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Editorial

Challenging Technology's Domination in the Urban: Critical Perspectives and Approaches

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Re-centering the narrative: Into the multiple realities of technology's domination

When reading the title of this issue, readers of *Urban Matters* might wonder how yet another critical perspective on 'technology in the urban' could significantly impact our perception of the transformations urban civilization is going through. Such a question is not only legitimate, but also well-posed, and it deserves a proper answer. This editorial attempts to respond by illustrating the urgency of a more nuanced understanding of technology's pervasiveness in shaping the urban, not only in physical ways (that is, reconfiguring spaces) but also with respect to our habits and behaviors as citizens, customers, and users. To do so, the first step is to acknowledge technology's true nature by withdrawing the Modernist curtain that depicts technological development as a linear, progressive, and unquestionable improvement for society. In contrast to the certainties of mainstream 'techno-triumphalist' narratives, this issue offers a glance into the multiple realities of technology's domination in the urban sphere. Across these realities, technology emerges as something different from the mere tool it is assumed to be. Instead, it's a force rooted in historical, cultural, social, and political processes. It is a force shaped by contingencies, and that in turn shapes and reshapes the realities it encounters. As a force entrenched in and produced by social structures, technology doesn't respond to the idealized, progress-oriented conception fostered by Modernity. In such a view, which arose in the century preceding industrialization, technology was in the service of science to enhance humankind's control and exploitation of natural resources. By connecting the notion of "progress through reason" (Sandercock, 1998) to the proto-capitalistic, neutral view of technology as a kind of *instrumentum regni* for subjugating the natural environment, Modernity put into circulation a powerful narrative device. In the age of smartness and sustainability, our view of technoscience is still shaped by this centuries-old conceptualization. This issue challenges such a view and aims to re-center the dominant narrative on technology. It's an intellectual effort that this journal has warmly encouraged, and that is reflected in the interesting experiences and case studies collected here.

Technology and the urban: A centuries-old project of control

Far from being a neutral force, technology has always existed as a framework used by humans to interpret and control reality (Gehlen, 1980). Nowadays, more than ever, human beings deal with and rely on technology to carry out a significant number of daily operations, spanning from self-sustenance and work duties to leisure activities, encompassing an array of practical utilizations in countless realms. Digitalization, of course, has contributed to broadening access, circulation, and use of technology. Though, together with its democratizing boost, digitalization has also paved the way to novel (monopolistic) concentrations of power. The pervasiveness of technology in contemporary everyday life, along with the uneven distribution of power and resources it is associated with, is eloquently reverberated in the urban sphere. There, the alliance between Big Digital Corporations and city governments is critical in shaping the development and control of urban technological infrastructures. Through them, a new technology-sector-led urban development mode is fostered, which draws upon datafication and algorithmic

management (Vadiati, 2022).

Granted, the interplay between scientific-technological innovation, economic development, and urbanization goes back centuries and has traveled through the evolution of the city throughout history (Mumford, 1961; Palmini & Cugurullo, 2023). In this view, technology underpins urbanization processes as a historically contingent, culturally connotated, and politically meaningful "project" of control and domination over space. At the same time, following the rise of Modernity and waves of industrialization, the key operative tenets technology draws upon (e.g., optimization, automation, efficiency, rationalization, etc.) have become central to a one-dimensional, pervasive view that prioritizes technoscientific rationality at the detriment of any other form of knowing. In the field of urban planning, this view is rooted in the Enlightenment ideal that technics, science, and reason are benign in themselves and positively contribute to societal progress (Allmendinger, 2002). Such an irenic notion of technology has informed a distinct apparatus of socio-spatial control that, while emphasizing the connection between technological innovation and social advancement, has fueled Modernist preoccupation for quantification, something James Scott (1998) has referred to as "politics of measurement."

This Modernist-anthropocentric model of scientific-technological control, recently enacted by the smart city model, is being opposed by the spread of artificial intelligence (Cugurullo et al., 2024). In such a context, wherein the certainties of the twentieth century seem to fade away, urban technology presents itself in the shape of a Lernaean Hydra. Every time a milestone on the way to technological progress is reached, from there on, new questions arise while old problems remain unresolved. Like the mythological monster, which possesses the capacity to regenerate its lost (cut off) heads, contemporary technology continuously increases its ramifications and projections. With its many faces, urban technology underpins and shapes individual behaviors as well as public policy.

The hegemonic practices of urban technology, nowadays

The contributions gathered in this issue challenge the Enlightenment-like notion of technology — democratic, value-neutral, progress-oriented, and accessible — across a range of contexts, times, and stories. The encounter between digital technology and the multiple spaces, bodies, and political formations it crosses is situated by the authors within the material, social, and institutional conditions that give it shape.

Sofia Leoni opens the collection by challenging the widespread 'metronormative' notion of digital transformation. Far from being an inherently urban phenomenon, digitalization reshapes rural territories through a reconfiguration of socio-spatial, economic, and infrastructural settings. The Taobao village of Dongfengcun, Jiangsu Province, China, represents a compelling case of what has been termed as *platform ruralism*. Existing logistical and infrastructural systems, household labor, and state-led rural revitalization policies, like the Rural Taobao Initiative, are instrumental in the expansion of platform capital into rural territories. Turned into "circuits of digital accumulation," rural villages are (re)positioned within a critical perspective on technology as a socio-spatial force extending far beyond the urban sphere. In such a context, platformization emerges as a

process that actively rewrites rural territories through a rearticulation of the socio-spatial structure of everyday life.

The logistical reach of Amazon, another protagonist of platform capitalism, is examined from a different perspective by Deepa Joshi, who maps the spatial footprints of the company's logistics infrastructure across the Italian regional context and, more specifically, the Veneto region. Far from being a disembodied digital phenomenon, Amazon's expansion is profoundly 'material': it demands greenfield land, highway access, and proximity to freight corridors, often in socio-economically fragile municipalities whose planning institutions lack both the financial and technical capacity to govern the negotiations on equal terms. Joshi's interviews reveal a structural contradiction: Amazon arrives bearing promises of employment and local development, yet the platform's spatial logic systematically bypasses existing regulatory frameworks, exploits institutional gaps, and consolidates land use under the narrow imperatives of global circulation. Where Leoni shows how digitalization is reworked from within rural life, Joshi shows how it imposes itself from without, converting territory into a resource and planning into a blind spot.

The tension between platform narratives and urban conflict reaches its most explicitly political dimension in the contribution by Ruggero Signoroni and Deepa Joshi on the Amazon Tower in Berlin. Framing the construction of the EDGE East Side Berlin project within the longer history of post-reunification urban development along the Spree riverfront, the authors show how tech giants have become generators of new urban centralities. Backed by city governments eager to attract high-value investments, technology-sector-led urban development relabels planning policies through the glossy language of digitalization. The project, conceived and approved without any public consultation, concentrated political power in a narrow coalition of federal planners, real-estate developers, and corporate tenants, while displacing the concerns of the district's residents, delivery workers, and environmental activists. Yet the opposition that crystallized around the anti-Amazon cause demonstrated how a heterogeneous coalition — tech workers, local protesters, trade unionists, and transnational solidarity networks — could leverage hybrid (online and offline) strategies to fracture hegemonic narratives, even when it could not stop the tower. Together with the previous contribution, this article articulates a portrait of platform capital operating simultaneously on an infrastructural and symbolic levels: occupying land, reconfiguring logistics corridors, and producing narratives of innovation that function as a form of governance.

If the Berlin case illustrates the contested politics of tech-driven urban development, Agustín Müller's ethnographic account of food delivery couriers in Copenhagen brings these dynamics down to the scale of the 'body in motion.' Working as a Wolt courier while simultaneously conducting research among Argentine migrant workers, Müller shows how Copenhagen's celebrated cycling infrastructure is transformed by platform labor into a high-speed corridor of risk, time pressure, and social stigma. Algorithmic management — invisible yet omnipresent — translates every minute of waiting into lost income, every detour into economic loss, generating a form of compressed temporality that overrides the safety logic inscribed in the bike lane's design. The result is what Müller calls ***blue stigma***: the marking of couriers, in their fluorescent uniforms, as socially disruptive

figures within an urban order they are simultaneously essential to maintaining. The piece shows how digital infrastructure cannot be evaluated in isolation from the labor conditions and migratory trajectories of those who inhabit and operate it.

A different dimension of digitalization in relation to urban governance is explored by Carin Graminius's contribution on Singapore's MyEnv application. Through a walkthrough method that emulates everyday use, the article examines how this government-developed environmental app constructs a particular temporal experience of urban life, framing the city as a rhythm of manageable flows (occasionally) disrupted by natural hazards. Drawing on Dalsgaard's notion of state temporality and Lynch's rhythm analysis, the article shows how MyEnv performs political legitimacy through the apparatus of anticipation: by presenting environmental risk as something monitored, quantified, and governed in real time, the app naturalizes the government's role as the indispensable mediator between citizens and their surroundings. Yet the walkthrough also reveals cracks in this narrative — moments when the app's digital rhythms diverge from lived experience, when alerts fail to materialize, or when real flooding goes unregistered — suggesting that the political legitimacy of smart governance is always vulnerable to the frictions of the real.

The issue closes with Michelangelo Fusi's analysis of the Riga Metro project, which takes the longest historical view and the most explicitly politicized conception of technological infrastructure as a tool of technoscientific control of space. Under Soviet rule, the one-million-inhabitant threshold functioned as a seemingly objective criterion for determining which cities deserved a metro system, yet Fusi demonstrates how this quantitative rule concealed deeply political objectives: elevating Riga's status within the Soviet hierarchy while accelerating Russification and eroding Latvian national identity. When opposition to the project emerged in the late 1980s, citizens and local experts mobilized technical and environmental arguments as a safer language of dissent in an authoritarian context — a strategic appropriation of the very technocratic register deployed by the central authorities. The delegitimization of the metro project on technical grounds became, ultimately, one of the first concrete steps toward Latvian independence. The Riga Metro case resonates powerfully across the other contributions: it shows, in a condensed and historically grounded form, how technical arguments can simultaneously mask and channel political contestation, how technology produces space, identity, and power — and how the same apparatus can be turned against those who built it.

Taken together, these contributions appraise urban technology not as a neutral or autonomous force, instead insisting on its embeddedness in specific socio-spatial formations, labor relations, and governmental rationalities. Whether in a rural village in Jiangsu, a logistics corridor in the Po Valley, a contested construction site in Berlin, a bike lane in Copenhagen, a smartphone application in Singapore, or the archive of an unbuilt metro in Riga, technology is always inherently political — a terrain of struggle as much as a medium of transformation.

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