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Platform Urbanism and Its Discontents discusses the fundamental transformation of urban space through platform technologies.

By reorganising access to a wide spectrum of fundamental domains, such as education, housing, health care, or even political information, platforms are destined to become the most powerful players regulating the way we live in cities.

Digital platforms such as Facebook, Uber, Airbnb and Amazon embody not only new types of enterprises but also a completely new culture of life — from the products we handle and the services we use every day to entire urban neighbourhoods that will be built by major platform enterprises in the next few years.

These multi-scalar changes raise significant questions about the social potentials and risks of the architecture of these all-encompassing ecosystems.

Platform Urbanism and Its Discontents

Peter Mörtenböck and Helge Mooshammer, eds.

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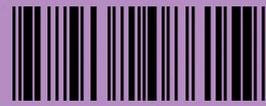
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Platform Urbanism and Its Discontents

*edited by
Peter Mörtenböck and
Helge Mooshammer*

Contents

Access Is the New Capital

City on Demand?

The Collapse of Scale

*The Platform Is
My Boyfriend*

*Monuments of Circulation –
'I' Is Everywhere*

Data Is a Relation
Not a Property

The Future
Is Public

Foreword and Acknowledgements

Over the last years, the notion of 'platform urbanism' has gained significant traction across a wide range of discourses, from urbanism and geography to architecture, sociology and anthropology, as well as cultural, media and digital studies. One of the reasons for this lies in the increased attention given by many scholars, practitioners, activist groups and policy-makers to the complex entanglements of urban space and digital technology. This interest has helped to launch new understandings of the emerging socio-technical formations that are driven by digital platforms and new types of global interaction. In this process, the city-as-platform has emerged as a powerful and highly contested entity that reflects the uneven challenges cities around the world are facing today across different demographic groups, regions and communities.

As an edited volume, this publication represents a collective effort to identify, discuss and analyse the impacts of the rising phenomenon of 'platform urbanism' on the way we live together. To this end, it draws its discursive power from bringing together more than 50 voices from around the world, contributing to this undertaking with a diversity of backgrounds, interests, conceptual approaches, perspectives and outlooks. We would like to express our gratitude to all the authors for their endless generosity in sharing their ideas, insights and precious time. We truly appreciate their dedication and willingness to join us on this journey into uncharted territories at a time which undoubtedly has brought unprecedented levels of stress and anxiety for most people.

Perhaps more so than usual, this project has been nurtured not only by what has now become manifest on the pages of this publication but by a shared history of mutual concerns and cooperation. Indeed, in many instances the collaboration for this publication has been preceded by various kinds of scholarly exchange related to broader processes of social, cultural, and urban transformation, which date back many years if not decades. In this sense, many of the authors assembled here have played a crucial role not only in giving shape to this book but also in the genesis of many of the strands of our research which underpin and combine in this endeavour: from our explorations of the 'virtual dimension' of architecture undertaken in the late 1990s to global initiatives probing the spread of 'networked cultures' in a post-national world and the evolution of 'incorporated informality' following the 2007/08 financial crisis. Whether we have shared panels at conferences, engaged in research exchanges and fellowships across institutions or joined the debate as guest critics in classes and workshops, these critical encounters have helped to make this book something more than a compilation of texts on a common subject. The shared goal to which we hope this book can contribute is a comprehensive, critical interrogation of the logics and dynamics behind platform urbanism, one that also helps to delineate pathways to a more just and equitable future for our cities.

In this spirit, and gesturing toward the parlance of disruptive technologies, the contributions to this volume have been grouped along seven different slogans that form a mixture of observations, propositions, provocations and calls to action: Access Is The New Capital; City On Demand?; The Platform Is My Boyfriend; Monuments Of Circulation – Everywhere Is 'I'; The Collapse Of Scale; Data Is A Relation Not A Property; and The Future Is Public. In their plurality, these slogans point out key operational fields involved in the rise and spread of platform urbanism. These range from the inherently exclusionary politics of platforms and the discrepancy between anticipated eye-level interaction and newly implemented hierarchies to novel forms of value extraction through the exploitation of affective labour and the struggle for new sets of collective rights arising from users' investedness in productive consumption. In the first chapter, entitled 'Platform Urbanism and Its Discontents', we elaborate in more detail on the scope and 'disruptive potential' of each one of these slogans.

This conceptual framework of the book is embedded in long-term research conducted in the context of the arts-based research programme PEEK funded by the Austrian Science Funds. In this research (AR371, AR633) we explore the manifold interrelationships between the global techno-economic complex and the constitution of 'data publics', focusing in particular on the spatial dimensions of these processes. In this context, investigations into the emergent phenomenon of 'platform urbanism', its socio-technical configurations, spatial formations and spheres of interaction have proven to be a highly valuable approach to the development of a better understanding of the enmeshments between platform technologies, urban space and the emergence of new socialities.

Significant outcomes of this research were presented on the occasion of the 17th International Architecture Exhibition La Biennale di Venezia 2021 as part of the Austrian national contribution. The roster of authors presented in this volume has its roots in two multi-channel installation works, which we produced for this exhibition. It was a great honour and acknowledgement of our research work to be appointed as curators of the Austrian pavilion for the Biennale Architettura 2021 and we are indebted to the Austrian government and all relevant bodies for their continuous support throughout the challenging period of multiple postponements of this exhibition due to the COVID-19 pandemic. Making this exhibition happen, in spite of all obstacles and adversities, would not have been possible without their generous administrative and financial support.

Throughout the past years, we have been joined by a wonderful team of research assistants who provided crucial help with sourcing and processing research material. Amongst others, Christian Frieß, Pieter De Cuyper and Lovro Koncar-Gamulin have demonstrated great skills in translating a diverse range of research outcomes into highly engaging visualisations, some of which are featured in this book. Special mention has to be reserved for Carmen Lael Hines, who has been invaluable throughout the entire

process of editing this book. For months, Carmen worked tirelessly in tandem with all contributing authors to ensure that this book could come to a timely completion. While devoting faultless attention to every detail, she always kept a calm and firm eye on the overall ambitions of this endeavour and gracefully shepherded everybody involved toward reaching this common goal.

Another crucial stalwart in bringing this multi-stranded project to a fruitful conclusion has been our copy editor and translator Joe O'Donnell. As with many of our other books, he has helped to clarify the key arguments of the contributions assembled in this book with great care and a much appreciated sensibility regarding their idiosyncrasies and specific modes of narration. We are truly grateful for having been able to bring him on board again.

The visual beauty of the book you are holding in your hands right now is the great achievement of the graphic designers from Bueronardin. It has been an absolute joy to see how Christof Nardin and his team have been able to connect the wide variety of different contributions in such a captivating as well as meaningful way.

Last but not least sincere thanks are due to nai010 Publishers and their director Eelco van Welie, who has welcomed this project with such open arms and inquisitiveness. His boundless passion for exploring novel issues and topics and his unending support have been indispensable for the realisation of this book.

Peter Mörtenböck and Helge Mooshammer, May 2021

Peter Mörtenböck & Helge Mooshammer
Platform Urbanism and Its Discontents

Imagine you are a member of an exclusive club. Life is easy, since members of your club enjoy a wide range of privileges. From tuning into personalised news feeds to catching up with friends and family, from sorting out your bills and business affairs to arranging your next trip, from ordering food and fashion or lifestyle items to planning your education, professional career, or retirement, all you need to do is access a relevant platform, and from there on things basically work by themselves. It's taken a while to get to this point but you have worked hard to earn your membership. Slowly but steadily you have built up a personal profile, a carefully curated history of activities which can be used as collateral when applying for further membership benefits and upgraded services. You have even subscribed to an online investment platform, which means you also have a nominal share in the providers of these privileged services and thus support the club's foundations while profiting at the same time.

In terms of its set-up and architecture, this club admittedly relies on a complex symbiosis between logistics, technology and infrastructure, yet its experience is effortless. All of its services are embedded in data-sensing environments and enhanced by artificial intelligence, enabling them to automatically synchronise across different devices and platforms. Through these magical mergers, they create a seamless, holistic universe, accessible with the tip of a finger, from the comfort of your bedroom or wherever else you choose to be. It's like living on an all-inclusive island, which you would never want to leave. With every conceivable desire catered for, there is no need to worry about how these privileges are actually made possible, or what the world behind your interface, where the goods and services you benefit from are actually produced, might look like. Welcome to life in the platform city!

Then, one day, you wake up to find that you are in the wrong club. For whatever reason, the city you live in has changed a few contractual arrangements with its service providers. Now your current club membership is no longer recognised as a valid basis for investing you with the rights and privileges accorded to other citizens. Suddenly you find yourself locked out of crucial parts of your everyday routines. You can't access any of your accounts, you can't communicate, you can't deliver work or secure daily essentials, and you also can't even register anywhere anew. The tricky thing is that, over time, all your privileges have become intertwined: your existing privileges are the basis on which you are granted new ones. With membership credentials being constantly checked electronically and in real time – if one link breaks, everything fails.

So, what will you do? Try to become a member of a different club and start earning new privileges from the bottom up again? If completely dropping out of such a tiered benefit system is not an option, will you kick off the foundation of a new club yourself? Or

better still, initiate an entirely new membership scheme, one that completely disrupts the way benefits are earned and revolutionises what it means to be a valid member of society? In other words, how will you respond to this new society based on technologically advanced membership systems? Will you see the 'age of platforms' as yet another, perhaps even more sophisticated and insidiously internalised mode of individual incarceration or as a harbinger of unbounded connectivity, enabling us to create environments responsive to both individual desires and collective aspirations?

As a matter of fact, digital platforms have become a ubiquitous feature of everyday life, especially in urban environments where human population densities are greater and new practices of mobility are forged that reflect the deepening heterogeneity of labour in the digital economy.[1] Whether we are in need of a ride or a meal or require someone to run a small errand for us, platforms have become the go-to-partner to sort things out. As digital information-sourcing and processing technologies, platforms help us to activate networks of exchange and support. The vast informational, economic and urban infrastructure they have been able to harness and create is likely to facilitate more and more attempts to mobilise groups of people to interact on these platforms, to generate data and, as a result of these activities, to enable additional business sectors to emerge.

The enormous capital value of these quickly growing hybrid infrastructures and the global competition to establish monopolies in the new value-added chain has initiated numerous changes in terms of social and spatial interaction. In the field of architecture, it is already evident that investment in real estate is in many cases based less on the sales value of an object than on its service value, which is territorially 'installed'. Increasing emphasis is being placed on the structural integration of services, via which digital platforms seamlessly merge with the tissue of the city and the city itself is made into a comprehensively steerable platform. This shift of focus from architecture as commodity to architecture as service is indicative of the changing constellations of property and rent in which digital platforms are being accorded a key role. Their carefully protected stock of new hybrid infrastructures – modular and scaleable building blocks lent character by architectural vocabulary – shifts attention from the speculative production of urban form to the logistical design of ways to extract rent.

Space, time and money are the key coordinates in these data-processing operations. They regulate the forms of access, participation, role design, and privilege allocation. Hence, for platform urbanism the key resource to be exploited, cultivated and developed is not just the hardware of the city and its built environment but the entire software of urban life itself. Everyday life has become the site of an increasingly conflict-laden encounter of the local with the global power of platform capitalism.[2] The conflictual urban geography of the platform can be understood in terms of 'flexible spatial arrangements,'[3] the operations of which are constantly reprogrammed by means of digital technologies as soon as they

1
Sandro Mezzadra and Brett Neilson, *Border as Method, or, the Multiplication of Labor* (Durham, NC: Duke University Press, 2013), 85.

2
Nick Srnicek, *Platform Capitalism* (Cambridge: Polity Press, 2017).

3
Lizzie Richardson, "Coordinating the City: Platforms as Flexible Spatial Arrangements," *Urban Geography* 41, no. 3 (2020): 459–461.

encounter resistance. This flexibility places greater or lesser require-ments on the different participants in such a system, disadvan-taging above all those groups of people – couriers, drivers, tutors, gardeners, cleaners – whose on-demand labour is supposed to help others achieve more independence and enjoyment.[4] The con-tainer villages that have sprung up in many major cities are a visual symbol of this idea of boundless connectivity and flexibility (for the few) – as well as concrete hubs for 'creative' work, dwell-ing and well-being. Together with the flood of open, 'multifunctional' zones of encounter which are beginning increasingly to shape the design of working landscapes, consumer worlds and urban spaces, they have become an embodiment of innovation, spontaneous action, and *en passant* moves – a haunted version of Cedric Price and Joan Littlewood's 1961 Fun Palace, multiplying and spreading across the world.

4
Jamie Woodcock and Mark Graham, *The Gig Economy: A Critical Introduction* (Cambridge: Polity Press, 2019).

Julius Taminiau Architects, Startup Village; Benthem Crouwel Architects, Equinix data centre; Science Park Amsterdam, 2018

Platform Urbanism and Its Discontents

Platforms are part and parcel of the changing relationship between technological development, capital, and cities. They act as socio-technical intermediaries and business arrangements and serve the new logics of organising and curating information.[5] With their comprehensive range of offerings in terms of direct connections, interactive communications and rapid execution, platforms are challenging established canons of government and industry in their attempt to take control of city-service operations.[6] In contrast to the smart-city approach, which aims to optimise city systems with the help of a newly calibrated interplay between 'smart' technologies commissioned by government and developed by private enterprise, platform urbanism goes all out. Changing regulatory frameworks is no longer a side project for companies like Airbnb and Uber but forms 'a material part of the business plan'.[7] Exploiting all opportunities for data-driven 'regulatory entrepreneurship', platforms have become agents not only of socio-technical transformation[8] but also of legal and infrastructural change.

In the global competition between cities, platforms provide an effective means of drawing attention and establishing markers that lend local events a global presence. Architecture experienced on site or per display becomes an aesthetic experience with which the potential of the immaterial work of a young, creative class can be locally anchored. Like home staging, which has been an important tool for presenting residential property to prospective buyers, we are now seeing a platform-based 'city staging' being deployed as an aesthetic undertaking with which cities court the favours of investors, service-providers and residents. The service appeal of cities communicated via images and case studies – the ease with which cities become accessible to outsiders, the lack of effort required to change from one city to another, the immediate support one finds in cities – has become the decisive factor for the generation of affective capital and the ability to attract digitally mediated labour.

This urbanisation process promoted or generated by platforms on the one hand affects the design of milieus in which a platform mentality with its codes, conventions and maxims can nest and address itself to all spheres of life by means of suitable narratives and aesthetics. On the other hand, platform urbanism is also characterised by a precisely coordinated configuration of operational fields which together make up the operating system of the city-as-platform. These fields of operation include the specification and control of access possibilities, the development and design of demand, the break with clear standards, the affective production of urban environments, the stimulation of activity and circulation, the regulation of social systems by means of data analysis and the steering of public life. These fields interact with one another and none of them operates completely autonomously. Each of them is subject to constant change and thereby also influences changes in other fields. The tensions and conflicts that are triggered in this process reveal in what direction the composition of socio-technical structures is moving and what is at stake. As we argue in the

5
Paul Langley and Andrew Leyshon, "Platform Capitalism: The Intermediation and Capitalization of Digital Economic Circulation," *Finance and Society* 3, no. 1 (2017): 11.

6
Jathan Sadowski, "The Internet of Landlords: Digital Platforms and New Mechanisms of Rentier Capitalism," *Antipode – A Radical Journal of Geography* 52, no. 2 (2020): 567–570.

7
Elizabeth Pollman and Jordan M. Barry, "Regulatory Entrepreneurship," *Southern Californian Law Review* 90 (2016): 393.

8
Desiree Fields, David Bissell and Rachel Macrorie, "Platform Methods: Studying Platform Urbanism outside the Black Box," *Urban Geography 41, no. 3 (2020): 462–468.*

following sections, platforms are speculative endeavours that thrive on the creation of instant, open-ended connections between discrete fields. In what follows we seek to delineate this process by addressing seven distinct theatres of speculative platform operations, each of which establishes a stage in its own right. These operational theatres develop and expand their repertoires independently, yet tie into each other and contribute in a co-constitutional manner to the evolution of platform urbanism.

Access is the new capital

The regulation of access, whether through its provision or denial, has long been a central aspect of architecture and urban development. The character of such regulation has of course changed over time, extending from the historical fortification of towns with walls and gates to the contemporary steering of access to urban infrastructure by means of digital chip cards. However, what has remained unchanged is the intention to control access to the utilisation of privileges associated with urban life. In recent years the possibilities offered by digital technologies have expanded the fields of application of access-authorisation and stirred up the established system with new actors. Digital platforms are playing an important role in these changes. The utilisation of new forms of urban mobility, for example, is increasingly being linked to the purchase of service offerings on mobility platforms which not only support precarious working conditions but are also not equally affordable for all. The urban living space is also being increasingly transformed by means of software into a service package coupled with other services which are configured by digital platforms. From dwelling and transport possibilities to income generation, food acquisition, and recreational activities, everything that we do, want or need is precisely enclosed and made into a service that is only accessible on platforms.[9]

The statement usually attributed to Goldman Sachs that 'millennials prefer access over ownership'[10] may be valid in relation to traditional concepts of individual ownership, but we also need to consider whether millennials actually want to avoid the 'burdens of ownership' or are simply unable to afford many things and therefore have to rely on the offerings of corporate digital 'landlords'. The romantic image of 'ballast-free' digital nomads all too often helps to mask new forms of economic exploitation, precarity and poverty and divert attention away from the increasingly global networking of ownership structures. Ever new sets of services providing access to products steadily increase the burden of outstanding payment obligations and extend the scope for globally active platform enterprises to frame conditions of use and set prices at their own discretion. Co-working platforms are currently demonstrating how utilising their services entails leasing not only a concrete workplace but also access to the complex milieu of the working world. Such services are not so much about concrete table

9
Jathan Sadowski, *Too Smart: How Digital Capitalism Is Extracting Data, Controlling Our Lives, and Taking Over the World* (Cambridge, MA: MIT Press, 2020), 61.

10
https://www.goldmansachs.com/insights/archive/millennials.

surfaces, filing systems and shelves as they are the contact possibilities generated by the working situation, possibilities that can be exploited by participants to establish a presence for themselves within the flow of information and opportunities. Those without access to these services miss out on not only the connection with professional networks and the acquisition of tacit knowledge but also the possibility of asserting rights and claims by means of a presence in the relevant milieu. In this way, participation in the design of our own working and living conditions becomes a subscription model.

Crowdfunding platforms are another expression of this monetised culture of participation, which – by virtue of connectivity – targets multiple registers of value. Linking different variants of liberalism (financial, social, and cultural), these platforms enable private initiatives to intervene directly in the customary operations of urban development and to realise public infrastructural elements such as bridges, swimming pools and parks by means of their own financial resources.[11] The concrete shaping and utilisation of public space is thus more and more frequently being determined through the concentration of private interests, with the result that those groups with more capital at their disposal are able to claim more public space. Hierarchically organised decision-making processes and influence exertion are being replaced by an 'unbureaucratic', technologically supported bundling of individual interests and private investment that creates an avenue of access to public resources for participants and grants them utilisation privileges. Platforms are being used not only for the self-organisation of such accelerated circumvention of institutionalised processes; optimised 'fast access' provides the foundation of nearly all new business models around disruptive technologies.

Disrupting the ways we relate to each other, digital platforms open up a space for new forms of exchange that suspend the protocols of previous forms of social interaction, communication, mobility and trade. Operating as elevated structures or, literally, 'levelled shapes', platforms are often promoted as a kind of superimposed infrastructure that offers improved access to people, goods and services, but they do so by excluding that which is seen as an obstacle or potential interference to the desired business success. They provide better service by leaving something else behind or below. Structurally then, the promise of platforms to offer unrivalled access is inherently bound up with acts of exclusion. They exclude what could impinge upon their services, and they exclude those from urban opportunities and benefits who do not happen to be on the platform concerned.

In the long history of modern architecture's contribution to fracturing urban life into zones of isolation,[12] the latest chapter of platform urbanism looks like irrevocably tearing up the last remaining pieces of a communally shared urban fabric. Its territorialised counterpart, the development of economic enclaves in the guise of free economic zones that suspend existing rules and regulations, has brought into existence a new kind of infrastructural

11
Pathfinding projects in this field include the Lowline on New York's Lower East Side (a proposed underground park) and the +POOL project (a public swimming pool in the Hudson River), as well as Rotterdam's Luchtsingel (a wooden footbridge that connects three formerly separated districts).

12
Matthew Gandy, "Cyborg urbanization: Complexity and monstrosity in the contemporary city," *International Journal of Urban and Regional Research* 29, no. 1 (2005): 36–38.

space that now serves as a blueprint for global urban development. Eradicating all obstacles hindering the smooth flow of goods, services and capital, the zone privileges everything that is enclosed within its physical boundaries. As Stefano Harney has noted, 'logistics produces access, and access inserts the metric, in a vicious circle.'[13] While 'free zone urbanism' has helped to establish the territorial dimension of access regimes in the golden age of grand-scale real-estate asset accumulation,[14] today platform urbanism has become the world's most powerful urban paradigm under the combined auspices of big data, machine learning and tech entrepreneurialism. It supplants the ambition of creating incentivised exurban enclaves for profit-making and virtualises the nodal points of urban access so that the transnational networks of the platform economy intersect better with the urban space of existing cities. Free zones may figuratively be regarded as *software* for making urban space,[15] but for their users platforms are often just a simple *app*. Their power lies in the simplicity of structuring global access to forms of exchange that have not been available before. The making of urban space is less the objective of these new arrangements than a staging act – a prerequisite to platform success and its concomitant effect.

13
Niccolò Cuppini and Mattia Frapporti, "Logistics Genealogies. A Dialogue with Stefano Harney," *Social Text* 136 (September 2018): 107.

14
Keller Easterling, *Extrastatecraft: The Power of Infrastructure Space* (London and New York: Verso, 2014), 25–69.

15
Easterling, *Extrastatecraft*, 15.

Collection of dockless rental bikes, Finsbury Park, London, 2019

For platforms the real urban space is ultimately only an inter-
face formulated as an object in order to 'implement' services,
while for the development of free economic zones the physical space
still constitutes a locus of transhipment, a nodal point and – to
use a term from the analogue age – machinery for the transaction of
business. Since their inception, platforms have been oriented to
virtual, translocal business flows (and the expansion of these flows)
and require real space only as an accessory and backdrop, as a
signifier that stimulates people's emotions, awakens memories and
generates a feeling of well-being. As a central locus of capital in
the digital economy, access has a value that can assume different
forms, from the intangible form of digital codes to the form of services,
social prestige or money. Access can be converted and exploited
in different ways although currently it is platforms themselves that
are shaping this process of transformation and thereby the chain
of value creation.

Using architecture as a mechanism to generate and convert
access capital, urban development has acquired a decisive posi-
tion in the formative years of platform capitalism. Access to urban
life, the constellation of 'means, relations, and processes that
enable various actors to derive benefits'[16] from the city, has become
a subscription business model, representing an asset class which
has taken the place of the acquisition of real estate. In this context
architecture serves as a driver of innovation in the development
of regulated access. In most cases such regulation is achieved via
the 'smart' connection of digital software with physical objects,
which is increasingly making access to the everyday provision of
food, personal hygiene, housekeeping, education, professions
and recreation a question of licences. This extraction of economic
rents disguised as service is giving rise to a new type of class
society, the structure of which is defined by the milieu-specific
distribution of access rights via platforms.

The right to the city being demanded in order to guarantee
access to the city for all persons rather than only certain societal
elites entails more than merely the entitlement to make use of
urban services. It also encompasses the open and equal discussion
on the form of the city, that is, what urban organisation should
look like, how it should be designed spatially and how a fair alloca-
tion of possibilities can be ensured. This right to the city is being
progressively limited by the growing dominance of digital platforms
in urban life. One of the most concerning dynamics we are seeing
in this context is a shift away from the idea of inclusion and belong-
ing centred on human rights towards an all-encompassing econ-
omy of licenses – a shift in the focus of social regulation from consti-
tutionally anchored rights to authorisations tied to the agreement
of service contracts and only available to those who can pay the
associated costs.

Exposing the deceitful camouflage of platform urbanism and
the vested interests of platform companies, new forms of politi-
cal activism are emerging today that could become the catalyst for
a shift away from the understanding of access as a managerial

and economic concern towards an understanding of access as a political process. Moving beyond the skewed power dynamics of capital accumulation, these activist efforts reframe access as collective responsibility, as an act of love and generosity informed by care. These aspirations and dynamics seem to be energising a political project that opposes a noncommittal, unrestricted convertibility of values and seeks to define new societal objectives based on different, shared values.

City on demand?

The promise of fast and unhindered access that underpins the success of platform urbanism is fuelling ever more demanding expectations of urban life. It is based on the assumption that unbounded social interaction can be achieved by unravelling and resolving the complexities of urban systems into political, cultural, and personal components made available as purchasable goods by an on-demand economy. Yet, if we acknowledge the fact that 'demands' have become both a driving force and major challenge for the way urban space is produced, it is crucial to enquire how such demands are defined, triggered, steered and satisfied, not least because of the smokescreen produced by the techno-economic apparatus of demand management that blurs our vision of how demands come into being in the first place.[17] Cast within Hayek's 'free market' mantra of an ongoing equilibration of supply and demand as the basis of free-reigning spontaneous order,[18] the economic logics of demand have become naturalised to such an extent that they are not only related to the flows of capital investment per se but are seen as giving shape to urban form and life in general.[19] Indeed, demands are felt everywhere today, whether in the spheres of work, leisure, consumption or family life. We are being overwhelmed by demands to become more productive, more creative, more caring, more compassionate, more everything. These demands to do more, to increase our capacities and achievements, are mirrored by a similar set of demands to mitigate the 'negative' aspects of our behaviour – to become less wasteful, less environmentally impactful, and less dependent on others by optimising and self-managing the fulfilment of our needs.

In this stressful situation, with ever more demands being placed on our abilities, time, attention, and patience, the city seems to come to our rescue – by being available on demand. Platform technologies are key to this shift in the perception of what cities are all about. Being able to rapidly process enormous amounts of data, the platform city promises to offer the perfect infrastructure for connecting the right ideas and the right partners at the right time. It flirts with the utopian idea that its high-performance architecture can satisfy all needs. Whether it is about connecting rushed travellers with adequate means of transport so that they arrive on time for an appointment, making sure that a wide choice of take-away food is available within fifteen minutes should that appointment overrun, or setting the right room temperature and all appliances on

17
See, for instance, Michel Callon's elaborations on "platform-goods" vs "process-goods". According to Callon, goods, supplies and demands do not form separate entities but are embedded in networks of evolving relations. Michel Callon, "Revisiting Marketization: From Interface-Markets to Market-Agencements," *Consumption Markets & Culture* 19, no. 1 (2016): 24.

18
Friedrich A. Hayek, *Studies in Philosophy, Politics and Economics* (Chicago, IL: University of Chicago Press, 1967), 66–81.

19
Michel Serres, *The Natural Contract* (Ann Arbor, MI: University of Michigan Press, 1995).

stand-by in response to those travellers' movements: with their capacity to synchronise data across vast networks and multiple devices, platform-controlled cities claim to offer their inhabitants optimum services.[20]

Yet, the incremental expansion of the customised 'city on demand' seems to make urban life more uniform and schematic than one might perhaps expect. Globally distributed and interconnected supply chains rely on high degrees of abstraction as well as streamlined externalisation to ensure system compatibility across a wide range of different contexts. Be it generic services involving labour and goods or more personal ones involving romance and intimacy, each 'service component' as well as the providers and users of that service have to adhere to the same protocol to make these efforts operational as well as feasible for global expansion. This conjunction of growth and abstraction forms a staple part of capitalist production. Unsurprisingly, platform cities confront us with ever more abstracted and homogenous cityscapes that increasingly look and feel the same, regardless of where we might find ourselves at a particular moment in time.

Counting on the strength of a perpetually recalibrated equilibrium of supply and demand can also lead to the opposite of a harmonious balance: higher volatility. A perfect example of this is the financial turbulence associated with the initial public offering (IPO) of The We Company, the parent company of WeWork, which in 2019 had risen to become the leading private-sector tenant in cities like London or New York.[21] Such threats of instability are often counter-acted with hedging and other governance arrangements such as license schemes and long-term contracts. Indeed, one of the most contested frontiers of urban development at the time of writing involves monopoly-enforced contractual agreements between municipalities and global providers of urban infrastructures.[22] Yet it is not just public administrations but increasingly citizens, too, who find themselves entangled in a web of contractual, technical and informational relationships with platform providers that make questions of choice dependent upon the fulfilment of regulatory demands, that is, limited to correctly contracted citizens.

Government by carefully managed and manipulated demands – rather than by law and principle – is infiltrating ever more social spheres, from the nucleus of personal relationships up to the realms of public governance and grand politics. In a similar vein, the last decade has been marked by the emergence of ever new arenas of economic activity under the aegis of the triangular logic of channelling demand, licensing corresponding services, and regulating access. Propelled by the innovation imperative facing today's institutions, even tasks once considered to be merely bureaucratic burdens can be transformed into lucrative platform operations, as is the case with e-citizen schemes that upon registration grant limited access to particular licenses such as temporary trade permits.[23] E-citizenships, made available on demand, thus constitute forms of 'flexible' or variegated citizenship[24] which have less to do with the principles of the Rights of Man than with the business of granting licenses.

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For a history of the entanglement of cybernetics, urban planning and design see, for instance, Orit Halpern *Beautiful Data: A History of Vision and Reason since 1945* (Durham, NC: Duke University Press, 2015).

21
WeWork's IPO was planned to go ahead in 2019 and later abandoned. At that time it was the world's single largest provider of temporary office spaces.

22
Projects that should be followed closely in this respect are, for instance, those pursued by Sidewalk Labs – a subsidiary of Google's parent company Alphabet – and its spin-off Sidewalk Infrastructure Partners. See: https://www.sidewalklabs.com/ and https://sidewalkinfra.com/ respectively.

23
Peter Mörtenböck, "Global Informality: Bottom-up Trade and Transnational Realignments," in *Informal Market Worlds Reader*, eds. Peter Mörtenböck, Helge Mooshammer, Teddy Cruz, and Fonna Forman (Rotterdam: nai010 Publishers, 2015), 107–109.

24
Aihwa Ong, *Flexible Citizenship: The Cultural Logics of Transnationality* (Durham, NC: Duke University Press, 1999).

As in the case of platform-based citizenship models, access to the city licensed by platforms and their subsystems is tailored to the optimisation of processes, to a maximum reduction of friction that blurs the boundary between the conduct of business and life. Pushed by the argument that on-demand urban infrastructures rely on innovative ingenuity as well as complex financial and technological underpinning, city governments are increasingly yielding to pressure from Big Tech platform providers to transform 'unproductive' living space into 'productive' infrastructure and to take an active role in the infrastructural steering of demand.[25] A case in point is the global surge of co-working and co-living platforms as a tool of urban development, not least because work and housing constitute two key components of cities. The increasing investment volumes in this area make clear the extent to which initiators of co-living offerings are taking advantage of not only the decreasing availability of housing in growing metropolitan centres and the decreasing earned income of their populations but also changing concepts of dwelling, new values (sharing economy, green technologies, digital entrepreneurship), the yearning for community and the increasing interweaving of dwelling with new forms of work. The two ends of this development – the extension of work into the reproductive aspects of life and the transformation of living space into an arena for professional advancement – expose a societal and spatial dynamic which, under the smoke-screen of community, is driving forward a fusion of work with other areas of life.[26]

25
Mark Graham, Rob Kitchin, Shannon Mattern and Joe Shaw, eds., *How to Run a City Like Amazon, and Other Fables* (London: Meatspace Press, 2019).

26
Kate Aronoff, "Thank God It's Monday," *Dissent* 64, no. 1 (Winter 2017): 55–63.

SelgasCano, Second Home co-working spaces, Hollywood, Los Angeles, 2020

The basic unit of urban life that is unabashedly disseminated by co-living and co-working spaces is the combination of hot desks and sleeping pods. This bleak reality is often compensated for with a flood of staged fun: social events such as yoga classes, wine-tastings and community events, accessories such as disco balls in the communal laundry and colourfully painted garden huts in the working area, and atmospheric chains of lights, graffiti and other adornments used to decorate variably styled gathering spaces, such as rooftop bars, libraries, lobbies, lounges, show kitchens and wellness areas. The pleasure communicated with these signifiers – gestures toward the potential of these on-demand spaces – does not actually have to be experienced; it merely needs to be possible, and it provides the perfect backdrop for advertising clips and selfies indicating a bright future.[27] While these stagings deliver the crucial advantage for securing tenancy contracts, life in the present becomes subordinate to a proxy economy of future options.[28]

In this context of transnational multi-billion dollar invest-ments, it is important to note that these co-living and co-working spatial typologies first saw the light of day as bottom-up initia-tives launched by young professionals and creatives hit hard by the fall-out of the 2007/08 global financial crisis. Their experiments with shared spaces were meant to achieve more than help them adapt to the hardships wrought by that crisis. They were also seen as providing a better work-life balance and an environment that corresponded more naturally to evolving needs for personal fulfilment, friendship and community.[29] Hence, the creative design of 'open spaces' that allowed for flexible, temporary uses, a play-ful coming together responding to more than the demands of produc-tion. Raised with great expectations, many urban middle-class millennials did not look for a return to pre-crisis realities but sub-scribed to a collective belief in the creative capital embedded in their own networks and in their own entrepreneurial ability to succeed and progress.[30]

In this sense, the proliferation of the city on demand is itself the result of a wide range of converging demands, from economic interests pushing for higher productivity to calls for a more efficient use of urban resources to longings for personal happiness and well-being. Camouflaged by the temptations of the affective economy, these emergent socio-economic frontiers thrive on en-meshing the forces of crisis with the management of subjective desire.[31] While both, the infliction of perpetual states of crisis and the manipulation of desires, are well-recognised stimuli of the cyclical logics of capitalism, it is their platform-enabled algorithmic calibration that propels the hopes attached to the city on demand.

The collapse of scale

Despite its obvious aesthetic and infrastructural ambitions, the architecture of platform urbanism tends to feel increasingly un-hinged and disconnected from the worlds it helps to create. Be it in the global South or the global North, in the wealthy enclaves of

27
Peter Mörtenböck and Helge Mooshammer, "My Home Is My Future," *ARCH+* 244 (2021).

28
Elena Esposito, *The Future of Futures: The Time of Money in Financing and Society* (Cheltenham: Edward Elgar, 2011).

29
Indicative of these desires is the grand parade of evocative taglines used by co-working or co-living providers, such as "End World Loneliness" or "Raise World Consciousness".

30
Peter Mörtenböck and Helge Mooshammer, *Visual Cultures as Opportunity* (Cambridge, MA: MIT Press, 2016).

31
Naomi Klein, *The Shock Doctrine: The Rise of Disaster Capitalism* (London: Penguin Books, 2007).

urban elites the experience of architectural environments has become barely distinguishable from fast-forwarding through TV commercials – a background noise, notoriously lifeless and un-memorable. Indeed, advertisement and promotion are key anchor points for the success of platform economies. They keep users active and engaged. One could even argue that the true invention of digital platforms lies in the cunning ways they enlist users as active participants in promotional communication processes: Multiply-ing public conversations by way of 'liking', 'sharing', 'clicking' and 'referring', users not only 'spread the word' but amplify these dy-namics by generating content and data themselves, hoping they will be acknowledged by others.

Co-created by digital code, platform technologies and online social exchange, such augmented spaces are highly 'designed' settings, encouraging users to deploy their abilities to manipulate the way they present themselves in platform environments. The composition of these user doppelgangers can be easily tweaked and optimised to better suit the needs of other users and search engines, with some features being emphasised and others omitted. Archi-tecture is becoming complicit in the staging of such virtual encoun-ters, tasked with setting the right mood for these interactions to make them 'instagrammable'. Instead of being tied to a concrete materiality, place and history 'instagram architecture' is breaking down the built environment into accessible (and potentially mar-ketable) palettes of moods, vibes, ambiences and atmospheres that are judged on their sequential integrability into multi-stranded global conversations. Small wonder that commercial developers invested in 'platform real estate'[32] fully endorse this trend with custom-tailored media campaigns featuring elaborately staged and carefully curated 3D mood boards. Architecture and lifestyle are entering into a new bond, in which the former is chosen to illustrate the latter.

Prioritising detail over the bigger picture, spaces crafted to fit the demands of high-value visual representation often operate beyond the burdening conventions of scale. They result in a kind of 'cropped' architecture that eliminates any hints of social struggles that might disturb the perfect image. This applies in particular to any signs of labour. The world of Instagram, Pinterest and co. is one of perpetual leisure. In order to keep the urban staging in perfect condition, 'second worlds' are created that ensure a constant brush-ing-up and supply of replacement items so that everything appears radiant and plentiful. Located at the temporal and/or spatial margins of endless nightshifts, underserved peri-urban peripheries, and low-income countries, this is the realm of logistics, migrant labour, mass production and waste. Aesthetic pleasure becomes the overriding goal of platform architecture which occludes every-thing, even the kind of creative labour that many of these places are meant to instigate. Co-working/living developments, for instance, epitomise the blurring of home and work, yet the work under-taken there while establishing professional networks or enhancing one's personal knowledge, fitness and well-being is shrouded in

narratives of joy, pleasure and vitality gained from spending time in such beautiful environments.

In this frictionless space of fashion-forward colours, decorative patterns, layered textures, flattering light and gentle shadows conventional notions of scale become irrelevant. The way things relate to each other is determined by pictorial effects, not by their placement within larger spatial settings, institutional frameworks or social relationships. Indeed, the creation and representation of seemingly unique, hand-crafted details is a much-repeated trope of platform imagery. Capturing and regaling oneself in images that 'evolve' space into an experience becomes the way to get hold of the cultural currency associated with it. The ubiquitous macro shot of the perfect cappuccino froth – or any other boutique and handcrafted item – set against a softly blurred background is indicative of the loss of spatially and temporally scaled relations as much as it is indexical of value chains turned upside down. If a blown-up photograph of an artisan cup of coffee is all that matters for platform real estate to signify status and luxurious lifestyle, small wonder that the use of such images has risen so excessively, given the huge difference in production costs between mediating image and the 'real thing'.

This loss of scale in the physical as well as imaginary construction of the built environment is mirrored by an equally significant loss of reference frameworks, of an embeddedness in institutional, political and social orders. Similar to the effects created by auto cropping images to focus on the object within, the design of 'cropped spaces' lends itself well to the profit-yielding dynamics of standardisation, unitisation, amplification and multiplication. Without any consideration for the finely adjusted interplay of scale, positioning and distribution, bodies, artefacts and architectures are thrown together in a new sort of space which operates independently of longstanding social practices, institutional settings and political traditions. The shortcomings of these new configurations, 'a form of environmental design that articulates scales of proximity and the large scales of digital data',[33] are celebrated as a liberation from normative rules, as a break with hegemonic conventions and as innovative forms of representation. The consumption of such unique experiences, landmark moments, and record-breaking structures may indeed offer benefits to those enjoying the services at hand, but they often obscure social ignorance, exploitative labour, externalised costs, and emotional manipulation. These contradictions accentuate the shift from juggling the challenges of postmodern disorientation[34] to navigating a world of nonstop disruption, with (images of) sophisticated urban landscapes constantly enlisting us in the struggle between 'underutilised' space and artisanal remakes of it.

Scale has been largely replaced by logistics and circulation: Aesthetic appearances might easily be stripped of meaning when they are replicated and serialised, but by forming part of spatial and temporal sequences of events, they contribute to the creation of a simulated ambience, a milieu generating social and economic

33
Andrés Jaque, "Grindr Archiurbanism," *Log* 41 (November 2017): 84.

34
In his reading of space as a medium of subjectivity, Fredric Jameson famously called for an aesthetic of cognitive mapping to visualise the trajectories of crisis-ridden late capitalism, arguing that for the postmodern subject – detached from any sense of groundedness – it had become impossible to locate itself in space and time. Fredric Jameson, *Postmodernism, or, the Cultural Logic of Late Capitalism* (Durham, NC: Duke University Press, 1991).

opportunities through the 'precession of simulacra'[35]. Deprived of value in and for themselves but fulfilling their role in the logistics of platform operations, they co-create spaces not yet integrated into chains of value production. The 'message feeds' of platform urbanism similarly thrive on speculative assemblages of architectural props – milieus in which anything might pop up irrespective of context, scale or register: an image of a bobbing flower next to one featuring a striking skyscraper façade, a miaowing cat amidst high-tech gadgets, a book cover followed by a scene from a crowded street festival – as long as the hybrid configuration is in line with predicted estimates, calculated parameters and intended effects. Under these logics of speculative association, individuals, objects and institutions tend to perform well as long as they remain connected to others, which requires them to be in constant circulation – hence the importance of meta-structures (aka platforms) that keep them from drifting apart. This binding function allows platforms to penetrate inner zones from any place, to remain unpredictable and unaccountable while drawing the private, the intimate and the vulnerable from users all over the world. On this construction site of the urban, intimacy becomes the cement and substrate used to mount affective infrastructures with which feelings can be bundled and utilised.

The platform is my boyfriend

It is rare to find as much attention paid to our feelings as we find on platforms. 'Likes', 'smileys', 'tears of joy', 'sadness', 'disgust', and many other emotional indicators can be sent with a simple mouse click. Even if we are supposed to aspire to complete independence in life, we can still confide in others all over the world on platforms, express our attitude to all manner of things and share our love, desire and passion with innumerable other people. All this makes platforms into close companions who willingly register our emotions, communicate them and, not least, make considerable profits in the process. With the help of data produced by users, platforms are able to weave a dense network of connecting threads between digital and real settings in which they develop and structure desires. However, there is hardly any mention of the enormous importance of the affective labour performed by platform users themselves when platforms present their services. And yet it is the unfiltered disclosure of wishes and feelings (and the time required for this process) that integrates *jouissance* into a computational matrix that feeds on the quantifiability of any and every value.

The productive exchange of feelings is the core business of the 'libidinal economy' of digital platforms, which is markedly different from Lyotard's concept of a libidinal economy of *unmediated* exchange[36] in that it rests instead on the ubiquitous simulacra of value systems that imply the convertibility and exchangeability of otherwise incompatible elements. The skilful design, management and manipulation of libidinal production in the platform economy is

35
Jean Baudrillard, *Simulacra and Simulation* (Ann Arbor, MI: University of Michigan Press, 1994).

36
Jean Francois Lyotard, *Libidinal Economy* (Bloomington, IN: Indiana University Press, 1993); see also: Chris L. Smith, "The Libidinal Economy of Architecture," in *Economy and Architecture*, eds. Juliet Odgers, Mhairi McVicar and Stephen Kite (London and New York: Routledge, 2015), 108–117.

based on camouflaging the mediating devices that record, process and use the personal information they extract. Technologically aided communication has emerged as a major ally in this appropriation of enjoyment. It reconfigures the landscapes of subjectivity into a growing web of indebtedness[37] by enabling both a supposedly self-determined ('creative', 'fun') mode of involvement and simultaneous affirmation through a related (and potentially collectively shared) response. Familiar examples of technologies serving and being served by the growing mass of indebted individuals are voice-activated personal robots, always-on digital assistants, Internet-of-Things-based artificial intelligence gadgets, cloud-based care hubs and other data extracting devices. Pioneered by big tech companies such as Google, Amazon, Apple, Microsoft and Samsung, these technologies help to collect and record massive amounts of data on intimate connections between people and their environments.

37
Slavoj Žižek, "The Libidinal Economy of Subjectivity," *The Philosophical Salon – A Los Angeles Review of Books Channel*, 5 August 2019, https://thephilosophical salon.com/the-libidinal-economy-of-singularity/.

Grow (set design), Google block party, Venice Beach, Los Angeles, 2017

Affective computing and the personification of tech-gadgets push the boundaries of capitalisation by motivating people to establish intimate bonds with smart objects and emotional attachments to platform environments. These advances also include corporate events, such as block-party-themed consumer experiences designed to demonstrate how two of Google's products – Google Home and Google Play Music – work together (see opposite page). Such inroads into the immaterial and affective domains of social life not only operationalise inner life in the service of platform capitalism but reconfigure feeling itself.[38] Platform technology acts as a dispositif through which feelings are both expressed and shaped in accordance with the potential use of data that they help to create. The impact of these digitally enabled exchanges reaches far beyond changing fashions in the way we might furnish, improve and protect our immediate surroundings; what is at stake with the emergence of these new techno-socialities is the very foundation of how we live together, of how we know ourselves and each other, of what we love and how we love.

Foregrounding management over substance, the new techno-social bond forged by platform urbanism is marked and sustained by rituals of glorification, acclamation and celebration.[39] It speeds up the shift that we have seen in city-making over the past decades from the subservient role of economic activities to the dominance of 'architectural capital' as a complex structure of investments in the economic and spatial realm. The bedazzlement brought on by images of spectacular city skylines and 'super-modern' urban infrastructures – illustrations of the dispositional qualities of architecture – has done its part to cloak the social void behind the seemingly solid façades in the heydays of finance-led speculative urbanism.[40] The 2007/08 global financial crisis might have dented the appeal of the story of global happiness and salvation via urban asset formation – 'spatial products' of various scales and geometry lubricating financial investment – but it has not taken long for the race towards breaking the next frontier of urban investment to pick up speed. Platform urbanism seizes on the experienced lack of substance – the absence of community, ignorance of sustainable ecologies, the spiritual void – and compensates for this deficit with the introduction of new spaces, and economies, of activity: platforms for sharing (that is renting) social spaces, curating bookable events, setting up membership-based service networks, and doing all the things that digital influencers love to talk about. To stimulate investment in these activities, the task of design is relegated to setting the stage for visual tableaus that lend themselves as pivots in self-replicating narratives of new-found happiness.

In a similar vein to the macro strata of platform urbanism, personal interaction with platforms is becoming increasingly characterised by what we do rather than what we intend. Platforms provide a techno-social terrain to generate a plastic economy of emotions and relations that compensate for the loss of institutional frameworks promoting inclusion in everyday life. When living on platforms, what counts is not a particular relationship as

38
Luke Munn, *Logic of Feeling: Technology's Quest to Capitalize Emotion* (Lanham, ML: Rowman and Littlefield, 2020).

39
Giorgio Agamben, *The Kingdom and the Glory: For a Theological Genealogy of Economy and Government – Homo Sacer II.2* (Stanford, CA: Stanford University Press, 2011).

40
Michael Goldman, "Speculative Urbanism and the Making of the Next World City," *International Journal of Urban and Regional Research* 25, no. 3 (2011): 555–581.

such but the continuous experience of appearing to be able to manage our interactions and relationships with the world around us; what counts for platform providers, as a quid pro quo built into every relationship, is effectively the exact opposite: platform technologies are managing an economy of emotions only supposedly 'on our behalf'. The growing dominance of ritualised, symbolic and 'efficient' communication has opened the door for communication technologies[41] to take the place of intimate partners – friends, dates, lovers. Just as today's entrepreneurial modes of governance draw on continuous performative affirmations to substantiate the hegemony of economic management as a key coordinating force, so is the growing addiction to continuously engaging with platforms – the quest for affirmation – indicative of how we reorient ourselves and our sense of subjectivity toward a fast-paced, hyperactive management of relations.

The ability of platforms to 'befriend' us forms a crucial parameter of their capacity to disguise the exploitation of emotional labour as the escape from alienating work into a whole new world of pleasure.[42] By rendering all engagements with platforms as driven by individual interest and endeavour, a wide range of relationships is brought into line under the common denominator of benefit, irrespective of whether these interactions are triggered by personal bonds, everyday errands or work-related demands. With platforms being available at a fingertip, we can connect with them whenever and wherever we are, which more often than not takes place in the privacy of one's home… or bedroom, facilitating the perception that platform operations are personal in tone and intimate in a way that few other relationships are.

Exuding an ethos of experimental subjectivity formation, platforms have advanced to occupy a pivotal position in processes of psycho-social development, competing with formal and informal networks of social care such as local communities, peer groups and intimate partners. In this techno-social engineering of human desires, platforms not only constitute and reconfigure the environments we live in,[43] but also act as friendly hosts of virtual reference points for users and their activity. In return for how we serve the platform economy's drive for self-reproduction and self-circulation, platforms appreciate, understand and feel about us, sometimes more than we could ever do ourselves, creating tensions between what we can know, what we might want to know and what we would like to reveal and share. It is in this space of unsatisfiable drives/desires that the expanded cycle of self-reproduction provides a 'platform', as it were, a stage to enact and engender an infinite number of plug-and-play identities, continuously tweaked and optimised to adapt to ever changing demands.

41
Stephen Graham and Simon Marvin, *Splintering Urbanism: Networked Infrastructures, Technological Mobilities and the Urban Condition* (London and New York: Routledge, 2001).

42
Samo Tomšič, *The Labour of Enjoyment: Towards a Critique of Libidinal Economy* (Berlin: August, 2019).

43
Brett Frischmann and Evan Selinger, *Re-Engineering Humanity* (Cambridge: Cambridge University Press, 2018), 102–123.

Monuments of circulation – 'I' is everywhere

Circulation is one of the prerequisites of modern urban expansion. It is also a defining feature of capitalist economies, supporting the paradigm of speculative wealth accumulation. In many regions of the world circulation has also exercised an increasing influence on the experience of social coexistence. In this historical entanglement of circulation with administrative, institutional, personal and territorial concerns, different models have emerged of urbanisation as a tool for realising political or economic claims to power and generating urban fabrics that interweave life and infrastructure.[44] The most current version of this formative process is represented by the possibilities provided by digital media, data flow and hybrid spaces of territorial expansion beyond the concreteness of physical locations. In the attempt to overcome the barriers of space and time in the sphere of circulation, platforms offer a vehicle that merges with the urban space to form an augmented technology of power, thereby becoming capable of penetrating deep into material and virtual processes, into intimate and distant encounters in a way not seen before.

In the few years since their emergence, digital platforms have become a prevalent form of contemporary infrastructure when it comes to enabling constant circulation. Seamlessly embedded in the everyday flows, movements and interactions of cities worldwide, they are one of the most powerful tools available for reprogramming urban life. Like Uber cars undeviatingly crisscrossing the street space, the mobility animated by platforms is not focussed or goal-oriented but oriented to spontaneous occurrences, constant motion, and the search for opportunities, which have to be evaluated in real time and weighed against other options. And like the fleet of new forms of transport in the sharing industry, these circulations generate a great deal of traffic but not much in the way of immediate capital gains in the respective service branches. In most cases the really lucrative business for platform companies lies in the investment, data and advertising capital that is generated and deployed in their multifarious activities.

Although the slogan 'Just Do It' may long ago have transitioned from a mantra to a cliché of start-up enterprise culture, the means and forms of being active in the platform economy continue to be deployed as key assets to support speculative assumptions about future performances. Platforms rely on evidence of activity – tweets, comments, traffic, clicks, impressions, conversions – to demonstrate their success and potential vis-à-vis both investors and users.[45] Visual and material representations of activity as well as environments that trigger active behaviour have therefore become essential auxiliaries, not only for specialised data and tech companies but for any kind of entrepreneurial venture. This has given rise to a new breed of spatial typologies that serve as instant markers of activity, as both instruments and monuments of circulation. Tying together being and praxis, substance and action, glory and power, such elaborately furnished circulation spaces – seemingly random data points dotted around the urban landscape –

44
Ross Exo Adams, *Circulation and Urbanization* (London: Sage, 2019).

45
Sarah Barns, "Negotiating the Platform Pivot: From Participatory Digital Ecosystems to Infrastructures of Everyday Life," *Geography Compass* 13, no. 9 (2019): e12464.

serve as instigators of flows, as vehicles of mobility per se, as inscrutable elements that help to extract valuable information. Be it fleets of e-scooters in tourist locations, colourful slides in office environments or DIY furniture in public space, the activities suggested by such 'disruptive' spatial elements don't necessarily have to be taken up, they only need to manifest themselves as a potential of activity, a substitute for whatever activity one might enjoy.[46]

Coinciding with the glorification of the platform economy and its management, activity has become the dominant imperative for twenty-first century social life, which translates into an unquestioning monumentalisation of circulation. Henri Lefebvre's analyses of the 'recognition effect' that monumental spaces exert on each member of a society by offering them an image of their membership and the way in which the splendour of monumental imperishability changes crude reality into a materialised appearance[47] are perfectly reflected in the designs of a new type of circulation spaces that are turning built environments into playgrounds for the flow of information and values. From the EPFL Rolex Learning Center near Lausanne (2010) and its endlessly meandering corridors that encourage the constant exchange of ideas and conversations, to Apple's ring-shaped headquarter in Cupertino (2017) and its work-live-play concept that celebrates the inescapable condition of mobility, connectability and performance, we are being confronted with a deluge of built structures that demand constant activity from their users and attempt to extract maximum value from their communicative abilities. A highpoint of this development can be seen in the Vessel in New York's Hudson Bay development (2019), a freestanding structure of 154 connected staircases, the attraction of which consists in the fact that they offer the public a 16-storey stage of circulation (see opposite page). As an interactive art piece – an ostentatious, enigmatic sculpture which invites haphazard and aimless activity and identification with this experience – it blends harmoniously into its smartified urban surroundings, which are fitted with advanced sensors and mobile apps to collect comprehensive data about users' activities. Drawing long queues of visitors thirsty for photo-op glory and the transcendent power of monumental space, the Vessel has rapidly become the holy grail of platform-as-a-service in the urban realm.

Be it cultural norms, ethical principles or personal expectations, 'mental conceptions of the world', as David Harvey has noted in his deliberations on capitalism's 'activity spheres', always co-evolve with the presentation, interpretation and implementation of such standards.[48] In the implementation and reshaping of these conceptions in the sphere of technologies, organisation forms, social relationships and work processes, an element of personal activity has to be involved for the formal, functional and structural components of social praxis to become effective in terms of textural formation. Venturi and Scott Brown's static proposal 'I am a monument'[49] is currently being superseded by the assertion of a constant being-at-the-forefront: "I' make life a monument'. Over the course of time, the institutional and spatial parameters of

46
Shannon Mattern, "Sharing is Tables: Furniture for Digital Labor," *E-Flux Journal*, Positions, 9 October 2017.

47
Henri Lefebvre, *The Production of Space* (Oxford: Blackwell, 1991), 220–221. In this book chapter Lefebvre writes: "[A] monument transmutes the fear of the passage of time, and anxiety about death, into splendour."

48
David Harvey, *The Enigma of Capital and the Crises of Capitalism* (London: Profile Books, 2011), 122–123.

49
Robert *Venturi*, Denise *Scott Brown*, and Steven Izenour, *Learning from Las Vegas* (Cambridge, MA: MIT Press, 1977 [1972]), 156.

the enforced participation in monumentality have changed: from pompous pageants and processions aimed at strengthening collective identity to the global online parade of selfie-postings, the circulation of which seems to provide a way to avoid being meaningless and deprived of social value. This shift in emphasis, and the new correlation between concrete locale and ubiquitous circulation, highlights the intentionally schizophrenic character of platforms: their capacity to appear everywhere and reside nowhere, to always be in contact but never in touch.
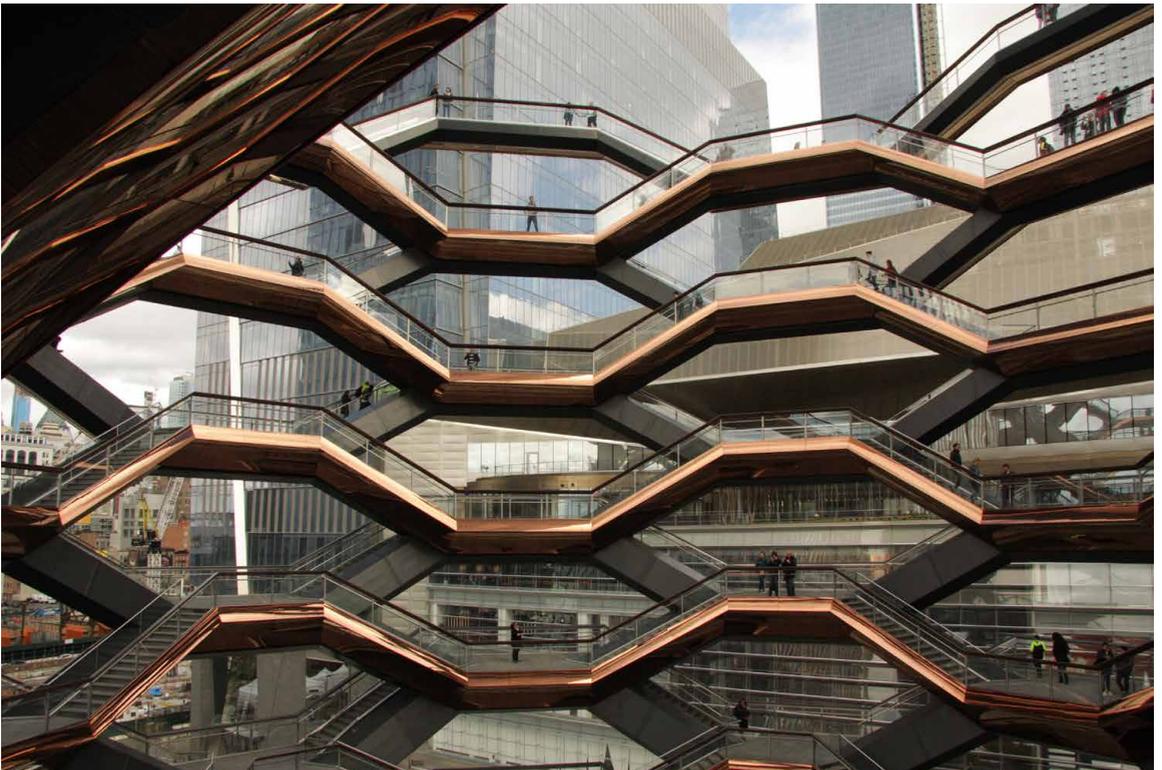
Heatherwick Studio, Vessel, Hudson Yards, New York, 2019

Data is a relation not a property

Applying knowledge gained through data mining in previous core operations, platforms such as Amazon, Facebook, Google and Uber have been striving to expand their primary product line and market reach by encroaching on as many spheres of urban life as possible. Amazon has developed from a virtual bookshop into a world-leading retailer of material goods and is now seeking to exploit its access to billions of customer reviews to tailor a range of product offerings in physical retailing outlets within urban space. Providing open access to its workflow management platform Airflow, Airbnb acts not only as a global rental agency for short-term accommodation but is also making use of its vast quantities of urban data to strategically link up with other data-driven economic arenas such as the Internet of Things. Google is using its supremacy in the field of information organisation to facilitate the development of entire urban neighbourhoods in tandem with its sister company Sidewalk Labs.[50] WeWork has rebranded itself as We Company as part of an attempt to extend its know-how regarding the optimisation of workspace und people's desires for communality from co-working to co-everything, beginning with housing and education. And Uber is using the data it has recorded about the movement of people in urban space to establish strategic partnerships with city planners via its urban mobility platform Uber Movement. These targeted attempts at urban innovation are less indicative of an integration of urban development into technological changes than of the transformation of the process of city-making itself into a vehicle for steering technological advancements, and by extension, channelling massive profits towards the highest strata of society.

At the heart of this development lie the generation, collection and analysis of data.[51] The recent expansion of data-recording technologies and the rise of platform applications that promise ways of capitalising on these data have brought a profound shift in the priorities of urban development.[52] Now urban life itself has been identified as the prime mechanism for inducing economic growth and wealth generation.[53] That is to say, cities, both as physical structures and cultural and social fabrics, have become the primary target when it comes to accessing and controlling data as a key ingredient of the success of novel platform economies. Even though individual successes have been achieved in forcing platform companies to share this data in the public interest, platforms still manage to hold on to enormous commercial gains that come with keeping valuable data proprietary. In addressing this situation, consideration needs to be given to data extraction not only in terms of digital platforms that capture urban activity but also with regard to the emerging platform of the urban itself as a medium of capture.[54]

From the point of view of interface design, the routine business of urban life offers the dual benefit of being a data source that can be mined and a channel that can be utilised to sell services based on the exploitation of that very data. As such, cities have become the

50 Ellen P. Goodman and Julia Powles, "Urbanism under Google: Lessons from Sidewalk Toronto," *Fordham Law Review* 88, no. 2 (2019): 457–498; Mike Hodson and Andrew McMeekin, "Global Technology Companies and the Politics of Urban Socio-Technical Imaginaries in the Digital Age: Processual Proxies, Trojan Horses and Global Beachheads," *Environment and Planning A: Economy and Space* (March 2021), https://doi.org/10.1177/0308518X211002194.

51 Jathan Sadowski, "When Data is Capital: Datafication, Accumulation, and Extraction," *Big Data & Society* 6, no. 1 (2019), https://doi.org/10.1177/2053951718820549.

52 Alan Wiig and Elvin Wyly, "Introduction: Thinking through the Politics of the Smart City," *Urban Geography* 37, no. 4 (2016): 485–493.

53 McKenzie Wark, *Capital Is Dead. Is This Something Worse?* (London: Verso, 2019).

54 Maros Krivý, "Becoming-Platform, the Urban and the City," *Mediapolis – A Journal of Cities and Culture* 3, no. 4, Roundtables (24 October 2018), https://www.mediapolisjournal.com/2018/10/becoming-platform/.

perfect lubricant for the global distribution of technologies that attract investment in change. What is at stake here for digital platforms is the establishment and control of environments generating sufficient amounts of 'noise' – that is, sets of information that can be subjected to algorithmic processing in the quest for knowledge about new patterns of behaviour, consumption and interest.[55] The purpose of people populating these 'smart' environments amounts to the provision of such noise, which in turn rests on them being active and in conversation with each other. Hence, the surge of staged encounters in indoor and outdoor urban spaces – the informal lounges in corporate environments, the hang-out nooks in corridors and lobbies, the laid-back roof terraces, the free coffee counters – to ensure occupants, or 'members' as they are now increasingly called, remain in constant circulation, generating information about their interaction with their environment, i.e. data points. Even better is when these members remain 'in conversation' with the system, pro-actively reporting back on their experiences via social media posts or ambient computing devices such as voice assistants, bots and in-the-air gesture interfaces.

Day after day, we are seeing the emergence of new forms of data analytics, dataveillance and algorithmic governance, and these technologies are bringing into focus the complex links between urban environments, digital platforms, online intermediaries, governments and users.[56] While there is still a considerable lack of transparency about how these links are forged through distinct sets of operations, through the creation of hybrid data environments, new governmental techniques and new technological devices, their impacts are becoming ever more tangible in the urban realm. From corporate and military surveillance systems to artificial intelligence for autonomous cars and mobility services, and from urban robots that provide 'public engagement' and collect personal data to government agencies' use of machine learning algorithms for anticipatory policing, there is an increasing sense of numbness vis-à-vis the plethora of means that make every aspect of urban life available, controllable and manageable for governments and private corporations. The reductive approach to communications in urban space supported by platforms – templates of question, answer and behavioural options that supposedly improve security but ultimately aim to achieve predictability in the service of power and profit interests – has led to a far-reaching crisis of articulation, which has an effect on human relationships. As Jathan Sadowski has pointed out: 'As smart tech acquires further control […] there is little to no opportunity for the dialogue that is a hallmark of human relations. Instead, these interactions are at their core rigid and commanding rather than communicative.'[57]

An approach to mitigating this crisis could start with reimagining the social fabric of the city in a way that initiates other forms of communication which are ideally not only less exploitable but also guided by other values.[58] The imperatives of the conversational *economy* of platform capitalism could be countered with the demand for a new *culture* of conversation which maintains scope for the

55
Luciana Parisi, "Instrumental Reason, Algorithmic Capitalism, and the Incomputable," in *Alleys of Your Mind: Augmented Intelligence and Its Traumas*, ed. Matteo Pasquinelli (Lüneburg: meson press, 2015), 125–139.

56
Shoshana Zuboff, *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power* (London: Profile Books, 2019).

57
Sadowski, *Too Smart*, 46.

58
Nick Seaver, "Algorithms as Culture: Some Tactics for the Ethnography of Algorithmic Systems," *Big Data & Society* 4, no.2 (2017), https://doi.org/10.1177/2053951717738104.

unproductive, uncreative and unprofitable and within the dialogues of which more in-depth and binding relationships could unfold. Counteracting what Judith Butler has aptly described as the hegemony of an unequal distribution of recognisability[59] (i.e. the relations of power that determine the structure and 'realness' of data by recognising particular relations as valuable while disregarding others), such a culture would constitute a more evenly accessible forum for the distribution of possibilities and recognisabilities within the social fabric.[60]

Creating this forum means recognising that data, as a mode of meaning-making, comes into being only in a situation of exchange, in an encounter with something or someone 'other'. Data is constituted in the endeavour to describe these events and to develop reference systems to express and navigate such situations. To put it differently, rather than being a property, data is both a way and a form of articulating a relation. What is therefore at stake is not so much the question of which value we put on data but of how we value the relations that underpin the generation of data. That is to say, what matters is not what price we demand for our personal data but how we care about our relations unfolding in the social sphere.

If we want to argue for the proposition of data as relation and not as property, it is crucial to reflect on the structures and terms of recognition that are in place in cities and other environments, the performativity of data and its potential to yield different kinds of subjectivities[61] as well as the character of relations recognised by data mining techniques. Such reflection leads unavoidably to a discussion of the question of the self and, as Étienne Balibar puts it, 'the loss of property which is at the core of the subject's resistance to identification' as 'inseparable from the question of the community', as an opening to a political praxis of togetherness that operates beyond appropriation and ownership.[62] Once we accept the idea that data is not actually personal property, something which belongs exclusively to oneself, but is rather the result of a collective effort, we can start to think about different forms of care and about different forms of institutions that take care of these relations in the urban realm. Rather than treating data as a stimulant of the neoliberal market economy, we might then begin to accord it more positive attention and see its potential for dissent as the intermediation of a new type of commons, as something that is collectively generated, managed and cared for in cities around the world.

The future is public

In April 2019 at F8, Facebook's annual technology conference, Mark Zuckerberg declared: 'As the world gets bigger and more connected, we need that sense of intimacy more than ever. So that is why I believe the future is private.' Couched in terms of collective needs and aspirations, a platform under public scrutiny for the way it extracts and exploits personal information seems here to be

59
Judith Butler, "Longing for Recognition," in *Hegel's Philosophy and Feminist Thought. Breaking Feminist Waves*, eds. Kimberly Hutchings and Tuija Pulkkinen (New York: Palgrave Macmillan, 2010), 109–129.

60
Peter Mörtenböck and Helge Mooshammer, "Data Is Not a Property but a Relation," in *Data Publics: Public Plurality in an Era of Data Determinacy*, eds. Peter Mörtenböck and Helge Mooshammer (London and New York: Routledge, 2020), 1–25.

61
Adrian Mackenzie, "The Performativity of Code: Software and Cultures of Circulation," *Theory, Culture & Society* 22, no. 1 (2005): 77.

62
Étienne Balibar, "'Possessive Individualism' Reversed: From Locke to Derrida," *Constellations* 9, no. 3 (September 2002): 314–315.

preparing us for a cunningly managed retreat from the public world.
In light of the fact that our urban environments are becoming
not just bigger and more connected but also less inhabitable for more
and more people because of capital's encroachment on the public
sphere, there is real need to cultivate forms of dissent and interven-
tion that can match the rhetorical manoeuvres, fluctuating iden-
tities, undeclared strategies and camouflaged political scripts of the
profiteers of platform urbanism. Achieving this involves not only
shedding light on newly emerging routines and protocols in the con-
text of a global-data and communication economy but also devel-
oping new perspectives on what constitutes 'public awareness', 'the
public domain' and 'the public interest' in an increasingly post-
institutional and 'undeclared' world. What is therefore vital when
attempting to retain the term 'public' in some way is to stress
the plurality and data-dependency of new social entities arising from
this setting. Rather than universalising, harmonising and ho-
mogenising these pluralities, it is important to highlight the conflicts
embedded in this process as well as the new forms of sovereign
power that begin to stake their claims on the future.

These days we are regularly informed about the effect on
public life of the transformation of the production and value chain.
Today's predominant mode of production is no longer the making
of things but the management and control of information. Enterprises
whose business model is oriented to the acquisition and valorisa-
tion of data have become powerful governance and steering bodies.
In addition, these production forms are opening up possibilities
of using ambient computing and communication environments to
penetrate ever deeper into personal spheres, deeper still than today's
social media are capable of. Platforms such as Twitter, Facebook,
Snapchat and Instagram are vehicles for the mobilisation and man-
agement of public communication, public forums for exchange and
interaction. They stimulate our emotional and cognitive capaci-
ties in order to transform them into an informational commodity
form and make private use of this data capital. Here the public
becomes a detour, a kind of tool for channelling attention that is
deployed to divulge the intimate and exploit the private. In order to
better direct and control this flow of productivity, platform providers
are increasingly focussing on the design of smart environments
and the infrastructures, services and objects integrated within them
as agenda-setters, watchdogs and gatekeepers of the platform
economy.

In the years leading up to the global financial crisis of 2007/08,
architecture and the urban realm had been increasingly reduced
to what Karl Marx, in the first sentence of *Capital,* famously termed
an 'immense collection of commodities'[63] [*ungeheure Waren-
sammlung*] aligned with other types of speculative assets. The sub-
sequent remedy of techno-entrepreneurial 'disruption' has seen
architecture and urbanism reinvented as a (data sharing) service.[64]
Today, on the cusp of a post-pandemic world, it seems worth-
while thinking about re-emphasising a more synergetic notion of
architecture as infrastructure, as a key provider of pragmatic and

63
Karl Marx, *Capital: A
Critique of Political
Economy*, vol. 1, trans.
Ben Fowkes (London:
Penguin Books, 1990),
125.

64
See, for instance,
David Bollier, *The
City as Platform:
How Digital Networks
Are Changing Urban
Life and Governance*
(Washington, DC: The
Aspen Institute, 2016).

ideological functions. In the early days of the COVID-19 pandemic, the Big Tech oligopoly was quick to reorient its attention in order to respond to new infrastructural opportunities for managing and controlling urban life – cloud infrastructure, serverless data warehouses, data pipelines, infrastructure as code. In agreements now being made between Big Tech and city governments all over the world decisive determinations on future urban governance are being made far from the realm of public discussion. In synch with the logics of large institutional investors and economic monopoles, informational infrastructure has become a rapidly evolving asset class and has redefined the uneven terrain of urban biopolitics. Platform providers and their investors are speculating on its power to generate an endless repertoire of dispositional spaces with respect to urban dataveillance, risk management and control. Behind these calculations lies an instrumental rationality that assumes that all parameters of urban life can be comprehended with the help of digital and structural provisions, making it possible to model, predict, manage and resolve every situation as it unfolds.[65]

Faced with this depressingly technocratic and economistic view of the city,[66] surely it is worth considering reclaiming a notion of architecture and urban space as public infrastructure, as a site of dissent, critique and resistance. As Tarleton Gillespie predicted in 2010 in his seminal text on the politics of online platforms, platform providers have become the curators of public discourse.[67] And in this role, while modelling the infrastructure of the conversational economy, platforms siphon off profits derived from the public flow of information. The design of this infrastructure regulates the unfolding and recognition of relationships. It determines the space given to economically exploitable forms of communication and excludes 'unprofitable' forms of exchange from the public sphere. Countering these one-sided choreographies of public interaction and the unidirectional nature of user data is necessary not only to extend the circle of beneficiaries of urban data traffic but also to make the discussion of a just distribution of prosperity and democratic participation in cities a public matter.

Platforms are now setting the tone in the reshaping of urban life through the proliferation of infrastructural spaces and urban networks. They are an effective mechanism whose 'conjunctural geographies'[68] – the flexible embeddedness and dis-embeddedness of space-time assemblages managed by platforms – has led to a global scattering of elastic spatial assemblages in which the value generated by collective production is extracted from the locales in which this production takes place. The physical terrain of the city is inscribed on these platforms in the form of user-generated content, and, conversely, platforms themselves have become the new form of city. Cities in which platform services are becoming the all-encompassing form of interaction and platform providers are becoming part of the elite of the new rentier capitalism[69] are transforming themselves into interchangeable nodes of incessant circulation in the shadow of which an increasing number of people are struggling to subsist. Conceding the potential for self-deter-

65
Rob Kitchin, "The Real-Time City? Big Data and Smart Urbanism," *GeoJournal* 79 (2014): 1–14.

66
Agnieszka Leszczynski, "Glitchy Vignettes of Platform Urbanism," *Environment and Planning D: Society and Space* 38, no. 2 (2019): 189–208.

67
Tarleton Gillespie, "The Politics of 'Platforms'," *New Media & Society* 12, no. 3 (2010): 347–364.

68
Mark Graham, "Regulate, Replicate, and Resist – the Conjunctural Geographies of Platform Urbanism," *Urban Geography* 41, no. 3 (2020): 453–457.

69
Brett Christophers, *Rentier Capitalism* (London and New York: Verso, 2020).

mined public efficacy to the plurality of these new socialities is
becoming a decisive issue with regard to the quality of future cities.

Recognising, establishing and employing platforms as a sphere
of public conversation, contestation and conflict could open up a
range of opportunities for other forms of co-existence. Importantly,
such public cultures could help to illuminate and engage with the
wide spectrum of antagonisms inherent in platform-run societies –
between the ability to participate across spatial and temporal
divides and the constant threat of arbitrary exclusion; between the
benefit of connecting and accessing shared resources and the pres-
sure to be permanently available and economise every moment;
between the pursuit of a myriad of collectively determined values
and the flattening of diversity into homogeneous categories. As
communicatively enabled (and constrained) spaces of exchange and
transformation, platforms could herald new freedoms to reach
out beyond the confines of territorially bounded concepts of space,
or they could pave the way toward an acceleration of technologi-
cally augmented modes of exploitation and inequality. Making plat-
forms and their interaction with the built environment a public
matter – as we attempt to do in this book – is a first step toward
ensuring that future urban paths are determined by the many,
not the few.

BIBLIOGRAPHY

ADAMS, Ross Exo
Circulation and Urbanization. London: Sage, 2019.

AGAMBEN, Giorgio
The Kingdom and the Glory: For a Theological Genealogy of Economy and Government – Homo Sacer II.2. Stanford, CA: Stanford University Press, 2011.

ARONOFF, Kate
"Thank God It's Monday." *Dissent* 64, no. 1 (Winter 2017): 55–63.

BALIBAR, Étienne
"'Possessive Individualism' Reversed: From Locke to Derrida." *Constellations* 9, no. 3 (September 2002): 299–317.

BARNS, Sarah
"Negotiating the Platform Pivot: From Participatory Digital Ecosystems to Infrastructures of Everyday Life." *Geography Compass* 13, no. 9 (2019): e12464.

BAUDRILLARD, Jean
Simulacra and Simulation. Ann Arbor, MI: University of Michigan Press, 1994.

BOLLIER, David
The City as Platform: How Digital Networks Are Changing Urban Life and Governance. Washington, DC: The Aspen Institute, 2016.

BUTLER, Judith
"Longing for Recognition." In *Hegel's Philosophy and Feminist Thought. Breaking Feminist Waves*, edited by Kimberly Hutchings and Tuija Pulkkinen, 109–129. New York: Palgrave Macmillan, 2010.

CALLON, Michel
"Revisiting Marketization: From Interface-Markets to Market-Agencements." *Consumption Markets & Culture* 19, no. 1 (2016): 17-37.

CHRISTOPHERS, Brett
Rentier Capitalism (London and New York: Verso, 2020).

CUPPINI, Niccolò, and Mattia Frapporti
"Logistics Genealogies. A Dialogue with Stefano Harney." *Social Text* 136 (September 2018): 107.

EASTERLING, Keller
Extrastatecraft: The Power of Infrastructure Space. London and New York: Verso, 2014.

ESPOSITO, Elena
The Future of Futures: The Time of Money in Financing and Society. Cheltenham: Edward Elgar, 2011.

FIELDS, Desiree, David Bissell, and Rachel Macrorie
"Platform Methods: Studying Platform Urbanism outside the Black Box." *Urban Geography* 41, no. 3 (2020): 462–468.

FRISCHMANN, Brett, and Evan Selinger
Re-Engineering Humanity. Cambridge: Cambridge University Press, 2018.

GANDY, Matthew
"Cyborg Urbanization: Complexity and Monstrosity in the Contemporary City." *International Journal of Urban and Regional Research* 29, no. 1 (2005): 26–49.

GILLESPIE, Tarleton
"The Politics of 'Platforms'." *New Media & Society* 12, no. 3 (2010): 347–364.

GOLDMAN, Michael
"Speculative Urbanism and the Making of the Next World City." *International Journal of Urban and Regional Research* 25, no. 3 (2011): 555–581.

GOODMAN, Ellen P., and Julia Powles
"Urbanism under Google: Lessons from Sidewalk Toronto." *Fordham Law Review* 88, no. 2 (2019): 457–498.

GRAHAM, Mark, Rob Kitchin, Shannon Mattern, and Joe Shaw, eds.
How to Run a City Like Amazon, and Other Fables. London: Meatspace Press, 2019.

GRAHAM, Mark
"Regulate, Replicate, and Resist – the Conjunctural Geographies of Platform Urbanism." *Urban Geography* 41, no. 3 (2020): 453–457.

GRAHAM, Stephen, and Simon Marvin
Splintering Urbanism: Networked Infrastructures, Technological Mobilities and the Urban Condition. London and New York: Routledge, 2001.

HALPERN, Orit
Beautiful Data: A History of Vision and Reason since 1945. Durham, NC: Duke University Press, 2015.

HARVEY, David
The Enigma of Capital and the Crises of Capitalism. London: Profile Books, 2011.

HAYEK, Friedrich A.
Studies in Philosophy, Politics and Economics. Chicago, IL: University of Chicago Press, 1967.

HODSON, Mike, and Andrew McMeekin
"Global Technology Companies and the Politics of Urban Socio-Technical Imaginaries in the Digital Age: Processual

Proxies, Trojan Horses and Global Beachheads." *Environment and Planning A: Economy and Space* (March 2021). https://doi.org/10.1177/0308518X211002194.

JAQUE, Andrés
"Grindr Archiurbanism." *Log* 41 (November 2017): 74–84.

JAMESON, Fredric
Postmodernism, or, the Cultural Logic of Late Capitalism. Durham, NC: Duke University Press, 1991.

KITCHIN, Rob
"The Real-Time City? Big Data and Smart Urbanism." *GeoJournal* 79 (2014): 1–14.

KLEIN, Naomi
The Shock Doctrine: The Rise of Disaster Capitalism. London: Penguin Books, 2007.

KRIVÝ, Maros
"Becoming-Platform, the Urban and the City." *Mediapolis – A Journal of Cities and Culture* 3, no. 4, Roundtables (24 October 2018). https://www.mediapolisjournal.com/2018/10/becoming-platform/.

LANGLEY, Paul, and Andrew Leyshon
"Platform Capitalism: The Intermediation and Capitalization of Digital Economic Circulation," *Finance and Society* 3, no. 1 (2017): 11–31.

LEFEBVRE, Henri
The Production of Space. Oxford: Blackwell, 1991.

LESZCZYNSKI, Agnieszka
"Glitchy Vignettes of Platform Urbanism," *Environment and Planning D: Society and Space* 38, no. 2 (2019): 189–208.

LYOTARD, Jean Francois
Libidinal Economy. Bloomington, IN: Indiana University Press, 1993.

MACKENZIE, Adrian
"The Performativity of Code: Software and Cultures of Circulation." *Theory, Culture & Society* 22, no. 1 (2005): 71–92.

MARX, Karl
Capital: A Critique of Political Economy. Vol. 1 [1867]. Translated by Ben Fowkes. London: Penguin Books, 1990.

MATTERN, Shannon
"Sharing is Tables: Furniture for Digital Labor." *E-Flux Journal*, Positions, 9 October 2017.

MEZZADRA, Sandro, and Brett Neilson
Border as Method, or, the Multiplication of Labor. Durham, NC: Duke University Press, 2013.

MÖRTENBÖCK, Peter
"Global Informality: Bottom-up Trade and Transnational Realignments." In *Informal Market Worlds Reader*, edited by Peter Mörtenböck, Helge Mooshammer, Teddy Cruz, and Fonna Forman, 105–118. Rotterdam: nai010 Publishers, 2015.

MÖRTENBÖCK, Peter, and Helge Mooshammer
Visual Cultures as Opportunity. Cambridge, MA: MIT Press, 2016.

MÖRTENBÖCK, Peter, and Helge Mooshammer
"Data Is Not a Property but a Relation." In *Data Publics: Public Plurality in an Era of Data Determinacy*, edited by Peter Mörtenböck and Helge Mooshammer, 1–25. London and New York: Routledge, 2020.

MÖRTENBÖCK, Peter, and Helge Mooshammer
"My Home Is My Future." *ARCH+* 244 (2021).

MUNN, Luke
Logic of Feeling: Technology's Quest to Capitalize Emotion. Lanham, ML: Rowman and Littlefield, 2020.

ONG, Aihwa
Flexible Citizenship: The Cultural Logics of Transnationality. Durham, NC: Duke University Press, 1999.

PARISI, Luciana
"Instrumental Reason, Algorithmic Capitalism, and the Incomputable." In *Alleys of Your Mind: Augmented Intelligence and Its Traumas*, edited by Matteo Pasquinelli, 125–139. Lüneburg, meson press, 2015.

POLLMAN, Elizabeth, and Jordan M. Barry
"Regulatory Entrepreneurship." *Southern Californian Law Review* 90 (2016): 383–448.

RIBOT, Jesse C., and Nancy Lee Peluso
"A Theory of Access." *Rural Sociology* 68, no. 2 (2003): 153–181.

RICHARDSON, Lizzie
"Coordinating the City: Platforms as Flexible Spatial Arrangements." *Urban Geography* 41, no. 3 (2020): 459–461.

SADOWSKI, Jathan
"When Data Is Capital: Datafication, Accumulation, and Extraction." *Big Data & Society* 6, no. 1 (2019). https://doi.org/10.1177/2053951718820549.

SADOWSKI, Jathan
"The Internet of Landlords: Digital Platforms and New Mechanisms of Rentier Capitalism." *Antipode – A Radical Journal of Geography* 52, no. 2 (2020): 562–580.

SADOWSKI, Jathan
Too Smart: How Digital Capitalism Is Extracting Data, Controlling Our Lives, and Taking Over the World. Cambridge, MA: MIT Press, 2020.

SEAVER, Nick
"Algorithms as Culture: Some Tactics for the Ethnography of Algorithmic Systems." *Big Data & Society* 4, no.2 (2017). https://doi.org/10.1177/2053951717738104.

SERRES, Michel
The Natural Contract. Ann Arbor, MI: University of Michigan Press, 1995.

SHAW, Joe
"Platform Real Estate: Theory and Practice of New Real Estate Markets." *Urban Geography* 41, no. 8 (2019): 1037–1064.

SMITH, Chris L.
"The Libidinal Economy of Architecture." In *Economy and Architecture*, edited by Juliet Odgers, Mhairi McVicar, and Stephen Kite, 108–117. London and New York: Routledge, 2015.

SRNICEK, Nick
Platform Capitalism. Cambridge: Polity Press, 2017.

TOMŠIČ, Samo
The Labour of Enjoyment: Towards a Critique of Libidinal Economy. Berlin: August, 2019.

VENTURI, Robert,
Denise Scott Brown, and
Steven Izenour
Learning from Las Vegas. Cambridge, MA: MIT Press, 1977 [1972].

WARK, McKenzie
Capital Is Dead. Is This Something Worse? London: Verso, 2019.

WIIG, Alan, and Elvin Wyly
"Introduction: Thinking through the Politics of the Smart City." *Urban Geography* 37, no. 4 (2016): 485–493.

WOODCOCK, Jamie, and Mark Graham
The Gig Economy: A Critical Introduction. Cambridge: Polity Press, 2019.

ŽIŽEK, Slavoj
"The Libidinal Economy of Subjectivity." *The Philosophical Salon – A Los Angeles Review of Books Channel*, 5 August 2019. https://thephilosophicalsalon.com/the-libidinal-economy-of-singularity/.

ZUBOFF, Shoshana
The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power. London: Profile Books, 2019.

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The *New*
Capital.
Access Is
The *New*
Capital.
Access Is
The *New*
Capital.
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