SURVEILLANCE WITH, BEYOND, AND AGAINST THE BIOMETRIC BODY

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Surveillance has emerged as one of the most contentious ethical, socio-political, legal, and technological issues of the twenty-first century. Its enduring relevance in media and critical theory has not only revitalised long-standing debates in new media and media studies but also spurred the formation of new academic fields such as surveillance studies (Ball et al., 2012; Monahan & Wood, 2018), as well as more experimental genres like surveillance art that reflects and refracts the logics of control — also referred to as "artveillance" (Brighenti, 2010; Monahan, 2017). Dominant governmental and corporate narratives often frame surveillance technologies through a techno-humanist lens, celebrating their potential to streamline consumer experiences in retail, optimise traffic flow and urban infrastructure, boost workplace productivity, enhance public safety, and prevent crime. Yet, this utopian framing obscures the deep asymmetries that such technologies perpetuate. As critical scholars and human rights activists have long argued, the use of these devices and systems poses significant threats not only to individuals but also to entire communities — particularly those who are constantly monitored, targeted, profiled, and criminalised based on race, gender, class, sexuality, ability, or migration and legal status (Browne, 2015; Kafer & Grinberg, 2019; Keshavarz, 2024; Saltes, 2013). These regimes of control raise urgent concerns not only about the erosion of privacy, the potential misuse of personal data, the risk of misidentification, and the curtailment of free expression under constant monitoring. They also risk contributing to a culture of fear, impose conditions of hypervisibility and undermine dignity, freedom, and the right to opacity.

The biometric turn in surveillance renders the harms of monitoring both more intimate and more far-reaching. Bodies are no longer merely observed — they are scanned, mined, indexed, and rendered as data points within a techno-political logic driven by classification and preemption. Such preemptive power — primarily exercised by Europe, Israel and the United States through practices of measurement — extends beyond the instrumental use of scanners, readers, cards, and other technologies designed to "govern mobility" (Amoore, 2006). It is also embedded in broader social and collective agreements around categorisation and belonging. Hence, these technologies — developed and deployed largely in the so-called Global North — extend borders far

beyond their physical sites of enforcement, shaping not only mobility but also its the very possibility in the so-called Global South. These dynamics are continuously enacted through peer surveillance, racial and ethnic profiling and practices of exclusion, reaching beyond border checkpoints and infiltrating everyday spaces such as airport security, railway and subway stations, city streets, tourist spots, public offices, and the workplace, while also permeating cultural spheres like film, television and music. In many cities across the Global North, public campaigns with slogans like "Anything Suspect?" — seen in airports and train stations across Belgium and France — or "See Something, Say Something" — prominent in the public transport across the United Kingdom and the United States — illustrate how surveillance mobilises ordinary individuals in everyday performances of suspicion. These routines constantly renegotiate how bodies become "inscribed with, and [demarcate] a continual crossing of multiple encoded borders — social, legal, gendered, racialized, and so on" (Amoore, 2006, p. 337). This constant renegotiation hinges on the production of instability, which, in turn, legitimises the demand for constant vigilance. As these processes operate dialogically, they reinforce and solidify binary categories — criminal/non-criminal, desired/undesired, legitimate/ illegitimate, deserving/undeserving — reducing bodies to abstract data points with no discernible origin. In doing so, they obscure the social, cultural, political, and historical factors that determine the very criteria for such categorisations. Within this framework, the idea of citizenship becomes a call to action, where "individuals are asked to be on guard but not told what to be on guard against; so everyone is free to imagine and identify the source of terror" (Butler, 2004/2016, p. 39).

These logics — and the debates they provoke — have intensified significantly with the rapid proliferation of artificial intelligence (AI), predictive analytics, and ubiquitous data collection (commonly referred to as big data), alongside the expanding scope of information consistently tracked by public and private organisations; to the point that bodies and their data have turned into the primary currency of an all-pervasive surveillance machine. Today, surveillance technologies extend far beyond CCTV (closed-circuit television) cameras and GPS (global positioning system) tracking systems. One of the most recent and alarming examples is the Israeli occupation's use of AI-driven data systems to organise and segregate Palestinian citizens into so-called "safe" and "unsafe" zones — an infrastructure designed to regulate movement and justify the carpet bombings in Gaza, widely documented since 2023 (Abraham, 2023; Nemitz, 2024). To this, we can add: drones monitoring hard-to-reach locations and patrolling nation-state borders through vertical and aerial control (Steyerl, 2011; Weizman, 2002); biometric scanners measuring bodily characteristics such as fingerprints, iris patterns, or voice imprints for identification, origin verification, and access control; facial recognition systems employing algorithms to identify individuals in security checkpoints, airports, and public venues; data mining tools and analytics extracting personal information from consumer behaviour and social media interactions; smart sensors detecting motion, sound, or

temperature often embedded in smart homes and urban surveillance networks; bodyworn cameras used by law enforcement and security personnel to record interactions with civilians; speech and dialect recognition technologies estimating probabilities of origin and citizenship status in asylum procedures; and electronic monitoring devices tracking individuals 24/7 during pre-trial or probation periods, thereby extending penal control into both domestic and public spaces (Canlı, 2023). This omnipresent "surveillant assemblage" (Haggerty & Ericson, 2000), where a decentralised network of surveillance technologies and practices collectively monitor, analyse and act upon personal data, makes each and every body hypervisible. There is no "outside" to this apparatus.

Moreover, it is equally important to recognise that an over-reliance on these systems as providers of safety and convenience risks eroding human oversight and critical thinking in decision-making processes. This ultimately allows the surveillant gaze to penetrate not only physical and digital spaces but also the very boundaries of the body. Mirroring — and simultaneously expanding — other pervasive forms of social regulation, the material and discursive impacts of surveillance technologies position the body as a socio-political — and arguably socio-technical — composite. Within this emerging paradigm of "surveillance capitalism" (Zuboff, 2019), where personal data is relentlessly commodified, bodies, behaviours and social relations are shaped in profoundly transformative ways that demand ongoing, multilayered analysis and critique. Beyond these immediate concerns, an expanding body of scholarship underscores the historical continuum connecting contemporary surveillance practices to earlier technologies of racialisation, classification, and dispossession — ranging from early colonial governance and the transatlantic slave trade to racial segregation (see e.g., Amaro, 2022; Benjamin, 2019; Browne, 2015; Vieira de Oliveira & Miyazaki, 2022). These continuities remind us that today's surveillance infrastructures are not neutral systems of observation; rather, they inherit and perpetuate long-standing regimes of power that have sought to render certain bodies visible, measurable, and governable across time.

Tracing the historicity of surveilling otherness reveals that biometry is not merely a tool for reading difference but also a mechanism for defining how such difference justifies categorical and political exclusion. Biometric technologies do not simply constitute practices of legibility and detectability; rather, they are themselves shaped by historical processes that establish how the body's legibility and detectability are defined in the first place. In other words, biometry "is constituted by the practices involved in its use" (Murray, 2007, p. 349). Crucially, these technologies do not operate in a political vacuum separate from civil society; rather, their actions and effects actively shape prevailing understandings of public and private space, as well as the mobility and stasis within and beyond those spaces. The techniques used to document and describe racialised subjects form part of a long-standing continuum of practices aimed at making the racialised body legible, visible and accountable to state power (Browne, 2015). Colonial observations, measurements, and taxonomies of otherness, for instance, were foundational to

European natural sciences in the nineteenth century (Ochoa Gautier, 2014). As early as the mid-fifteenth century, passports were introduced in Europe as a means to regulate the movement of "the poor and underclass (...), suspected of having contagious diseases, being vagabonds or engaged in illicit trading, and so on" (Keshavarz, 2019, p. 23). Records kept by enslavers reveal a lexicon of bodily descriptors used to mark otherness — such as skin color, birthmarks, "gendered nouns (...) race and place of birth (...) or sometimes referencing some specific labor that they performed [or] a body made disabled by that very labor" (Browne, 2015, p. 75). Similarly, newspaper advertisements for runaway enslaved men and women in the United States employed such descriptors to render them easily identifiable by other white subjects (Browne, 2015). Even fingerprinting — often perceived as a neutral forensic innovation — was first introduced and institutionalised by the British Empire in colonial India "in response to the problem of administering a vast empire with a small corps of civil servants outnumbered by hostile [sic] natives" (Cole, 2002, p. 63). The epistemic validation of these practices as scientific not only helped naturalise systems of exclusion by making them appear observable, measurable, and objective. Such systems could only emerge through the eyes and ears of the educated, cultivated Western observer, positioned simultaneously as arbiter of difference and guarantor of knowledge.

Taken together, these genealogies remind us that surveillance is not merely a technological infrastructure but also a historically entrenched system of knowledge production — one that shapes how difference is perceived, read, and governed. Against this backdrop, this special issue positions itself within current debates while also identifying possible directions for discursive and methodological shifts across — and beyond disciplinary boundaries. Our call for proposals was anchored in open-ended questions: how have historical and contemporary systems of surveillance, management, and control shaped the body, not only physically, but also cognitively, socially, and politically? What ethical and human rights challenges do they pose? In what ways do they reproduce or unsettle dominant power structures? How do race, gender, class, and citizenship status influence the deployment and impact of these technologies? Moreover, what creative strategies, novel articulations, and unorthodox interventions might we imagine to protect our privacy, sustain our opacity, and reclaim our data from extractive regimes? By opening up the space of this issue — and of academic publishing more broadly — to speculative and situated approaches to surveillance, we sought to foreground the material articulations of control as experienced by profiled individuals within and against state and corporate apparatuses. Just as importantly, we invited contributions that not only critique or expose surveillance systems but also propose creative, resistant, or fugitive strategies for reimagining the relationships between bodies, data, and visibility.

The articles in this issue, "Surveillance with, beyond, and against the biometric body", respond to these provocations from multiple directions — across geographies, disciplines and epistemologies — ranging from sociology and communication studies

to the visual arts. For instance, Laura Neiva's contribution "Among the (Many) Meanings of Big Data: History, Surveillance, Control, and Criminalisation" explores how contemporary algorithmic surveillance does not represent a rupture with the past but rather a reconfiguration of long-standing mechanisms of control. Examining surveillance studies through a historical lens, the article traces how socio-technical and security dynamics have shaped practices of monitoring and categorising bodies. Neiva lays the groundwork for understanding how techno-optimistic narratives warrant the expansion of surveillance infrastructures, both mass and targeted surveillance, and reinforce a security model grounded in collective suspicion. Focusing particularly on the Portuguese context, the author demonstrates how these technologies reflect a broader aspiration towards modernised policing and criminal investigation — often at the expense of critical scrutiny and democratic oversight. The article warns of the ethical and political dangers posed by automated and obscure decision-making processes and calls for public debate, regulatory oversight, and resistance to algorithmic governance as means to safeguard fundamental rights and prevent the entrenchment of structural inequalities.

As a reopening, Paulo Victor Melo's article, "Technological Surveillance and Potential Discrimination: An Analysis of Proposals for the Use of Technology in Public Security in Brazil's 15 Most Populous Cities", examines the banalisation of technovigilance in Brazil's largest urban centres. The author observes, on the one hand, a growing deployment of facial recognition technologies in public spaces by municipal governments and state bodies, and on the other, a concerning lack of transparency regarding the scope of their application and the handling of collected data. Through qualitative analysis, the article demonstrates how the uncritical use of technology's discursive power — often framed as promoting safety and combating crime — combined with the absence of a regulatory framework, contributes to the misuse of surveillance technologies. This misuse affects not only the right to privacy but also facilitates the targeting of historically marginalised and racialised groups in the country. Melo calls for a critical reassessment of the notion of "modernisation" as used by public officials in reference to surveillance technologies, and advocates for the implementation of transparency-oriented policies to govern their use.

Slightly shifting the focus from the facts to representations, and from social sciences to the arts, Jenna Altomonte's article, "'Passport, Please!': Subversive Resistance at the Checkpoint", examines how three contemporary artists — Mahmoud Obaidi, Nadia Gohar, and Khaled Jarrar — critique racial, ethnic, and religious profiling in global mobility regimes, particularly in the context of airport and border security infrastructures. Through installations, satirical passport imagery, and performative travel documents, these artists expose how state apparatuses — especially those based on biometric and AI technologies — enforce corporeal control, marginalisation, and surveillance under the guise of security. Altomonte situates these artistic interventions as both critical and resistant responses to the post-9/11 securitisation of identity, arguing

that even mundane artefacts, such as Transportation Security Administration baggage inspection slips, reflect a pervasive culture of suspicion and profiling. Her article ultimately questions what a truly "fair sky" might look like in a world increasingly governed by automated surveillance and algorithmic decision-making.

Written from a fully technological perspective and artistic methods, Moana Ava Holenstein's contribution "I Hear You: On Human Knowledge and Vocal Intelligence" explores how the growing integration of large language models into everyday life raises concerns not only about the vast quantities of data collected and processed by major tech corporations, but also about new — and yet unthought — forms of surveillance, classification, and targeting by automated systems. As this introductory note has already discussed, the close entanglement between technologies of control and their potential automation through AI is well established. However, artistic practices can offer a testing ground — or an open canvas — for rehearsing modes of addressing, questioning, critiquing, and ultimately resisting what may soon become everyday reality. The experimental article, presented in the form of an interview conducted by the author, serves both as a demonstration and a cautionary tale, probing what large language models know about us, about themselves, and about the connections they are capable of forging with us and on our behalf. In this context, existing terms such as "surveillance" or "biometry" may no longer suffice; new vocabularies must be invented.

Last but not least, Ana Carvalho's exhibition review titled "Being Undetectable (2016) — The Right to Not Exist, Momentarily", approaches digital surveillance through the lens of speculative art. Centring on Peter Hudson's installation Being Undetectable (2016), the author reflects on how moments of opacity, silence, and self-erasure can create temporary refuges from algorithmic capture. Through an interplay of film, theory, and installation, she invites readers to imagine a politics of disappearance within regimes of hyper-visible.

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REFERENCES

Abraham, Y. (2023, November 30). 'A mass assassination factory': Inside Israel's calculated bombing of Gaza. +972 Magazine Online. https://www.972mag.com/mass-assassination-factory-israel-calculated-bombing-gaza/

Amaro, R. (2022). The black technical object: On machine learning and the aspiration of black being. Sternberg Press.

- Amoore, L. (2006). Biometric borders: Governing mobilities in the war on terror. *Political Geography*, 25(3), 336–351. http://dx.doi.org/10.1016/j.polgeo.2006.02.001
- Ball, K., Haggerty, K., & Lyon, D. (Eds.). (2012). Routledge handbook of surveillance studies. Routledge.
- Benjamin, R. (2019). Race after technology: Abolitionist tools for the new Jim code. Polity.
- Brighenti, A. M. (2010). Artveillance: At the crossroad of art and surveillance. *Surveillance & Society*, 7(2), 137–148. https://doi.org/10.24908/ss.v7i2.4142
- Browne, S. (2015). Dark matters: On the surveillance of blackness. Duke University Press.
- Butler, J. (2016). *Precarious life: The powers of mourning and violence*. Verso. (Original work published in 2004)
- Canlı, E. (2023). Rethinking carceral domesticity: Electronic monitoring, punishment and home as prison. *PAD: Pages on Arts and Design Journal*, 16, 121–147.
- Cole, S. A. (2002). Suspect identities: A history of fingerprinting and criminal identification. Harvard University Press. https://doi.org/10.4159/9780674029682
- Haggerty, K. D., & Ericson, R. V. (2003). The surveillant assemblage. *British Journal of Sociology*, *51*(4), 605–622. https://doi.org/10.1080/00071310020015280
- Kafer, G., & Grinberg, D. (2019). Editorial: Queer surveillance. *Surveillance & Society*, 17(5), 592–601. https://doi.org/10.24908/ss.v17i5.13541
- Keshavarz, M. (2019). The design politics of the passport: Materiality, immobility, and dissent. Bloomsbury.
- Keshavarz, M. (2024). Smuggling as a material critique of borders. *Geopolitics*, 29(4), 1143–1165. https://doi.org/10.1080/14650045.2023.2268528
- Monahan, T. (2017). Ways of being seen: Surveillance art and the interpellation of viewing subjects. *Cultural Studies*, 32(4), 560–581. https://doi.org/10.1080/09502386.2017.1374424
- Monahan, T., & Murakami Wood, D. (Eds.). (2018). Surveillance studies: A reader. Oxford University Press.
- Murray, H. (2007). Monstrous play in negative spaces: Illegible bodies and the cultural construction of biometric technology. *The Communication Review*, 10(4), 347–365. https://doi.org/10.1080/10714420701715415
- Nemitz, N. (2024, April 9). "Es braucht dringend klare verbote und vorschriften". Netzpolitik.org Online. https://netzpolitik.org/2024/autonome-waffensysteme-es-braucht-dringend-klare-verbote-und-vorschriften/
- Ochoa Gautier, A. M. (2014). Aurality: Listening and knowledge in nineteenth-century Colombia. Duke University Press. https://doi.org/10.2307/j.ctv11smfj3
- Saltes, N. (2013). 'Abnormal' bodies on the borders of inclusion: Biopolitics and the paradox of disability surveillance. Surveillance & Society, 11(1/2), 55–73. https://doi.org/10.24908/ss.v11i1/2.4460
- Steyerl, H. (2011). In free fall: A thought experiment on vertical perspective. e-flux Journal, 24(4), 42–52.

Vieira de Oliveira, P. J. S., & Miyazaki, S. (2022). Maschinelle intelligenz?! Stimmbiometrie als hörend-bestimmende medien-techno-logie. In A. Schürmer, M. Haberer, & T. Brautschek (Eds.), *Acoustic intelligence*. (pp. 99–124). Düsseldorf University Press. https://doi.org/10.1515/9783110730791-007

Weizman, E. (2002, April 23). *Introduction to the politics of verticality*. Open Democracy. https://www.opendemocracy.net/en/article_801jsp/

Zuboff, S. (2019). The age of surveillance capitalism: The fight for a human future at the new frontier of power. PublicAffairs.

BIOGRAPHICAL NOTES

Ece Canlı is an artist and researcher whose work explores the intersections of body politics, material regimes, and the socio-spatial construction of gender, sexuality, and identity. She holds a PhD in Design from the University of Porto and is currently a researcher at the Communication and Society Research Centre (CECS) at University of Minho, where she investigates the spatial, material, and technological conditions of the criminal justice system, queer materialities, penal design, and abolition feminism. She is a board member of ATGENDER (Netherlands), a member of the Carceral Geography Working Group (United Kingdom), SOPCOM – Associação Portuguesa de Ciências da Comunicação and A Passeio platform, as well as a collaborating researcher in several European Cooperation in Science and Technology Action projects. She lectured nationally and internationally on themes including design criticism, gender, decoloniality, visual literacy, and semiotics, and published in various edited volumes and peer-reviewed journals. As an artist, she works with extended vocal techniques, multimedia, electronics and the performing body, possessing a solid body of work and extensive experience in composition, artistic direction, and sound production for staged performances, exhibitions and films, both in collaborations and as a soloist.

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