI/ACM Conference on AI, Ethics, and Society*.

Schmidt, A., Väänänen, K., Goyal, T., Kristensson, P. O., Peters, A., Mueller, S., ... & Wilson, M. L. (Eds.). (2023). *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems*. ACM.

Serrano, U., Turner, D. C., Regalado, G., & Banuelos, A. (2022). Towards Community Rooted Research and Praxis: Reflections on the BSS Safety and Youth Justice Project. *Social Sciences*, 11(5), 195.

Showkat, D., Smith, A. D., Lingqing, W., & To, A. (2023). “Who is the Right Homeless Client?”: Values in algorithmic homelessness service provision and Machine Learning Research. *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems*.

Simon, J. (2007). Rise of the carceral state. *Social Research: An International Quarterly*, 74(2), 471-508.

Sojourner, D. (2023). *Against the Carceral Archive: The Art of Black Liberatory Practice*. Fordham Univ Press

Stop LAPD Spying Coalition, & Free Radicals. (2020). “The Algorithmic Ecology: An Abolitionist Tool for Organizing Against Algorithms.” Retrieved May 16, 2024

Sum, C. M., Tran, A.-T., Lin, J., Kuo, R., Bennett, C. L., Harrington, C., & Fox, S. E. (2023). Translation as (re)mediation: How ethnic community-based organizations negotiate legitimacy. *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems*.

Tan, N. H., Kinnee, B., Langseth, D., Munson, S. A., & Desjardins, A. (2022). Critical-playful speculations with cameras in the home. *CHI Conference on Human Factors in Computing Systems*.

Warren, R. B., & Salehi, N. (2022). Trial by file formats: Exploring public defenders' challenges working with novel surveillance data. *Proceedings of the ACM on Human-Computer Interaction*, 6(CSCW1), 1–26.

Wickett, K. M. (2023). Critical data modeling and the basic representation model. *Journal of the Association for Information Science and Technology*, 1–11.