

Standby

Organizing modes of in|activity



ephemera: theory & politics
in organization

What is *ephemera*: theory & politics in organization?

ephemera is an independent journal, founded in 2001. *ephemera* provides its content free of charge, and charges its readers only with free thought.

theory

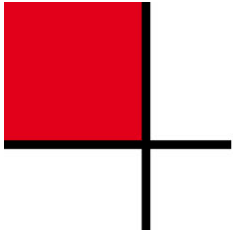
ephemera encourages contributions that explicitly engage with theoretical and conceptual understandings of organizational issues, organizational processes and organizational life. This does not preclude empirical studies or commentaries on contemporary issues, but such contributions consider how theory and practice intersect in these cases. We especially publish articles that apply or develop theoretical insights that are not part of the established canon of organization studies. *ephemera* counters the current hegemonization of social theory and operates at the borders of organization studies in that it continuously seeks to question what organization studies is and what it can become.

politics

ephemera encourages the amplification of the political problematics of organization within academic debate, which today is being actively de-politized by the current organization of thought within and without universities and business schools. We welcome papers that engage the political in a variety of ways as required by the organizational forms being interrogated in a given instance.

organization

Articles published in *ephemera* are concerned with theoretical and political aspects of organizations, organization and organizing. We refrain from imposing a narrow definition of organization, which would unnecessarily halt debate. Eager to avoid the charge of ‘anything goes’ however, we do invite our authors to state how their contributions connect to questions of organization and organizing, both theoretical and practical.



ephemera

theory & politics in organization

ephemera 21(1), Feb 2021

Standby: Organizing modes of in|activity

Laura Kemmer, Annika Kühn, Birke
Otto, Vanessa Weber

Published by the *ephemera* editorial collective: Bernadette Loacker, Birke Otto, Christian Garmann Johnsen, Christos Giotitsas, Ekaterina Chertkovskaya, Emil Husted, Justine Grønbæk Pors, Jette Sandager, Karolina Mikołajewska-Zajac, Lena Olaison, Lisa Conrad, Márton Rácz, Mie Plotnikof, Nick Butler, Ozan Nadir Alakavuklar, Randi Heinrichs, Rowland Curtis, Yousra Rahmouni Elidrissi.

First published for free online at www.ephemerajournal.org.

ISSN (Online) 1473-2866

This work is licensed under the Creative Commons Attribution-Noncommercial-No Derivative Works 3.0 Unported. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc-nd/3.0/> or send a letter to Creative Commons, 171 Second Street, Suite 300, San Francisco, California, 94105, USA.

Front cover: Artwork by Jim Henderson. *ephemera* wishes to thank the artist for licensing under the Creative Commons 1.0 Universal Public Domain Dedication.

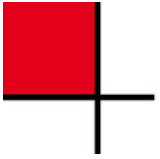


Table of Contents

Editorial

- Standby: Organizing modes of in|activity 1-20
Laura Kemmer, Annika Kühn, Birke Otto and Vanessa Weber

Interview

- Pandemic times. A conversation with Lisa Baraitser about the temporal politics of COVID-19 21-30
Laura Kemmer, Annika Kühn and Vanessa Weber

Articles

- Being on Standby: On maintenance work in chronic disease management 31-58
Lisa Wiedemann
- Standing by for data loss: Failure, preparedness and the cloud 59-93
A.R.E. Taylor
- Waiting on standby: The relevance of disaster preparedness 95-135
Joe Deville
- Standby urbanization: Dwelling and organized crime in Rio de Janeiro 137-172
Frank Müller
- Hydraulic standby: Anticipating water in Mexico City 173-196
Anke Schwarz

Ruined museums: Exploring post-foundational spatiality 197-228
Friederike Landau and Lucas Pohl

Dancing with a billboard: Exploring the affective repertoires of
gentrifying urban spaces 229-253
Linda Lapiņa

Notes

Scenes of the bystander 255-265
Derek McCormack

After progress: Notes for an ecology of perhaps 267-281
Martin Savransky

On Standby ... at the borders of 'Europe' 283-300
Nicholas De Genova

Films

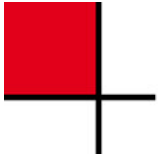
#standby 301-302
Annika Kühn

Talking photobooks: Standing by Kinshasa 303-304
Alexa Färber, Laura Kemmer, and AbdouMaliq Simone

Reviews

The foamy politics of surfing in Hawaii 305-311
Marie Lecuyer

Moving and mapping (with) Actor-Network Theory 313-322
Milena D. Bister



Standby: Organizing modes of in|activity

Laura Kemmer, Annika Kühn, Birke Otto and Vanessa Weber

Introduction

In the technical sense, standby refers to an operating state in which energy continues to flow despite an apparent shutdown, thus allowing for sudden reactivation. However, the term ‘standby’ extends to realms beyond electronic devices, and it has long since shaped the work environments of people such as medical practitioners, military troops, or airplane staff. Following up on this observation, this special issue of *ephemera* explores how standby acts as an ordinary *mode of organizing* sociomaterial lifeworlds. The standby icon seen on this issue’s cover – a line breaking a circle – represents the binary language of computers, with the numbers ‘1’ for ‘on’ and ‘0’ for ‘off’ being merged into a simultaneous on-offness. If we mobilize the concept as a lens through which to observe social phenomena, standby can be understood as a state of ‘in|activity’ that indicates readiness without immediate engagement, but that nevertheless requires and generates energy, resources, and relations. As such, we explore the notion of standby as a mode of organizing that integrates new materialist, affect-theoretical and time-space-focused approaches to denote a field of tension between the contingent and persistent, between the exceptional and ordinary, between the human and nonhuman.

For this issue, we have compiled a series of conceptual, methodological, and empirical explorations that scrutinize the forces and frictions of standby as a mode of organizing not necessarily dependent on full operation. Such a

mode includes the deceptive stillness of vacant transport terminals, urban wastelands, and memorials; the busy background activities of air pollution sensors and water meters; the constant maintenance work required to keep mobile devices and data storage facilities active; or the security forces that maintain a state of readiness to respond to possible emergencies. Our primary interest lies in standby's capacity to create, regulate, and synchronize heterogeneous formations of people, things, natural elements, and technologies through the collective state of being prepared to be available. The contributions to this issue raise questions of agency, power, and resistance that particularly come to light when, for example, migrants and refugees stand by at Europe's frontiers, when marginalized populations' lives are held in limbo in urban peripheries, or when casual bystanders witness a wrongdoing without intervening. With these cases and others, the authors in this issue invite us to explore the sociomaterial compositions and political implications of what it means to never really shut down.

The editorial to this issue is an invitation to think with standby in its different facets and mutability. The first part explicates our definition of standby as an ambiguous term of organizing in|activity. As we worked on this special issue, a number of questions in need of addressing emerged: For instance, how does standby relate to notions of availability and disposability? Is standby a form of 'stuckness'? What is the difference between standby and 'waiting'? Collectively, we hope to offer new answers to these questions as discussed in fields such as organization studies, mobility studies, urban and infrastructural research, feminist studies of affect, and science and technology studies (STS). The second part of this editorial introduces our contributions, which illustrate standby's potential to be mobilized for a wide range of themes, including ways of dealing with contemporary crises, technological transitions, urbanization effects, and methodological questions. We conclude by offering three analytical dimensions that allow us to capture the ambiguity of standby: the *power* to have command over availability and disposability; the *relationality* of looseness and detachment; and the *temporality* of circular durations.

Available, but not in demand

Standby has long figured in human lifeworlds by way of ‘on-demand’ labour, a practice historically rooted in the agricultural and stevedore work of seasonal workers and day labourers and stretching to the precarious present whereby a broad segment of temporarily and (in)formally employed immigrants and displaced people around the world must take whatever short-term work they can find, whenever they can find it (Gill 2015, Gutiérrez-Rodríguez 2010, Valenzuela 2003).

Writing about the socioeconomic implications of holding people and capital in such a state of constant availability, Karl Marx and Friedrich Engels coined the term ‘reserve army of labour’ (Marx, 2004 [1867]). This notion refers to the experience of a ‘surplus population’ (Engels, 1993 [1845]: 149) of labouring bodies kept ready for deployment should capitalist demand increase.¹ Through scholars from Pierre Bourdieu (1998) to Judith Butler (2004), a multifarious canon of academic engagements has emerged, exploring both the politico-economic dimensions of precarity and the ontological condition of precariousness. In the context of work, this condition carries a sense of permanent ‘replaceability’ in relation to contingent, irregular, and uncertain work arrangements. Ultimately, what such academic engagements with standby as reserve illustrate is that *being available does not necessarily imply being in demand*.

This argument is also put forward in a growing body of literature that deals with changing labour relations and the increasing monetization of latent time in the gig economy context (Stanford 2017, Free 2020).² In this case, scholars are referring to the material, affective, and temporal enactments of

¹ Similarly, but with less focus on human standby, Martin Heidegger has offered the Rhine river in Europe as an example of the implications of a ‘standing reserve’, arguing that it has lost its poetics as a natural flowing watercourse by becoming a resource ready to generate hydroelectric energy (Heidegger 1977: 16, cf. Müller and Weir, 2018, unpublished).

² We owe many of the ideas developed in this section to David Bissel’s inputs, including an early draft on ‘Standby labour for platform mobilities’ (2018, unpublished), which he kindly shared with us in the course of this project.

‘disposability’ that gig workers experience by being under the constant threat that other workers (short-term) or technologies (long-term) will replace them (Straughan et al., 2020; Scholz, 2017). Achille Mbembe (2004: 374) has further examined the affective dimension of disposability from the perspective of working and living in African metropolises, arguing that such a condition is embedded in a ‘dialectics of indispensability and expendability’ that generates psychic states of vulnerability extending beyond work relations to impact every sphere of life.

‘On hold’, but not stuck

As feminist critiques have indicated, the affective implications of standby become apparent when one studies how conditions of precarity, contingency, and crisis linger on and intensify in the shadow of liberal capitalist promises for ‘better futures’ (e.g. Povinelli, 2011, Berlant, 2011). In lieu of struggling for transformation, people seem to cling to auspicious government policies of cultural recognition and the promise of urban living conditions or to labour rights, despite their apparent shortcomings and at times detrimental effects.

Studies following in Lauren Berlant’s tradition have suggested that the failed promises of the present create an affective sense of being stuck indefinitely in a ‘midway place between hell and heaven’ (Otto and Strauss, 2019: 1806). Understood this way, standby as ‘impasse’ normalizes the permanent threat of uncertainty (Berlant, 2011: 199), thus bringing an affective tension and nervousness into everyday life, much like the ‘white noise’ that pervaded in analogue television times (Berlant, 2006: 23). However, Berlant argues, the ordinariness of such affective unease can also function as a soothing rhythm, constantly lulling people into ‘a thick moment of ongoingness’, of transitions and adjustments to the current state (*ibid.*, 200).

Still, the seemingly endless succession of promises that ‘things will be better’ can be disrupted if one conceptualizes standby not as a state of being, but as a verb. As Laura Kemmer and AbdouMaliq Simone (2021) have shown, everyday acts of ‘standing by’ enable people to hold on to the promises of the present, for the possibility of these promises’ being broken ceases to matter when the act of standing by in itself becomes a tactical manoeuvre

that functions to hold the promisors accountable and to keep the very objects and aspirations connected to their promises in play (cf. also Färber et al., this issue). As such, while being on standby can exhaust a person having to cope with indeterminate futures, *standing by is not tantamount to being stuck*.

Thus, standing by can be understood as an activity embodying the strategies and potentials of waiting, perseverance, and endurance – a way of coping with detrimental material and social conditions. This way, a standby perspective raises awareness of the potentialities inherent in the ‘small agencies’ that inhabit a predicament of stuckness (Jokinen, 2016: 87), and it registers and takes seriously the ‘multiple aspirational moods’ that standby can create (Färber 2020).

Ephemeral, but recurring

If we consider the feeling of being stuck in standby as a prevalent condition generated in late liberalism, then we need to interrogate the ‘hidden politics of waiting’ as a permanent but undesirable condition in various social spheres (Straughan et al., 2020). For instance, human geographers and anthropologists have used the notion of waiting to describe a condition of being ‘locked in’ spaces of enclosure like the Gaza Strip (Joronen, 2017) or to highlight subaltern experiences of endless, ‘chronic waiting’ (Jeffrey, 2008) in refugee camps and other spaces of resettlement (see also De Genova and Müller, this issue). In contrast to waiting, however, standby concerns something more than a phenomenological quality, a transitory moment to achieve other ends, as it also depicts a metastable state in which competing tensions build the ground for transformation (Simondon, 2009: 6). This conception brings standby closest to a Bergsonian notion of *durée*, a ‘continuous transition in itself’ (Bergson, 2007: 2), which embraces a set of repeating and overlapping temporalities without necessarily incorporating linearity (Kühn, forthcoming).

Along these lines, Gisa Weszkalnys (2016) has developed a concept of ‘pause’ to explore a quality of capitalist time not fully captured by the Marxian notion of ‘reserve’ labour. Marx, Weszkalnys points out, considers pauses necessary for workers to ‘recharge’ or for soil to regain its fertility,

but these pauses must be kept brief to guarantee ‘the flow of production’ (Marx, 2013: 647; quoted in *ibid.*). In a study of today’s capitalistically organized oil industry, she shows how the pauses between periods of exploration, zoning, contractual negotiation, financial speculation, infrastructural provision, and the actual oil extraction are instead actively sustained. In this case, pausing organizes (extraction) infrastructures into rhythmic cycles of ‘dormancy, not death’, thus maintaining the sense of hope and extending ‘the promise of a profitable future’ (*ibid.*: 624, 633). In this light standby as mode of organizing realigns a multiplicity of temporal-material arrangements that emerge during periodical moments of slowdown (*ibid.*), thereby retaining its air of something fleeting and unstable, yet gaining a sustaining power through its recurrence.

Switched off, but not disconnected

As STS works suggest, the paused mode of standby can be understood as an ‘intermediate stage’, whereby a shutdown is not seen as the end of a process but rather as successive moments of failure that gain consistency through their repetition (de Laet and Mol, 2000: 240). This preliminary quality of pausing is also reflected in the technical understanding of standby as ‘plugged in’ but not receiving full voltage. Yet, as Annika Kühn (forthcoming) shows, in this case standby can be understood as an infrastructural state of *planned* detachment. During standby, the withdrawal, reduction, or impassibility of some components – that is, workers, energy flows, or techno-material elements – points to modes of (partial) disconnectivity without necessarily implying dysfunctionality (Candea et al., 2015; Harvey and Knox, 2015; Knox et al., 2015; Stäheli, 2013; Strathern, 1996). Detachment is considered an instant of operational and affective indifference, thus casting doubt on conventional understandings of relationality and organization. From the perspective of partially disconnected social formations that are still somehow available for each other, *being switched off does not necessarily mean being disconnected*.

In this sense, standby requires looking into practices of maintaining and managing ‘loose bonds’, not as a means of repairing, but rather of forging provisional arrangements that *remain* provisional (Kemmer and Simone, 2021; see also Färber et al., this issue). When failure and breakdown are

rendered constitutive of contemporary lifeworlds – as an analytical consideration of ‘constant decay’ (Graham and Thrift, 2007: 1) – standing by for the fragile and precarious becomes inseparably entwined with continuous maintenance work as an ordinary process of (re-)connecting heterogeneous and fragile compositions. Times of slowdown become a possibility – but not a requirement – for weaving and unweaving relations, for repairing what became diffused in operation or destroyed through usage and (lasting) standstill (e.g. Denis and Pontille, 2019; Jackson, 2014; Mol, 2008). In this sense particular types of standby resemble what Mol et al. (2010) describe as a practice of persistent tinkering – a careful practice of ‘holding together that which does not necessarily hold together’ (Law, 2010: 69, see also Baraitser, this issue).

The contributions: Organizing standby

The above analysis deployed a range of theoretical perspectives to illuminate the concept of standby by shining light on various aspects of standby as a mode of organizing. This disciplinary diversity is reflected in our contributions, whose specific questions and cases collectively form a concrete engagement that, as we will argue in the remainder of this editorial, offers a new understanding of standby in terms of its power, relationality, and temporality.

Standing by in crisis

Although the prevailing modes of ordering often mobilize the ideal of the restless neoliberal subject incessantly turning every externally imposed obstacle into new productive opportunities, our current COVID-19 pandemic experience has exposed many of the limits of such contemporary imperatives. It has forced some to put their bustling activities ‘on hold’ while throwing others into intense situations of work, care, and responsibility. A number of contributions to this issue explore the agentic and emancipatory qualities of standing by in crises. They ask whom, what, and how do we act when the conditions that enable acting are suspended, interrupted, or seemingly unfeasible? Crisis impedes and paralyzes; it destroys and kills – but it also reveals and uncovers, opens up spaces for transformation.

In the interview with Lisa Baraitser in this issue, psychosocial perspectives inspire our collective discussion of the notion of standby. Baraitser explores the implications of waiting because an external force, the pandemic, has impeded movement – a common, albeit often-unacknowledged experience connected to care work, even before pandemic times. Rather than see waiting as an undesired predicament, Baraitser focuses on the capacities and skills of affective detachment and withdrawal one cultivates when enduring or even intervening in times of crisis. Thus, Baraitser suggests, outwaiting a crisis can be more than a passive state; it can also be a watchful act, an ‘awareness of observing injustices of a (crisis) situation accompanied by a perpetual readiness or openness to allow for change’ (Baraitser, this issue; Baraitser, 2017).

In a similar gesture, Derek McCormack invites us to reconsider the supposedly passive act of bystanding, often seen as a form of witnessing injustice without interfering in it. Exploring the ethical dimensions of ‘standing by’, he suggests that the figure of the bystander defies any idea of standby as (individual) readiness to act; indeed, the bystander comes to represent the very failure of standby. However, by considering the act of standing by as a *scene* involving a particular moment enabled by certain conditions and capacities, we arrive at an understanding of standby as distributed agency. From this perspective, McCormack’s contribution acts as an ‘encouragement to think about the friction between an expanded conception of standby and a rather more bounded and more human figure’ (McCormack, this issue).

If the bystander’s reaction to crisis suggests paralysis or indifference, the terror and frenzied activity brought on by impending catastrophe capture the opposite. However, this type of response may only serve to drag us ‘deeper into the mud’, Martin Savransky suggests in his contribution, which engages with the question of how to inherit a devastated world. He proposes that a standby perspective rejects the normative valuations of activity and passivity inherent in contemporary understandings of progress. Pointing to the absence of an easy way out of the present environmental crisis and the increasing difficulty of even imagining a better future, he advises us to train our sensibilities, values, habits, and practices to ‘learn to stand by a

perhaps', to trust the insistence of indeterminate futures and to create minor openings for action (Savransky, this issue).

Unlike the contributions that consider a standby mode as a means of coping with an anticipated existential threat, Nicholas De Genova shows us that waiting does not stop once the extreme situation has arrived. Thousands of migrants and refugees in makeshift staging areas without adequate housing and food are living on standby in the Greece/Turkey border regions, ready to cross but prevented from doing so. Despite this waiting predicament, the 'subjectivity and autonomy of migration remains operative', he argues (De Genova, this issue). In fact, migrant activities have proven powerful in re-shaping, re-defining, and debating European borders and identities.

In sum, these contributions highlight the potentials of standby as a distributed mode of organizing with the capacity to reshuffle and shift existing sociomaterial constellations, to change discourses, and to transform the actual lifeworlds of those in need of change.

Standby technologies

Standby technologies like mobile devices or digital clouds promise to stay ever on and connected, to be ready to act when needed. They promise ease, improvement, and the secure feeling of a backup, but there is a trade-off: these technologies require time and energy, maintenance, and care to guarantee their users' existence. Consequently, users must organize standby to maintain technical 'support', a task that requires their constant vigilance as they seek to care for the technologies that promise their survival.

Lisa Wiedemann describes the intimate relation between diabetes patients and their physical connectedness to the battery-powered technologies that assure their survival. These complex more-than-human assemblages require maintenance practices that ensure the technology functions smoothly and prevent technical failure. Within those practices, subjects must exercise permanent vigilance to prevent potential breakdown. Far from freeing them from the responsibility of managing their disease, active digital technologies create new vulnerabilities requiring a constant state of alertness, because

attention is shifted ‘from caring for the body towards caring for technical devices’ (Wiedemann, this issue).

Alexander Taylor makes a similar observation in relation to big data centres, servers, and cloud storage. He considers these technologies to be materialized and built forms of standby created to ensure the continuity of data availability in the face of an ultimately inevitable technical breakdown, suggesting that such technical infrastructures emanate an affective quality of safety derived from their ‘backup’ function. While they require little action on the user’s part, data centre workers expend a tremendous amount of labour, care, and energy to maintain such ‘data prepping’ (Taylor, this issue).

Joe Deville’s article in this issue examines the narrow and precarious line on which the Swiss organization chiefly responsible for disaster preparedness operates in the absence of the catastrophes for which it is preparing. In the absence of such disaster, however, the preparatory work can turn standing by into futile waiting. Deville shows how anticipating a continuous threat of detachment from material, affective, and political bonds actualizes the practice of standing by as an act of relevance-making – a constant trial of reconnecting. Deville carefully explores this process, without ever resolving the tension this limbo implies.

‘Standby urbanization’

In ‘Standby urbanization’, Frank Müller follows Rio de Janeiro’s residents as they navigate through the unstable, sandy grounds on which their dwellings stand in the urban periphery. This muddy foundation serves as an analogy for the uncertain futures projected for these dwellers by Rio’s erratic urban governmental programmes (Müller, this issue). While these policies brutally create a manner of ‘dwelling in limbo’, Müller also shows how marginalized residents strive to challenge and contest the weaknesses of such programmes.

In the case of Mexico City, Anke Schwarz refers to a way of governing urban lives by anticipating certain futures. Raising another slippery and ‘fluid matter’ – water – Schwarz elaborates on the concept of hydraulic standby.

She unfolds a situation where water taps are finally installed in nearly every urban dwelling, but water is nevertheless not always available to run from them. In her ethnographic endeavour, Schwarz defines hydraulic standby as being formed by practices of sensing and buffering that establish the necessary precautions and preparedness to deal with the regular water shortages in the city.

Searching for the political potentials of spaces, Friederike Landau and Lukas Pohl juxtapose the ‘museum’ as a spatial formation representing standstill and order with the ruin as a formation with the potential to disrupt and thereby politicize urban configurations. Taking the example of the Ground Zero memorial in New York, the authors propose that ‘ruined museums’ can be used to highlight the intertwined relationships between politics and the political in urban spaces.

Capturing standby’s affectivity

The last set of contributions in this special issue experiments with capturing the affective qualities of standby. Linda Lapina proposes an inventive methodology for exploring the uncertainties and failures of standby moments by drawing attention to the ‘affective repertoires’ of standby. A spontaneous dance encounter between her as a researcher and a construction site billboard allows her to capture a range of ambivalent, heterogeneous affects that permeate the ‘active inactivity’ of a slowly gentrifying neighbourhood (Lapina, this issue).

Further seeking to transgress the textual form of academic journal writing, two of our special issue editors use two short films to examine the affective encounters of standby. Urban researcher Laura Kemmer and her colleagues Alexa Färber and AbdouMaliq Simone take the photobook ‘Suturing the City. Living together in Congo’s urban worlds’ (De Boeck and Baloji, 2016) as an invitation to discuss the effects and potentialities of (unfulfilled) urban promises. This ‘talking photobook’ (Färber, talkingphotobooks.net) can be found on *ephemera*’s website, appearing there as a resource for research and debate together with Annika Kühn’s short film *#standby*, jointly produced with Berlin and Hamburg-based video artists Friederike Güssefeld, Stefan Rosche, and Iwan Schemet. *#standby* is the end-result of the artists’

detaching and re-ordering of audio-visual material to explore the affectivity of cruise ship terminals on standby. The film guides the viewer through various resting infrastructures – from an entry hall to gangways – thus radicalizing the impression of social detachment. Yet, although the camera certainly rests on infrastructural fragments, it nonetheless captures and creates a pulsating tension – a humming – that becomes almost painfully tangible and near unbearable. This tension merges with the sound of pollution data (turned into music) and babbling voices from busier days, a soundtrack intended to denote the political scope of cruising as a contested global practice and to provide a cacophonous reminder of the ephemerality of stillness – and of standstill.

We end this section with the metaphor of the cruise ship terminal, of its liminal existence born of the regularly alternating states of lull and busyness. This circular rhythm forms the starting point for our conclusion, in which we search for openings for new beginnings that might emerge in organizing modes of in|activity.

Conclusion: Three propositions for an analytical framework

At once evoking an idle presence (the one who merely ‘stands by’, or the ‘bystander’), a metastable state of readiness to act (that which is ‘on standby’), and responsive abidance (‘I stand by you’), standby’s ambiguity might be reason enough to hesitate and pay attention. (Savransky, this issue)

Standby entails a multiplicity of registers through which activity and inactivity are fused into a single space. Building on notions such as availability, stuckness, transitivity, and detachment, we have proposed some entry points for creating an analytical framework that accounts for the ways in which loosely connected compositions are organized. Such a framework can enable us to conceive of power and control struggles that do not rely on a logic of ‘full operation’, and to consider the moral and ethical implications of standby, if conceived of as moving beyond the ‘intervention’ or ‘non-intervention’ binary. As an alternative to a conclusion, we have thus opted to propose three dimensions in which the ambiguities of standby come to the fore and become productive topics for further discussion: *the power of standby, the relationality of standby, and the temporality of standby*. Taking the

three together, we understand them as a set of starting points for analysing how the metastable state of standby depends on the patterning and organizational forces of ‘situational infrastructures’ composed of bodies, devices, and environments (McCormack, this issue, cf. also Berlant, 2016).

The *power of standby* points to situations that command availability. One such powerful mode of standby organizing involves the strategic control held over the fast-shifting and overlapping boundaries between being indispensable and expendable – for example, in forced resettlements (De Genova, Müller), biopolitics (Wiedemann, Baraitser), security governance (Dewille, Taylor), and cultural politics (Landau/Pohl). This power dimension features in De Genova’s critique of how European border regimes decide over migrants and refugees ‘on the move’ and in Müller’s analysis of how (illicit) urban actors allow for the displaced residents of Latin American cities to move to a new housing complex, while others are kept waiting in perpetuity. In summary, the availability-disposability nexus of standby becomes at once a condition of preparedness for all manner of institutional and individual actors and a state of intense and permanent vulnerability: the longer these actors ‘stand by’, the more deeply they must fear for their relevance, as Dewille (this issue) points out. In his analysis, Swiss disaster preparedness becomes an almost institutional perversion, a self-reproducing machinery of ‘prevention’ in danger of losing sight of where to move and which disaster to actually prevent.

However, De Genova’s and Müller’s case studies also show how the standby modality of populations at the periphery remains a resource for potentially outwaiting and outwitting the powerful actors that surround them. Migrants and refugees use the often long periods of standby to tentatively gather force, to self-activate and actively reorganize their lifeworlds, while displaced residents mobilize the sandy ground on which their houses are built to tactically denounce corrupt or criminal actors without overtly taking action. In this sense, the empirical case studies covered in this issue remind us of the importance of attending to the strategic use of standby and to explore inactivity beyond human intentionality. Thinking with standby as the power to command the availability and disposability of others, then, turns the simplistic picture of a passive and seemingly powerless waiting-for into a multi-layered process of distributed agencies.

Approaching the *relationality of standby* raises the question of how it organizes the partial and temporal detachment of some of its components while keeping energy flowing and thus maintaining a relation that can be re-activated on short notice. As our contributors have shown, holding more-than-human compositions in readiness only potentially makes them available. A continuous tinkering with individualized and portable technologies, as occurs with diabetes patients' relation to smartphone apps and transmitters (Wiedemann, this issue), does not guarantee successful activation. However, detachment does not equal disconnection; it rather designates a way of sustaining loose relations through human/nonhuman agency. In other words, if looseness functions as an *ordering principle* in standby, then practices of tinkering (Wiedemann, this issue), of filtering (Weber, 2020), of witnessing (McCormack, this issue), and of standing by (Färber et al., this issue), become a means of keeping collective and more-than-human bodies in pulsation (Kühn, this issue).

In this case, the loose relationality of standby neither generates indifference or absolute disconnection, nor suggests that everyone is a bystander or passive witness to our current conditions of socio-economic injustice and environmental degradation. As Savransky (this issue) states, the multiplicity of participants that compose an environment come to exist *in situ* and *in actu*, consequently rendering the act of staying available for others a situated practice that depends on other non/human actors, geographical locations, and temporalities. This is why McCormack's figure of the bystander essentially points us to the infrastructures that sustain 'tensed inaction', that hold together humans, technologies, and environments beyond their individual capacity to act. Standby as a relational ordering principle thus prompts us to ask how loose connections can manage (partial) detachment in ways that generate new and unexpected formations of collectivity.

The particular circular rhythm of standby – which differs from other conceptualizations of 'linear' progression or finality – points us to standby as a *temporal* mode of organizing manifest in repeated lockdown scenarios (Baraitser, this issue), as anticipation (Schwarz, this issue), as a slowing down of time (Lapina, this issue), or as absent presences (Pohl and Landau, this issue). Often these temporal modes synchronize populations and time-

spaces to make them controllable, predictable, and ready-to-work-with. The repeated duration of standby indicates how despite having a temporal quality of being-in-the-present, standby always also refers to that which comes next (Simone 2017).

This is where Savransky's (this issue) description of the *perhaps* resonates with a notion of standby as an analytical concept developed through an attentive listening to stories that are not stories of progress and that do not sustain capitalist practices of pausing-in-order-to-accelerate. Rather, in these examples standby modes establish a sense of (imagined) futurity that helps us to endure and to persist throughout uncertain times. Baraitser detects this kind of durational power within standby when she describes it as a coping mechanism in times of crisis. However, understood as a practice of staying with stuck time, standby as a mode of crisis intervention demands that one have the ability to manage anxious states of mind (Baraitser, this issue). Such an ability to cope with conflicting and amplifying energies is unevenly distributed in a crisis like the COVID-19 pandemic, as repeated lockdowns, the pressure to cut relations, and job losses disproportionately impact those already hit hard by the detrimental effects of the capitalist economy. As such, standby – as a *temporality* of circular duration and endurance – might then become a moment for movement (ibid) – a way of staying with and claiming more just futures.

Although we are living in times infused with the imperative to be ever ready to change, to move on, and to reconnect, we offer this special issue as a collection of terms and perspectives for re-thinking standby as a state of having powerful command over availability and disposability, as a principle for ordering loose relations, and as way of approaching a repetitive temporal mode of metastable, yet durable quality.

references

- Baraitser, L. (2017) *Enduring time*. London: Bloomsbury.
- Bergson, H. (2007) [1911] *Creative evolution*. Basingstoke: Palgrave Macmillan.

- Berlant, L. (2006) 'Cruel Optimism', *Differences: A Journal of Feminist Cultural Studies* 17 (5): 20-36.
- Berlant, L. (2011) *Cruel optimism*. Durham and London: Duke University Press.
- Berlant, L. (2016) 'The Commons: Infrastructures for Troubling Times', *Environment and Planning D: Society and Space* 34 (3): 393-419.
- DeBoeck, F. and S. Baloji (2016) *Suturing the city: Living together in Congo's urban worlds*. London: Autograph ABP.
- Bourdieu, P. (1998) *Acts of resistance: Against the tyranny of the market*. New York: The New Press.
- Butler, J. (2004) *Precarious life: The powers of violence and mourning*. London & New York: Verso.
- Candea, M., J. Cook, C. Trundle and T. Yarrow (2015) *Detachment: Essays on the limits of relational thinking*. Manchester: Manchester University Press.
- Denis, J. and D. Pontille (2019) 'Why do maintenance and repair matter?', in A. Blok, I. Farias and C. Roberts (eds.) *The Routledge Companion to Actor-network theory*. London: Routledge.
- Engels, F. (1993) [1845] *The condition of the working class in England*. Oxford University Press, USA.
- Färber, A. (2020) 'Stay tuned: Televised endurance as a standby-condition', paper presented at panel 'Standby. On sociomaterial modes of organizing' (org. L. Kemmer, A. Kühn, B. Otto, V. Weber), *4S/EASST conference*, Prague/virtual, 18-21 August.
- Free, L. (2020) 'Riders not Heroes: The Pandemic and Precarity of Food Delivery Workers', *Strelka Mag* [<https://strelkamag.com/en/article/riders-not-heroes>]
- Gill, T. (2015) *Yokohama street life: The precarious career of a Japanese day laborer*. London: Lexington Books.
- Graham, S. and N. Thrift (2007) 'Out of order: Understanding repair and maintenance', *Theory, Culture & Society*, 24(3): 1-25.

- Gutiérrez-Rodríguez, E. (2010) *Migration, domestic work and affect: A decolonial approach on value and the feminization of labor*. New York: Routledge.
- Heidegger, M. (1977) *The Question Concerning Technology and Other Essays*. New York: Harper and Row.
- Jackson, S. (2014) 'Rethinking repair', in T. Gillespie, P. Boczkowski and K. Foot (eds.) *Media technologies: Essays on communication, materiality, and society*. Cambridge: MIT Press.
- Joronen, M. (2017) Spaces of waiting: Politics of precarious recognition in the occupied West Bank. *Environment and Planning D: Society and Space*, 35(6): 994-1011.
- Jeffrey, C. (2008) 'Guest Editorial: Waiting', *Environment and Planning D: Society and Space* 26(6): 954-958.
- Jokinen, E. (2016). 'Precarious everyday agency', *European Journal of Cultural Studies* (19), 85-99.
- Kemmer, L. and A. Simone (2021) 'Standing by the promise. Acts of anticipation in Rio and Jakarta', *Environment and Planning D: Society and Space*, online first. [<https://doi.org/10.1177/0263775820982997>].
- Knox, H., D. O'Doherty, T. Vurdubakis and C. Westrup (2015) 'Something happened: Spectres of organization/disorganization at the airport', *Human Relations*, 68(6): 1001-1020.
- Kühn, A. (forthcoming) 'Infrastructural Standby: Caring for loose relations', *ephemera. theory and politics in organization* 21(2).
- de Laet, M. and A. Mol (2000) 'The Zimbabwe bush pump: Mechanics of a fluid technology', *Social Studies of Science*, 30(2): 225-263.
- Law, J. (2010) 'Care and killing: Tensions in Veterinary Practice', in A. Mol, I. Moser and J. Pols (eds.) *Care in practice: On tinkering in clinics, homes and farms*. transcript: Bielefeld.
- Marx, K. (2004) [1867] *Capital: Volume I*. Penguin UK.
- Marx, K. (2013) *Capital: A critical analysis of capitalist production*. Ware: Wordsworth Editions.
- Mbembe, A. (2004) 'Aesthetics of superfluity', *Public culture*, 16(3): 373-405.

- Mol, A. (2008) *The logic of care: Health and the problem of patient choice*. London: Routledge.
- Mol, A., Moser, I. and J. Pols (2010) *Care in practice: On tinkering in clinics, homes and farms*. transcript: Bielefeld.
- Müller, F. and P. Weir (2018) 'Ontology, Technology and Amsterdam's DNA spray "standing reserve"', *unpublished manuscript*.
- Otto, B. and A. Strauss (2019) 'The Novel as Affective Site: Uncertain work as impasse in "Wait Until Spring, Bandini"', *Organization Studies*, 40(12): 1805-1822
- Povinelli, E. (2011) *Economies of Abandonment. Social Belonging and Endurance in Late Liberalism*. Durham and London: Duke University Press.
- Scholz, T. (2017) *Überworked and Underpaid: How Workers Are Disrupting the Digital Economy*. John Wiley & Sons.
- Simondon, G. (2009) 'The Position of the Problem of Ontogenesis', trans. G. Flanders, *Parrhesia*, 7: 4-16.
- Simone, A. (2017) 'All Over the Place: The arts of standing still', paper presented at the *Annual Meeting of the American Association of Geographers*, Boston, 9-11 April.
- Stäheli, U. (2013) 'Entnetzt Euch! Praktiken und Ästhetiken der Anschlusslosigkeit', *Mittelweg*, 36 (4): 3-28.
- Stanford, J. (2017) 'The resurgence of gig work: Historical and theoretical perspectives', *The Economic and Labour Relations Review*, 28 (3): 382-401.
- Strathern, M. (1996) 'Cutting the Network', *The Journal of the Royal Anthropological Institute*, 2(3): 517-535.
- Straughan, E., Bissell, D. and A. Gorman-Murray (2020) 'The politics of stuckness: Waiting lives in mobile worlds', *Environment and Planning C: Politics and Space*, 38(4): 636-655.
- Valenzuela Jr, A. (2003) 'Day Labor Work', *Annual Review of Sociology*, 29(1): 307-33.

Weber, V. (2020) 'Filtering data: Exploring the sociomaterial production of air', *ephemera. theory and politics in organization*. online first [<http://www.ephemerajournal.org/contribution/filtering-data-exploring-sociomaterial-production-air>].

Weszkalnys, G. (2016) 'Infrastructure as gesture', in P. Harvey, C.B. Jensen and A. Morita (eds.) *Infrastructures and social complexity: A companion*. London and New York: Routledge.

acknowledgements

We are grateful for the intellectual, practical, motivational, and institutional support we have received over the years of involvement in developing this special issue. We would particularly like to thank Tim Edensor, who participated in an initial workshop on 'The Hidden Life of Infrastructures' at Hamburg University in 2016; all participants of the 2017 AAG panel 'Standby Infrastructures', particularly David Bissell, who provided critical and long-lasting input as a commentator; all participants of the 2020 *EASST/4S* conference panel 'Standby as socio-material mode of organizing'. Here, Joe Deville offered indispensable feedback as a discussant and attentive reader, which helped to shape the arguments of our editorial. Many thanks to the *ephemera* collective for giving us the organizational framework and freedom to work so intensively on this topic, and, of course, for your invaluable review of this editorial. Thanks to the Department of Management, Politics and Philosophy at *Copenhagen Business School* which provided financial support, and, last but not least, a big shout-out to our colleagues at the Graduate School 'Loose Connections. Collectivity in Digital and Urban Space', *University of Hamburg*, Germany, especially to Alexa Färber and Urs Stäheli.

the authors

Laura Kemmer is a postdoctoral researcher at the Department for Human Geography, Humboldt-Universität zu Berlin, working on urban and infrastructural transitions across the Global North and South. She has explored how infrastructural standby generates new modes of un/relating in *Bonding: Infrastructure, affect, and the emergence of urban collectivity* (Berghahn, forthcoming) and 'Standing by the

promise: Acts of anticipation in Rio and Jakarta', *Environment and Planning D: Society and Space* (January 2021, online first) together with AbdouMaliq Simone.

Email: laura.kemmer@geo.hu-berlin.de

Annika Kühn works as an independent researcher and author in the fields of critical infrastructure studies and sustainable urban mobilities. She has organized international conference panels, screenings and workshops on the temporality and dis/connectivity of urban mobilities. While working on her PhD project at University of Hamburg, Annika came across standby as a common mode of infrastructural organisation. She explores standby as a way of unrelating beyond dysfunctionality within 'Infrastructural Standby: Caring for loose relations' forthcoming with *ephemera* and approaches the affectivity of transport terminals on standby as a filmmaker and author of #standby (2019), an internationally screened short film.

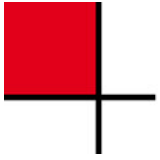
Email: annika_kuehn@gmx.net

Birke Otto, PhD, is a cultural sociologist. As a postdoctoral researcher at the Free University Berlin and fellow at the Department of Management, Politics and Philosophy and Copenhagen Business School, she studies the role of secrecy as a mundane organizational practice in creative and innovation processes. This involves many negotiations of standing by the secret. She is a member of the editorial collective of *ephemera: theory and politics in organization*.

Email: birke.otto@fu-berlin.de

Vanessa Weber is researcher in the project 'Digital Curation in the City' (funded by the German Research Foundation) at CityScienceLab of HafenCity University, a cooperation with MIT. Her research interests lie in the field of cultural sociology and related disciplines such as media studies and science and technology studies (STS). In particular, she is interested in algorithmic cultures and data practices as well as the materiality of the social and their aesthetic, sensory, and affective dimensions. She edited the special issue 'Locating Affect' (2019) in *Distinktion. Journal of Social Theory*, 20/1 (with Laura Kemmer, Steffen Krämer, and Christian Helge Peters) and published, for example, 'Filtering data: Exploring the sociomaterial production of air' forthcoming with *ephemera*.

Email: vanessa.weber@hcu-hamburg.de



Pandemic times. A conversation with Lisa Baraitser about the temporal politics of COVID-19

Laura Kemmer, Annika Kühn and Vanessa Weber

Introduction

Lisa Baraitser is Professor of Psychosocial Theory at Birkbeck, University of London. In her research, she combines psychoanalytic and social theories to address the temporal, ethical and affective dimensions of care. In this interview, Prof. Baraitser helps us think through the temporal politics of COVID-19 and the ways in which pandemic conditions transform the affective dimensions of care work in Europe and US-America.

Annika Kühn (AK): For this issue of *ephemera*, we have conceptualized standby as a more-than-human temporality, relating it to the organization of contemporary lifeworlds, from labor and migration, through infrastructures, to ecologies. Here, standby becomes an act of social ordering, synchronizing and regulating a sort of modern ‘standing reserve’ (Heidegger, 1977), where people, things, biological agents, and technical devices are held together in a state of constant readiness. Arguably, with the outbreak of the COVID-19 pandemic and the subsequent proliferation of lockdown scenarios, large parts of these socio-material and ecological formations are experiencing a new quality of successive ‘standbys’, waiting for their world to move on. This turns our attention to the sociopolitical effects of standby and makes us wonder how we can also think of standby as a device that changes power relations in

subtle yet radical ways. Lisa, in our search for answers to this question, we have found strikingly original reflections in your previous work on the temporalities of suspension and the manifold expressions of ‘stuckness’ in contemporary cultures. Your monograph *Enduring time* (Baraitser, 2017) unfolds an array of durational practices and affective strategies of survival in late liberalism, analysed from a psychosocial perspective. Re-adjusting these reflections to the new reality, in a recent article with Laura Salisbury (Baraitser and Salisbury, 2020), you provide a lead for us to reformulate the above-question, urging us to think about how to inhabit pandemic times.

Lisa Baraitser (LB): Firstly, thank you for the invitation to be in dialogue with the three of you, and for your conceptual framing of the time of the ‘now’ in relation to the notion of standby. Although I have been working on temporal experiences of waiting, delay, and other forms of stuck or sluggish time, I had not connected it with the material and technological framing that you offer with the notion of standby, nor to the political framing that Donald Trump’s incendiary comments have brought to the fore, that were designed to call on a ‘standing reserve’ of a much more threatening kind. Standby, as you have conceptualised it, becomes a particular form of waiting that occurs in relation to impeded movement which also, then, impedes time’s flow. It has both enabling and threatening potentials.

Laura Kemmer (LK): Yes, absolutely, and this also points us to something we encountered when rethinking standby scenarios in relation to pandemic times. Since the outbreak of COVID-19, we have been told repeatedly that in order to keep the system running we need to temporarily suspend all kinds of personal and institutional bonds – a sort of loosening relations in order to guarantee the re-activation of all kinds of socio-material infrastructures at a later time (Kühn, forthcoming). To what extent do you think this adds a new quality to the ways we have been trained and training ourselves in acts of ‘purported indifference’ (Kemmer/Simone, 2021), not in the sense of giving up, but rather as way of standing by the failed promises of the present?

LB: This is such an interesting and important question, it references the need to maintain ourselves in the face of repeated abandonment by institutions, or attacks on institutions that are there to maintain life’s flourishing.

It suggests that there is a kind of affective work that supports this maintenance, and it takes the form of ‘purported indifference’ or a kind of detachment in the name of survival. It reminds me of something Julia Kristeva wrote about in her work on ‘maternal passion’ in which she argues that the ‘passion’ a mother has for ‘a child’ (which I read to mean anyone whom one comes to name and claim as a child, and not a biological bond, or even an intergenerational one), entails a double movement of passion and detachment, passion as depassioning, a kind of loosening, as you put it, of attachment so that the ‘child’ can separate. Here purported indifference has a protective function towards the ‘child’ that might be distinct from the kind of despair that sets in under conditions of repeated ‘lockdown’, not just in relation to COVID-19.

AK: Against this background, what does it mean if ‘lockdown’ becomes a repetitive mode? How does the constant alternation between ‘radical suspension’ and ‘back to the new normal’ affect the ways we inhabit pandemic times?

LB: One thing that is striking about what happened when many parts of the world shutdown due to COVID-19 was that this happened in an historical period that one could already describe as having entered into ‘standby’ for many; in previous work I had been tracking pockets of ‘stuck time’ that co-exist within otherwise speeded up, accelerated time that include the stilled yet frenetic time of precarious labour; the deep time violence of environmental damage; the cruel crushing of hopefulness and futurity for whole populations held in suspension due to austerity measures; and changing patterns of debt, to name a few. My interest has been to link these forms of stuck time to the time of care, which also has the structure of suspension. Care, after all, involves waiting, staying, delaying, enduring, persisting, and what Maria Puig de la Bellacasa (2017) names as ‘hovering and adjusting’.

If we think of the repetitions of ‘lockdown’ as the suspension of all sorts of life projects, if we think of it in relation to the incarceration of Black life, the locking up of hope in conditions of economic collapse, and the foreclosure of the future brought about by indifference to the climate crisis, then standby may well be a way to ‘stay with’ as a form of care for the future.

Vanessa Weber (VW): In your work you speak about caring as a capacity to ‘stand by’ that involves both repetition but also the ability to permanently begin again. Has caring as a common mode of existence received more awareness in pandemic times?

LB: Much of what I’ve been trying to think about in my own work, and with the team of researchers working with myself and Laura Salisbury on the *Waiting Times* project (<http://waitingtimes.exeter.ac.uk/>), is how to conceptualise the time of care in a broader context in which time itself may be on ‘standby’, and which the COVID-19 pandemic has brought into sharp relief. Practices of care are often tied to the pace and rhythms of those we care for, whether human, or non-human, or even ideas that have fallen into disrepute and practices that seem obsolete in the contemporary moment. Because we cannot control this pace, and because care and the need for care is unevenly distributed, care seems to entail staying in time that can feel disruptive to already established rhythms, so that time stagnates, becomes repetitive yet motionless. Often ‘care time’ is not really experienced as moving, developing, flowing or unfolding. It can be emotionally full, but more often it is time that must be endured, suffered even, rather than embraced. Many people who found themselves unable to leave home and go to work during the pandemic, but were trying to work from home alongside permanently being on ‘standby’ for their children, as well as trying to home school them, might relate to this. And of course, it is women who largely found themselves disrupted in this way, despite being at home with male partners, because of the ways that women are still socialized into being the primary carers of young children, and hence being the ones whose time can be constantly interrupted. It seems to me that you are proposing that ‘standby’ encapsulates a form of materialized waiting, one that pushes us to think further about who or what is put on standby, for how long, by whom, and for what purposes, and therefore how power enters the waiting relation. I’m grateful for this really fruitful concept.

VW: Yes, and it is this way that many of the COVID-19 related measurements made us revisit what might be the sociopolitical implications of standby. Notions such as ‘system relevant’ and ‘standby labor’ accompany the (partial) shutdown of caring institutions on the one hand, while on the other hand, there have been celebrations of lockdown situations as an opportunity to

‘reset’ and rethink our ways of living in this world. These make us wonder about privileges, beneficiaries and the reshuffling of power relations.

LB: I think that one of the things that COVID-19 has revealed is both the temporality of the current moment as one of standby, and the paradoxical need to *endure* standby, even to open it up, in order to take care of time, to produce the care-ful attention that is required to really know about the injustices of the present in order that there be a future at all. These injustices include the profound inequalities that have become so extreme over the last 10 years of austerity, and it is really this that has come to the fore during the pandemic. I think this endurance – staying in stuck time long enough to really know about injustice – requires the management of very anxious states of mind. In the piece I wrote with Laura Salisbury (Baraitser and Salisbury, 2020), we tried to disrupt the UK government’s use of the terms ‘containment, delay and mitigation’ as descriptive of their initial response to the pandemic. For us, all three terms have particular meanings in psychoanalysis. Containment has to do with developing the capacity to think, ‘thinking’ being a kind of emotional process that deals with ‘thoughts’ which are more object like mental entities that can be felt to attack our minds in cruel and destructive ways. Thinking can occur when anxieties generated by what our thoughts can do to ourselves and others can be contained, usually by another, and eventually by our own minds. Containment, delay and mitigation thought in a psychosocial way bind together care and waiting, not waiting for something specific to happen, but a ‘waiting with’ as a way to manage the anxious bombardment of thoughts, whose qualities can become knowable, in all their difficulty and violence. It is becoming clear that this particular pandemic will have a much longer timeline than first expected, possibly with repeated lockdown scenarios, and that we are all more vulnerable to the spread of future novel viruses in a globally networked world. This makes containment understood as ‘waiting with’, even more important, if we are to know about, care about, and address the inequalities that were always there but the pandemic has forced into awareness.

LK: From our view, your article with Laura Salisbury provides us with one of the few ‘psychosocial’ takes on these issues: Could you explain how this perspective helps us specifying current political scenarios?

LB: A psychosocial perspective has something to do with a reluctance to reduce and resolve the tension between, on the one hand a social, political, and historical analysis of the current state of things, and on the other, the disruptions to this analysis that are produced when we bring processes that structure psychic life, interior life, affective life into the picture. It is less additive – a social plus a psychological analysis – and more a process of using one perspective to displace or dislodge the other, throw it off the subject, as it were. A psychosocial perspective would refuse to give up on the difficult work of acknowledging attachments, identifications, longings, anxieties, and destructiveness as a way to understand the persistence of injustice, inequality and abuses of power. In addition, because psychoanalysis, which is one of the key theoretical resources for psychosocial thinking, has a very particular account of temporality, questions of memory, futurity, repetition, chronic waiting, and the ‘now’ open up in different ways. If we are to try to understand the catastrophic failures of State care, for instance, in the UK – the failure of the track and trace system despite billions of pounds being paid to private companies to provide it, the collapse of social care for the elderly due to chronic underfunding over decades, the fact that 1 in 3 children in the UK live in poverty and 2.5 million children now live in food insecure households – then a social analysis is not enough, it doesn’t explain fully why this situation has been allowed to develop and what sustains it. Instead we need to try to understand why we cannot hold this situation in mind enough to do something about it. It’s not that individuals don’t care, which I think they do. But care entails bearing to know about the violence and destructiveness we are also capable of, whether as individuals or at the level of institutions and the State, and a psychosocial perspective tries to elucidate this.

AK: You have described care as a way of ‘living with’ various affective states and ambivalences, including racialized, gendered and class-based differences. COVID-19 shows impressively how the shutdown of some areas of society accelerates inequality and amplifies social polarization in others, and vice versa: What does this reveal about the (gendered and racialized) division of public and private spaces?

LB: The question of what constitutes the space of ‘home’ has been highlighted in very dramatic and brutal ways – the fact that so many people don’t have shelter, let alone something that can feel as safe and reliable as ‘home’, and

that the 'home' for some women, queer and transfolk, children and of course older people in 'care homes' is a space of violence, danger and neglect. Here 'living with' or 'staying with' or 'staying alongside' should not be a matter of staying in situations of danger or violence, but reactivating the resources that 'remain' from long decades of work by feminists, queer and transactivists, anti-racist activists and many others who have been prepared to 'go on going on' about the chronic repetition of situations that may be repudiated culturally because they are seen as tired, uninspiring, uninteresting, or out-of-date. Sara Ahmed's (2010) figure of the 'feminist killjoy' would be one example of the figure who goes on going on about injustice, discrimination and abuse, despite the accusation that she 'kills' joy.

With Michael Flexer in the *Waiting Times* team, I have been trying to think about the relation between moment and movement, and why a moment in time (what you called the current moment) may retrospectively come to be understood as evental – a time that has a certain quality, that is differentiated from unqualified time – through a political movement that has an elongated history, in relation to the elongated time of the traumas of slavery, colonialism and imperialism. Trauma, as we know, is only knowable through temporal delay. It comes back to us from an unrecorded and obliterated present as something that repeats from what comes to be the past. For trauma to be known about, acknowledged, and cared about, it has to move in the present, move us in the present. We could think of the temporal hiatus produced by COVID-19 as a time that has forced a quality of thinking about movement and moment into collective consciousness. Being forced to live in the suspended time of lockdown, to know that we are in a time that will become an historical event from the perspective of another historical time in the future, which some people have likened to the simultaneous monotony and terror of the temporalities of conflict or war, there is a chance that a certain kind of thinking can emerge that can know something about trauma, that can stay alongside this long enough to care about it.

LK: Speaking of 'movements', right now, there is an intense manifestation of all kinds of (conflictive) political claims and convictions – partly coming together in form of protest movements, partly through acts of solidarity; and organizing in both physical and virtual spaces. Could you think of the

interplay of such different formations, or of how ambivalent 'standby' moments interact with political movements?

LB: I think many analyses of the COVID-19 pandemic have now understood that the pandemic has unfolded alongside, and perhaps even prompted, another temporal event; the renewed urgency of the call for racial justice made by the Black Lives Matter (BLM) movement during the time of lockdown. These two events – the murder by US police of George Floyd, Breonna Taylor, Ahmaud Arbery, Tony McDade and Dion Johnson between February and May 2020, and the spreading of COVID-19 around the world leading to conditions of lockdown for millions of people – are coterminous, and they are related to one another in the sense that COVID-19 has disproportionately affected those already suffering the most from the effects of our current capitalist organization which itself is built on the excessive brutality of slavery, colonialism and empire. BLM has been making this call for a long time, and before this, the work on racial justice has been taking place, you could say, over the last 400 years. It has been productive, Lauren Williams (2020) argues, of black rage, which is born of chronic waiting. It has been a very very long wait.

I'm struck by the double meaning of standby – of both active inactivity, but also standing by, or taking up the position of a bystander, someone who witnesses something without intervening. I've mentioned Lauren Williams' work on 'black rage' as a response to chronic waiting, and rage is certainly one affective dimension of standby that refuses the position of bystander. I've argued elsewhere, however, that 'depression' is also a useful way to think about the affective dimension of waiting (Baraitser and Brook, 2020). It links up with your notion of detachment in the name of survival, a necessary withdrawal, perhaps, that I think can intervene in the logic of 'crisis' and its antithesis, 'anti-crisis' that tends to dominate models for understanding social change. Here depression becomes a mode of 'watchful waiting', or careful protest, a form of waiting that can stay open to, and aware of, the potentials for failures of care or of violence that hovers within any act of care.

references

- Ahmed, S. (2010) *The promise of happiness*. Durham and London: Duke University Press.
- Baraitser, L. (2017) *Enduring time*. London: Bloomsbury Academic.
- Baraitser, L. and W. Brook (2020) 'Watchful waiting: Crisis, vulnerability, care', in V. Browne, J. Danely, T. Managhan and D. Rosenow (eds.) *Vulnerability and the politics of care*. Proceedings of the British Academy, 235: 230–247. Oxford: Oxford University Press.
- Baraitser, L. and L. Salisbury (2020) 'Containment, delay, mitigation: Waiting and care in the time of a pandemic', *Wellcome Open Research*, 5: 129.
- Kemmer, L. and A. Simone (2021) 'Standing by the promise: Acts of endurance in Rio and Jakarta', *Environment and Planning D*, online first.
- Kühn, A. (forthcoming) 'Infrastructural standby: Caring for loose relations', *ephemera*, 21(2).
- Puig de la Bellacasa, M. (2017) *Matters of Care: Speculative ethics in more than human worlds*. Minneapolis and London: University of Minnesota Press.
- Williams, L. (2020) 'Lauren Williams in conversation with Guadalupe Maravilla', *Shifter Magazine*, September 17.
[<https://vimeo.com/463482345>]

the authors

Laura Kemmer is a postdoctoral researcher at the Department for Human Geography, Humboldt-Universität zu Berlin, working on urban transitions, more-than-human temporalities and cities 'after redemption'. She has explored how urban and infrastructural standby instills new modes of un/relating in *Bonding: Infrastructure, affect, and the emergence of urban collectivity* (Berghahn, forthcoming) and recently published 'Standing by the promise: Acts of anticipation in Rio and Jakarta', *Environment and Planning D: Society and Space* (January 2021, online first) together with AbdouMaliq Simone.

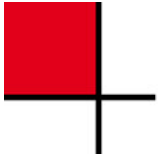
Email: laura.kemmer@geo.hu-berlin.de

Annika Kühn works as a researcher and author in the fields of critical infrastructure studies and sustainable urban mobilities. She has organized international conference

panels, screenings and workshops on the affectivity, temporality and dis/connectivity of urban mobilities and published on standby as a mode of organizing within 'Infrastructural Standby: Caring for loose relations' forthcoming with *ephemera* and as a filmmaker and author of *#standby* (2019), an internationally screened short film. Email: annika_kuehn@gmx.net

Vanessa Weber is researcher in the project „Digital Curation in the City“ (funded by the German Research Foundation) at CityScienceLab of HafenCity University, a cooperation with MIT. Her research interests lie in the field of cultural sociology and related disciplines such as media studies and science and technology studies (STS). In particular, she is interested in algorithmic cultures and data practices as well as the materiality of the social and their aesthetic, sensory, and affective dimensions. She edited the special issue „Locating Affect“ (2019), *Distinktion, Journal of Social Theory*, 20/1 (with Laura Kemmer, Steffen Kremer, and Helge Peters) and published, for example, 'Filtering data: Exploring the sociomaterial production of air' forthcoming with *ephemera*.

Email: vanessa.weber@hcu-hamburg.de



Being on standby: On maintenance work in chronic disease management

Lisa Wiedemann

abstract

This paper examines what it means to live with a disease, type 1 diabetes, in tandem with complex technologies. For decades, patients have been tediously replicating the function of an organ on a constant basis, but due to digital developments the materiality of care has changed, with daily treatment now woven into a wide web of digital components. Based on empirical fieldwork, the paper seeks to outline the impact of these transformations on what daily care means. I argue that patients increasingly act as technical maintenance workers who need to be in a constant state of standby in order to be forever ready to re-organise and re-stabilise their disease management. In this, a shift from caring for the body towards caring for technical devices can be observed. The analysis draws from both a sociomaterial perspective and a growing body of work in the field of science and technology that is shifting attention from stability to maintenance and repair. I argue that, against the background of complex technical systems, maintenance as a practice dedicated to restoring order implies a state of vigilance and readiness that I name ‘being on standby’. Through the lens of standby, both the fragility of care and the affective tensions of intimate body-technology relations become apparent.

Introduction

Since the proliferation of portable meters and insulin pumps in the 1980s, an intimate relation with battery-powered technologies has been a key feature of living with type 1 diabetes, as poignantly described by a patient on Twitter:

‘My pancreas runs on AAA batteries’ (DSC Community, 2016). But over the last decade the technologisation of diabetic care has intensified and daily treatment is now woven into a complex web of digital technologies. New smart devices continuously record glucose levels and automatically transmit them to a monitoring device. After more than 40 years of repeated announcements promising to provide automatic insulin delivery systems (Heinemann and Lange 2019: 1), some patients are no longer willing to wait for commercial solutions have started to reprogram their devices to always stay on in order to automate their insulin supply as much as possible. But living with always-on technologies also means living with possible breakdowns or disruptions. The aim of this paper is to explore the facilities, complexities and tensions of living with these technologies on a daily basis, with particular focus on how some patients tinker with technology. Although technology has taken over more of the care workload, I will show that digital improvements do not, in fact, lead to the pairing of passive subjects with active technologies that take over the reins of responsibility. Instead, a shift from caring for the body towards caring for technical devices can be observed: complex and ramified technologies are prone to failure and require maintenance from the persons using them. Once more actors become part of daily care, the potential for disorder spreads. Thus the relations between smart technology and the body are accompanied by ‘new kinds of vulnerabilities’ (Oudshoorn, 2016: 767) which in turn become a ‘matter of care’ (Puig de la Bellacasa, 2017).

Based on an analysis of interviews, I argue that in relation to these new vulnerabilities, patients need to be in a constant state of ‘standby’. Because maintenance work only intermittently sticks to a schedule, daily care requires a continuous vigilance and readiness to (possibly) re-stabilise and re-organise the heterogeneous care collective. In this regard, the paper draws from a sociomaterial perspective that pays attention to the affordances of materiality and conceptualizes care as a collective doing that unfolds tensions (Mol et al., 2010: 14; Mol, 2008). Furthermore, it contributes to a growing body of work in the field of science and technology studies (STS) that is shifting attention from stability to maintenance and repair. I propose that, in complex human-technology entanglements, maintenance as ‘processes dedicated to restoring order’ (Denis and Pontille, 2015: 341) implies a state of vigilance and

readiness, which can be considered as ‘being on standby’. In the course of this argumentation, I will discuss different modes of standby as patients, technologies and bodies become attentive to each other in different ways. However, the analysis given here calls particular attention to a patient-centred mode of being on standby. Patients constantly need to be in a state of readiness in order to repair, replace, recharge or reconnect the devices that help attend to the disease. Thus, a lens of standby puts the fragility of care on view and offers a deeper understanding of what it means to manage a disease together with complex technological systems.

In the following, I will first provide insights into the methodology of the study. Then I will outline an analytical stance on care as an ongoing ‘collective doing’ and illustrate this by means of the diabetic path to always-on technology. Informed by the work of Dutch philosopher and anthropologist Annemarie Mol, I will demonstrate how care is formed in historically specific sociomaterial constellations and how technical changes have specific effects on daily life. From the materiality of care, I will move on to the care of materiality, and briefly illustrate the connection between care, maintenance and standby. Based on empirical insights, I will then show what it means to be constantly on standby and how the 24/7 attachment and attentiveness to complex technologies generates specific affective tensions. In closing, I provide a conclusion.

Methods

The paper grew out of fieldwork from an earlier ethnographic study. In that study, based on the double context of the quantified-self community and type 1 diabetes, I examined the practice of self-tracking (Wiedemann, 2019). My fieldwork in the context of diabetes involved: 14 semi-structured interviews with persons living with the diagnosis; participant observation of diabetes educational programs, public events and patient meeting groups; and the analysis of personal blogs of patients. Reading the latter became my habit between 2013 and 2017. Within these online journals, patients write, for example, about their daily routines, emotions, wishes for therapeutic changes or experiences with new technologies. As a matter of curiosity, I reanimated my habit in 2019 and a great deal seemed to have changed. The topic of DIY

closed-loop systems and artificial pancreas systems (APS) has now seemed to emerge in the German blogger scene, so I resumed my research. Some technically adept patients had started to reverse-engineer their devices in order to partially automate insulin supply.

My previous research on diabetes, examining how digital technologies have changed life with the disease, tried to answer how the possibilities of continuous digital monitoring have strengthened a living by numbers. The paper presented here takes a slightly different approach: its focus is on the vulnerability of digital technologies. The empirical material presented here is primarily based on semi-structured interviews I conducted with two patients who have both managed their disease with a do-it-yourself (DIY) closed-loop system since early 2019. Here, for anonymisation, I have named them Olivia and Tomas. Olivia is 37 years old and was diagnosed with type 1 diabetes at the age of 14; Tomas is 28 years old and received his diagnosis when he was 16. Both have undergone multiple changes with regard to their technological companions. I know both of them because they have each written online blogs for many years. Already on their blogs, both have authored articles on the conflicting and multiple realities created by coexistence with highly complex technologies. My interviews with them focused on daily practices, the impact of technology, programming knowledge, hurdles, disturbances and the increasing need for maintenance work. Both interviews had a length of about 60 minutes. However, I will also refer to some interviews from my previous research. Moreover, the empirical analysis is informed by blog posts focussing on DIY technologies and other online articles on artificial pancreas systems. I have coded the material according to recurring themes and used a sociomaterial perspective during analysis. Based on iterative cycles of analysing the data, the concept being on standby was developed.

It should be noted that ‘DIY-looping’ does not represent the average way of enacting diabetes: it could be read as an extreme case. On the digital paths of the diabetes online community, one quickly gets the impression that everyone with type 1 diabetes will be wearing an artificial pancreas system by tomorrow (Heinemann 2017: 864). But ‘current users’, like Olivia and Tomas, ‘tend to represent a cohort of “experts” in type 1 diabetes’ (Crabtree et al., 2019: 65), who have access to the world of DIY-looping because they are technologically adept patients and have the time to acquire the necessary knowledge to re-

engineer their devices. There is uneven access to the DIY world, and it is also influenced by legal liability issues, since these homemade medical systems receive no regulatory approval by healthcare providers, medical technology industries or the government. Nonetheless, the circle of patients who entrust part of their disease management to an algorithm is growing, and a Facebook group named 'Looped', founded in 2016, now has over 23,000 members.

The path to always-on technology: 'Doing pancreas' in specific sociomaterial constellations

Type 1 diabetes is an autoimmune disease in which the body puts its pancreatic islet cells, responsible for producing the hormone insulin, in a shutdown mode. In glucose metabolism, insulin acts as the key to unlock the door to cells. Without it, sugar molecules broken down during food intake cannot be transported from the bloodstream into cells and, as a consequence, the blood glucose level rises continuously. Its symptoms, such as excessive thirst, have been observed since ancient times, and up until 1921, when the surgeon Frederick G. Banting identified the lack of insulin as being responsible for the disease, diabetes was a ruthless killer. With time, diabetes turned from a fatal disease into a chronic one, though survival became possible only with daily injections of insulin.

In the 1980s there was a proliferation of new portable measuring devices that established the current treatment regime. With these devices, patients themselves tediously replicate the function of an organ. In modern technology-dependent treatment, all regulatory processes that a healthy pancreas performs have to be re-enacted by externally balancing measurements, nourishment, physical activity, and insulin intake. The overall goal of self-management is to maintain normal blood sugar levels and consequently to prevent long-term complications. To quote the title of a popular diabetes guide, such self-management requires the patient to 'think like a pancreas' (Schreiner, 2004). From an STS-inspired point of view, I suggest speaking of 'doing pancreas' (Wiedemann, 2019) because an empirical perspective on the daily life of patients shows that the condition is 'materialized through a range of activities and practices' (Danholt et al., 2004: 4).

As illustrated by Annemarie Mol (2002; 2008), caring for a chronic disease is an ongoing endeavour: it never finds closure. There is a widespread set of activities to engage in, thus my interviewee Olivia calls her condition a ‘24-hour job’.¹ Just as any other medical practice, ‘doing pancreas’ is a collective sociomaterial enactment, not a question solely of an individual’s skills’ (Fenwick, 2014: 48; see also Mol et al., 2010). Therefore, academic research has already shown that diabetic care activities are constantly negotiated among human and non-human actors (e.g., Bruni and Rizzi, 2013; Danesi et al., 2018; Danholt, 2012; Mol, 2000, 2008, 2009; Mol and Law 2004). Patients, doctors, nurses and others thus find themselves engaging with, for example, AAA batteries, chargers, insulin, smartphone apps, cannula, sensors, charts, smartphones, wires, smart watches, transmitters, receivers or algorithms. However, this enumeration mirrors the digital age in general, and such an assembly should be understood as a historically specific sociomaterial constellation in which the mundane ‘doing pancreas’ takes place.

Since type 1 diabetes is a silent disease only noticed in cases of high or low blood sugar levels, the objectification of metabolism demands specific strategies that have changed throughout medical history. When diagnostic colours and later numbers materialized the hidden, the development of miniature sensors turned graphs and alarms into another important knowledge category of blood sugar ‘control’. Drawing on Mol, I assume that specific realities of ‘doing pancreas’ are enacted due to the techniques of visualization, and that the difference of material participation affects what diabetic care means.² I will illustrate the four different ways of measuring blood sugar levels I encountered during my field work in recent years. The gradual demonstration of a growing closeness to complex technologies leads

¹ Because the interviews during my fieldwork were conducted in German, I have translated the passages I quote in this article.

² In ‘The body multiple’ (Mol, 2002), Mol’s gaze passes through the various departments of a hospital and examines different ways of ‘doing arteriosclerosis’ in specific sociomaterial configurations. At the centre is the idea that the disease is multiple in its manifestations and the various realities are situated in certain practice settings.

to the central argument of patients needing to be on standby in order to re-organize and re-stabilise the care collective of ‘doing pancreas’.

Diabetes as a colour: syringes, strict schedules and colour charts

Marianna, who at the time of our meeting had been living with diabetes for 40 years, recalls large metal syringes which frequently had to be boiled to sterilize for reuse, and then later, how they were replaced with plastic disposable syringes. During her childhood it was common to manage diabetes through rigid schedules and dietary plans determining the times when she was allowed to eat. For decades, mundane monitoring was dominated by urine tests, though their design evolved over time. In a diabetes podcast, a patient diagnosed in the late 1950s says:

The only place you could get a blood test was in a hospital and you’d wait a week for the results. So, all we had to test our blood sugar was urine tests [...]. It was like a small chemistry kit (Grief, 2019).

This first simplified ‘chemistry kit’ for home tests he speaks about was introduced in the mid-1940s (Clarke and Foster, 2012: 85). Using the so-called Clinitest, patients popped a tablet into a small quantity of urine, which caused the mixture to boil and induced a colour change. The results were interpreted by reading the outcome against a colour chart.

Diabetes as a number: portable meters, pens and pumps

The 1980s paved the way for a growing ‘closeness of technology’ (Pols, 2012) in diabetes treatment. Through the proliferation of portable meters, the clinical practices of blood glucose testing was translated into domestic spaces. The option of self-measurement made it possible to lead a more flexible life, replacing one that been characterized by strict schedules. Additionally, with the development of short-acting insulin, it became possible to avoid sticking to a diet, as food intake became, in turn, a matter of counting carbohydrates and matching the grams of each meal with a corresponding dose of insulin. However, this seeming ‘freedom’ stood in exchange with a huge increase in the responsibilities of the patient and a living by numbers.

When I met with Eva in a café, I could observe how she measures blood sugar. She pricked her finger with a lancing device and squeezed the drop of blood onto a test strip she had already inserted into the measuring instrument. After she read the number on the display, she pulled out an insulin pen and adjusted the unit to be injected. Eva lifted her sweater and injected the calculated dose into her abdomen. This practice is to be repeated before eating, doing sports, driving or sleeping, in case of physical unease, and after eating. Other patients wear an insulin pump, which frees them from self-injections. In that case, a tube is connected to an insulin reservoir in the pump and a thin cannula placed under the skin. Throughout the day, the pump delivers a basal rate of the hormone subcutaneously in small, automatic doses.³

But patients still need to do finger pricks and program ‘bolus’ doses of insulin delivery via buttons on the pump after deciding how much insulin will cover each meal. In both delivery methods, there remains a risk of miscalculating insulin substitution or of a body acting erratically. Insulin is a potentially lethal hormone, and taking an excess amount can lead to serious symptoms such as dizziness, tremors or fainting, thus the fear of hypoglycaemia becomes a constant subject of everyday doings.

Diabetes as a graph and alarm: smartphones, sensors and transmitters

When I met Max, he glimpsed at his smartphone to check his current glucose level. He uses an insulin pump and a system known as a ‘continuous glucose monitor’ (CGM), which operates with a microneedle-based sensor constantly sitting on his upper arm that measures the glucose concentration in subcutaneous tissue fluid in a nearly continuous manner; a mounted wireless transmitter sends the glucose readings automatically to his smartphone every five minutes. Alternatively, it is possible to use a smart watch or the display on his pump as the receiving device. The chosen display screen presents his glucose results over the last 24 hours in the form of a graph.

Max was enthusiastic about his CGM during our talk as he no longer has to prick his finger and is ‘always [able to] counteract immediately.’ This

³ The external pumping machine that the patients have to carry close to the body is nowadays about the size of a small mobile phone.

possibility to ‘always’ act not only refers to the ability to obtain real-time values at any given moment, it also means the ongoing ‘doing pancreas’ is accompanied by a variety of new symbols. Besides graphs, dynamic trend arrows provide prospective information on glucose levels. Additionally, in the event of high or low, sharply falling or sinking values, the CGM system acts like an attentive assistant by sending out an alarm that prompts patients to actively regulate their metabolism through additional insulin dosages (via pump or pen) or sugar intake. As the sensor constantly works in the background and the system ‘rings’ as soon as metabolic or technical problems arise, patients can stay in an on-call mode instead of constantly being alert to physical symptoms of low glucose values and having the fear of (unnoticed) hypoglycaemic events. The removal of this fear was described by a lot of people during my research as a relief.

Connected always-on technology: DIY closed-loop systems

The development of CGM systems is inscribed with the hope to automate disease management. For decades, the medical industry has been promising the development of a ‘closed-loop system’ consisting of a CGM, insulin pump, and algorithms to allow for complete automation. A milestone on the road to an artificial pancreas was achieved in 2017 when the company Medtronic began marketing the MiniMed 670G insulin pump in the United States (Weaver and Hirsch, 2018: 217). Based on its sensor data, this first commercial ‘hybrid closed-loop system’ automatically adjusts insulin delivery to a predefined target range every five minutes, and ceases delivery as soon as blood sugar values approach a hypoglycaemia level (Medtronic, 2020). However, numerous regulatory and financial restrictions limit access to the system.

But in the online diabetic community the hashtag ‘#WeAreNotWaiting’ is used to gather patients who are tired of continued delays and obstacles in access to these systems. Moreover, the low customizability of the commercial system is criticized by many patients as well. Members of the community began to disseminate their experiences with ‘do-it-yourself artificial pancreas

systems', and different open-source algorithms were developed to initiate the practice labelled as 'looping' (e.g., Marshall et al., 2019).⁴

Olivia and Tomas, whose experiences with the 'loop' build the heart of my analysis, decided to begin looping in the beginning of 2019. Both needed to reprogram their existing devices and procure additional ones. Now, pump, sensor and smartphone app interact continuously to regulate their glucose levels day and night. Since these devices are not officially designed or approved to be operated in this looped configuration, Olivia declares: 'one needs to tinker a bit'. Tomas stresses that it is a challenge to get the loop to 'run'. Although he is technically very skilled, he says: 'Well, you actually have to take a holiday to set it [the loop] up.' In addition, 'you have to have a lot of knowledge about your body and your illness before you start looping.' Furthermore, I spoke with Olivia about the fact that she had to buy additional hardware abroad. A so-called 'RileyLink' needs to be kept in close proximity to the other equipment, as it converts Bluetooth signals in order to enable the smartphone and insulin pump to mutually communicate. She also purchased a new computer to compile the looping software, as the smartphone app that harbours the algorithm is not simply downloadable. Before 'the loop can take work off your hands', 'the hurdle' is 'extremely high' at the beginning, as Tomas reports.

But a loop, once initiated, brings many positive changes. Olivia already refers to her CGM system as the 'biggest and best shift' in her treatment because she has been able to read her values 'all the time' without interruptions for testing. The days of 'flying blind', as she calls it, are over. Olivia describes her daily routine as 'irregular'. Although she does sports every day, the intensity can vary. As exercise lowers blood sugar, it is a relief that she is now able to read the glucose levels from her wrist as easily as reading the time of day, and the fear of hypoglycaemia no longer follows. At night, she had years of rising blood sugar levels with symptoms that carried on throughout the day; CGM alarms prompting her to ingest sugar interrupted her sleep, and similarly

⁴ In the United States, the so-called OpenAPS movement had already been launched in 2014, and patients and technology enthusiasts made an open source algorithm available that allowed everyone to build their own artificial pancreas system (OpenAPS, 2019).

caused tiredness. By looping, her blood sugar is now kept within a target range and it has become possible to sleep through the night. As Olivia puts it, she no longer has 'this trouble' with 'too high or too low blood sugar values' that often happened before the automatic regulation provided by the loop system. Hence, an overall outcome of the work of these digital devices is an improvement of clinical values and reduction in variability, which leads to her 'being in much better health'. Tomas also told me about better values and improved sleep; however, his approach to looping seemed more playful. He 'likes technology' and learnt to program at a young age. Especially 'new technology helps' him to 'deal' with his disease and he states: 'I think everybody has their own way of finding motivation, because diabetes itself, there is not much to get out of it'. At the same time, Tomas repeatedly refers to the invisibility of digitally connected technologies, as they no longer 'look like diabetes'. For example, when visiting a restaurant, he can now 'just take out his cell phone' and manage insulin injections through the looping app without anyone noticing it.

The effects of technical change

As this paper takes a sociomaterial approach, it is not the intention here to bring technical developments to trial, rather to note that their 'effects are crucial' (Mol, 2010: 255). With the blood glucose meter, a strict schedule was exchanged for flexibility, but then the challenge was to live by numbers, and blood glucose monitoring became tighter. The involvement of smart non-human actors has multiple effects on, for instance, sensory body awareness, ways of knowing the disease in practice, doctor-patient relationships, and the visibility of measurement and daily medical chores (Wiedemann, 2019). Living with always-on technology helps to stabilize glucose levels and thus reduces the risk of long-term complications. But in times of the insulin pen, the switch between off and on was more apparent, an issue I will return to later.

While looping technology takes over therapeutic decisions and a great deal of responsibility in metabolic regulation, it concurrently engenders new responsibilities and vulnerabilities. The latter becomes clear though the words of Tomas: 'Well, with a pen, nothing can go wrong.' In saying this, he wanted to underline his experience that an insulin pen is less troublesome

compared to the loop. Complex systems kept in continuous operation might suddenly break or steadily discharge their batteries and thus require time-critical maintenance work, either unplanned or planned. Hence ‘a lot is about keeping the technology running, and before that it was about managing the sugar’. Tomas explained. This shift from caring for the body to caring for technology corresponds with a mode of vigilance and readiness I refer to as being on standby. In the following, my paper presents empirical examples of this central effect of smart technologies. Beforehand, it seems worthwhile to concretize the concept of standby in its close relation to maintenance and care.

Holding together – The close relation between maintenance, care and standby

It has become clear how humans and non-humans come together in different sociomaterial constellations, but these constellations also repeatedly fall apart and have to be reassembled in order to keep the process of ‘doing pancreas’ going. There is a constant necessity of holding the care collective together.

Such an acknowledgment of material vulnerability (Hommels et al., 2014) and fragility is the starting point of maintenance and repair studies. There has been a growing body of work in the field of science and technology studies that has shifted attention away from order, routines, stability and resistance and brought maintenance, repair, mess, instability, fragility and breakdowns to the foreground (e.g. Dant, 2010; Denis and Pontille, 2015; Graham and Thift, 2007; Gregson et al., 2009; Henke, 2000).⁵ In his famous essay

⁵ Earlier ethnographies have paved the way to this. For example, Lucy Suchman’s (1987) analysis of ‘situated actions’ during the interaction between humans and a photocopier, or Julien E. Orr’s (1996) study of the daily work of copier technicians, can be interpreted as a starting point for ethnographies on the subject of maintenance.

‘Rethinking repair’, Steven Jackson argues for a basic ‘broken world thinking’ (Jackson 2014: 221) and suggests appreciating ‘the ongoing activities by which stability (such as it is) is maintained’ (*ibid.*: 222). Considering ‘the constant decay of the world’ (Graham and Thrift, 2007: 1), maintenance and repair offer a theoretical framework to ‘investigate the operations that daily shape and preserve material order’ (Denis and Pontille, 2019: 2). Vulnerability and fragility are regarded as ‘the primary – “normal” – property of matter. Everything has, in a way or another, to be taken care of’ (*ibid.*, 2019: 6). Care in the form of maintenance can thus be given to people, to bodies, to environments or to things. Correspondingly, the STS lens views the never-ending care work as an act of constant maintenance (Denis and Pontille, 2015; Mol, 2008; Jackson, 2014; Puig de la Bellacasa, 2017). Previously, feminist studies have recognized a close connection between care and maintenance, as seen in Berenice Fisher and Joan Tronto’s (1990) famous definition of care as: ‘[E]verything that we do to maintain, continue, and repair “our world” so that we can live in it as well as possible’ (*ibid.*: 40).

In her work on ‘matters of care’, theorist Maria Puig de la Bellacasa (2011, 2017) takes this quote as a pivotal point and includes non-humans ‘to probe further into the meanings of care for thinking and living with more than human worlds’ (*ibid.*, 2017: 4). Thinking with care has a double significance to her, ‘as an everyday labour of maintenance that is also an ethical obligation’ in terms of the ‘responsibility to take care of the fragile gathering things constitute’ (*ibid.*, 2011: 90). Previously, Mol (2008) theorized the logic of care by studying the shared work of human and non-human actors in doing health care. She drew attention to the fact that, no matter what the situation, fragility is a present mode in care practices because ‘the logic of care starts out from the fleshiness and fragility of life’ (*ibid.*: 11). Notably, bodily, material and technical fragility needs to be taken as a normal part of managing a chronic disease, leading to the necessary of constant tinkering and maintenance work. Care includes ‘messy entanglements’ (Kaziunas 2018: 92; Shildrick et al., 2018) and thus draws on ‘practices for holding together that which does not necessarily hold together’ (Law, 2010: 69).

In order to enact temporal stability, the maintenance of chronic disease management calls for tasks such as picking up prescriptions, keeping regular appointments, or submitting copious and comprehensive claims to one’s

insurance company. Since the 1980s, material oriented maintenance work has been part of diabetic care – e.g. when insulin ampoules have to be replaced or the portable meter asks for new batteries every three months. As pointed out before, an effect of always-on technology is an increasing sociotechnical instability. Because of their constant vulnerability, smart devices strive for re-stabilisation and re-organisation in shorter intervals.

But how does standby take part in this? A continually operating, vulnerable system has enlarged the dependency on technical maintenance, and since ‘there is always something’ (Olivia) to maintain, more alertness and readiness to intervene at any time is required. If technical systems become more complex or if threats to life are involved – one thinks of intensive care units – stability must somehow be monitored. I consider being on standby as an internal and affective state of coordination, like maintenance and care aimed at holding together. Standby is an operation mode most people know from technical devices: A laptop on standby, for example, receives all operations even though the screen remains black, and it ‘wakes up’ to become ready for use within seconds. But also clinicians, system administrators or locksmiths often work on standby. For certain professions it is characteristic that some people remain on call, ready to work or intervene on short notice rather than needing to constantly be physically present at the workplace. In these two ontologically different examples of standby, four interwoven characteristics become apparent:

First of all, standby is a constant ‘*intermediary stage*’ (de Laet and Mol, 2000: 240) eroding boundaries between on and off, between work and rest, between being whole and broken, between attendance and waiting. Consequently, it is a state or operation mode that invariably refers to the hybrid. Secondly, and following on from this, it is noticeable that standby is a *state of readiness* without being immediately engaged. Something or someone on standby is soon ready for re-action after receiving an alert, call or note. Thirdly, the state of standby always requires a *certain degree of vigilance and alertness*. Fourthly, being on standby is *not energetically neutral* because intermediary stages demand a certain amount of energy. The in-between is not an empty space. These four characteristics of standby can be identified on different levels in my empirical material, which I will demonstrate in the following. The body, the technology and the patients are all sometimes in a state of standby.

‘Something always happens’ – Being on standby

Living with a chronic disease always has moments of standby – for instance, we can look back to the wait that was required for clinical results in the medical history before transportable meters. In the ‘old’ days of the blood glucose meter, patients had to remain on standby in particular awareness of their bodies. As soon as signs of high or low blood glucose were perceived, it became time to actively take measurements. With always-on technologies, sugar levels always remain visible. Tomas tells me he sees them on his smart watch and, while working, in the taskbar on his computer – thus a constant perception of glucose levels can, at least theoretically, dwell in hibernation.⁶ Furthermore, one could say that the overall aim of chronic illness management is to keep the body in an intermediate stage between health and symptomatic alarm levels. The disease is never off, but at best, its acute physical symptoms ought to remain silent as long as possible. Accordingly, the glucose graphs of the diabetic CGM system should not slip out of an intermediate stage (target range) between high and low.

To interrogate the technology for a state of being on standby turned out to be more difficult and ambiguous. I have outlined the path to always-on technology above. Both Olivia and Tomas have maintained their loop system for the last year and a half and never intentionally turned it off. In order to recognize moments of standby within complex technical co-operations, one would need to spend a lot of time to study the overlapping technical, metabolic and electrochemical processes in detail. But let me briefly hint at more clearly describable moments of technical standby. In the loop, the pump is, day in and day out, ready to intervene in metabolism as soon as the perpetually measuring sensor notifies it of glucose fluctuations. In addition, the line between technology that is still working and that is broken is constantly blurred. Just-charged battery cells immediately return to a state of discharge again. Moreover, Olivia told me about various devices being part of a backup plan and which always remain ready in her standby bag. Since the

⁶ The question as to what extent technology intervenes into body awareness cannot be discussed in detail here. However, other studies have already shown that technology in practice is able to train body perception (e.g. Mol and Law, 2004).

practice of looping increases dependency on electrical power sources and draws a lot of energy from her smartphone, it became necessary to 'drag along a power bank'. Sometimes one is simply in places 'where you have no possibility to recharge anything', Olivia points out. It is a common part of her 'doing pancreas' to anticipate technical breakdowns or disruptions. In order to respond to the erratic rhythms of this technology, Olivia told me, she always has replacement units such as additional batteries, emergency insulin syringes, or an alternative meter in her standby bag. Tomas uses two smartphones, with one used for looping; this is both to extend battery charge and to distinguish diabetes-related notifications from other messages or calls. He told me that in his daily life he 'trusts' his loop, but once he leaves his hometown, he makes sure he is accompanied by ready-at-hand spare parts. Even though Tomas and Olivia entrust smart technologies with an important part of their 'doing pancreas', they remain active in the care collective.

The limits of automation

With automated insulin delivery systems it became possible to set up an automated mode for insulin delivery. Since then, Tomas has no longer had alarms at night announcing high or low values that call upon him to spring into action, because the loop 'does it automatically'. In conversation, he explains:

So what's automated is definitely at night because you don't move, you don't ingest food, you don't actually have any stress unless you have a nightmare, and in those eight hours when you sleep, the loop has full control and can adjust your sugar and I think that's where we have the biggest impact in terms of the loop.

But during the day is not like pushing the autopilot button and having disease management smoothly take over. 'During the day,' Tomas continues,

I have to look: is the battery fully charged? Is insulin still in [the pump]? Is the Bluetooth connection working? Is everything communicating or am I too far away from my mobile phone?

Moreover, a body that is awake becomes hungry, and it is also confronted with various environmental influences. During our interview, Olivia also

repeatedly emphasized the limits of the hope for automation, because the system must be navigated through daily events. She says:

If I just let this go all through the day, the system doesn't know when I'm eating and what. The system doesn't know when I do sports and when I move. The system doesn't know when I have stress. [...] You have more stress, you move, you want to eat something at a different time, and the system has to know that.

Since her everyday life does not always fit the same template, she has to actively feed the system with her doings and feelings. On the one hand the looping app requires user input, especially around meal times, to account for carbohydrates.⁷ Tomas told me that he used to estimate how many grams of carbohydrates he ate. But the looping app requires more precise details in order to 'tell' the pump how many insulin needs to be injected. Hence he likes to eat in the same restaurants because he programmed an app that allows him to retrieve stored data on certain dishes; with its help, he quickly tells the loop he is eating a certain dish again. On the other hand, human blood sugar is influenced by many factors which by and large cannot be regulated, such as hormones, seasons of the year, stress, sleep or changes in daily routine. Thus with the loop, to quote Tomas, 'it's never like it is set once and then it runs for a year'. He explains: Although the loop is able to 'smooth out' these manifold influences 'a bit', 'you still have to adjust it again and again, so it's not that easy.' In the case of looping, it becomes clear that despite sophisticated digital technology, disease management cannot be fully automated because living bodies as well as technologies are erratic (Mol, 2009: 1575).

Patients ready for maintenance

Dana M. Lewis, cofounder of the project called Open Source Artificial Pancreas System (OpenAPS), which disseminated the first algorithm for a DIY closed loop, speaks in her book about successful looping and of a required 'maintenance mode' (Lewis, 2019a). Since the technology cannot sustain or repair itself, the loop needs to be maintained by the patient who, in turn, stays in a state of readiness because there is always the potential that something

⁷ As the duration of action of insulin is delayed, increases in blood sugar after meals have to be controlled pre-emptively.

needs to be maintained. As Olivia points it out: 'Something always happens'. There are different types of disturbances possible: one may misestimate a value when calculating consumed carbohydrates; the insulin catheter of a pump can bend or be blocked; the body may simply react differently today than it did yesterday; or, for instance, the sensor on the upper arm might accidentally collide with a door frame. Moreover, a part of the care collective can suddenly go belly up with no immediately clear cause. But most notably, digital actors are accompanied by a new variety of technical disruptions.

As Olivia told me during our conversation, the sensors and transmitters of the CGM system can suddenly display error messages that require reaction. This may, for example, be because the sensor is not always able to handle strong metabolic fluctuations, she explains. In that case, its display states 'No readings' or 'Sensor error' and does not display any values for up to three hours. In the meantime, she is only able to measure her blood sugar 'traditionally.' From time to time there are error messages that Olivia isn't familiar with and has to look up online. Additionally, Olivia declares, there are moments of 'transmitter loss', which means that her smartphone does not receive any glucose readings because it is too far away from the transmitter. Or the RileyLink, responsible for communication between the pump and smartphone, is suddenly no longer within range of the other two devices due to movement. It is also possible that the smartphone app coordinating Olivia's loop suddenly crashes and has to be restarted. In the event of such troubles, she receives an immediate warning on her smart watch. But these technical disturbances have no schedule, and they do not happen every day, Olivia explained. Being on standby does not imply that there is sudden maintenance work to do every day; the crucial point is that maintenance work permanently looms in the background, waiting around the corner.

Even on a day when no unscheduled maintenance work occurs, the schedules for planned maintenance need to be kept in mind. Every third day, Olivia has to refill the insulin reservoir of her pump and to secure the device again on a disinfected area of her skin. The software involved in the looping requires occasional updates, but this is not done with a single click of a mouse. Olivia told me that the complicated updates often scare her, but that her husband stands by to assist. The transmitter she uses must be removed and replaced after three months, while other CGM systems require the device to be

recharged every few hours. The lifespan of the sensor is even shorter, and should be renewed after 10 days. Every day she needs to recharge her smartphone and her smart watch to be able to read her glucose levels immediately, and the RileyLink, too, needs daily charging. Wiring the mobile devices has become her evening routine and, she explains to me, the devices charge up overnight next to her on a bedside cabinet to be ready for the next day.⁸ But even if the time cycles of equipment fatigue are predictable and notifications or battery status bars help to draw attention to them, in practice, the line between planned and unplanned maintenance can quickly dissolve. Every smartphone user is probably familiar with sudden worries about a low battery or a blank screen.

Beeping, humming or buzzing – The affective tensions of being on standby

Care in practice unfolds tensions that need handling (Mol et al., 2010: 14): ‘tensions between different subjectivities and objectivities’ (Law, 2010: 68), bodies and technologies, calculation and the erratic or desires and the metabolism. At this point I would like to highlight the affective tensions becoming apparent through the lens of standby. Always-on technologies reduce the anxieties of strongly fluctuating glucose levels, yet, but constantly discharging batteries, result in temporal ‘range anxiety’ (Müggenburg, 2019) – a term that emerged in the 1990s in the context of electric vehicles and refers to the fear of being stranded: that the battery will run out of power before a charging point can be reached. But devices as well as patients may become temporarily fatigued.

Tying in with this, Tomas spoke about the phenomenon of ‘alarm fatigue’ (Shivers et al., 2013) occurring when one is subjected to frequent alarms as, for example, described earlier in the context of nursing. With an insulin pen, to quote Tomas, ‘if you wanted to ignore’ diabetes you could ‘just put it back in the cupboard’ and ‘then [the] disease was gone – at least in feeling’. When numbers are constantly visible, technical disorders and metabolic fluctuations both cause alarm sounds, or devices invariably need to be kept

⁸ Of course Tomas also has to do maintenance work, which due to his different devices, has a partially divergent schedule to what Olivia describes of her system.

close to the body, it becomes a challenging negotiation to temporarily put the disease out of mind. The digital technologies require an attentive body; however, the constant beeping, humming or buzzing of the devices can be ‘annoying’ and ‘burdensome’, as Olivia also pointed out. These alarms are for safety and are designed to quickly detect low or high, sharply falling or rising and extremely fluctuating glucose levels, as well as low insulin reservoirs, signal loss or upcoming maintenance. But they create affective tension between feeling safe and annoyed: ‘you don’t want to hear the sound, but you’re glad it’s there’, states Thomas.

Alarms are part of the trade-off between pricking one’s finger to constant visibility and reactivity due to the CGM system. Olivia says: ‘You are grateful for these alarms, definitely, because you can intervene and react directly. But it often pulls you away from your doings.’ An advantage of DIY systems is that they are more customizable than those available on the market, and alarm thresholds can be customized more to individual preferences. To reduce his alarm fatigue, Thomas adjusted audio settings ‘down to a vibration’, because the sounds are ‘always connected to something negative’. In certain situations, for example, at the movies or in a business meeting, he mutes the alarms and observes his sugar on screen. However, at night, the beeping sound stays activated – as long as he ‘didn’t forget to turn the phone back on’.

But with looping, there are fewer metabolism alerts, which in turn – as Tomas puts it – benefits his ‘diabetes-life balance’. With the CGM system, this balance started to oscillate, he tells me, because ‘it was beeping all the time’. Nevertheless, he needs to be on standby because he is attached 24/7 to a technological system which may requires his attention. Unlike professions organized into standby duties, it is not a short on-call period after which another person takes over the shift the following day. The intimate body-technology relation accompanies a lifelong need to be on standby – a state that subtly consumes energy for humans and non-humans alike.

Conclusion

Over the last few years, complex digital technologies have recreated the everydayness of diabetes care; they have facilitated living with the disease and

allowed patients to improve their glycaemic levels (Battelino et al., 2012). Due to the vulnerability and unruliness of these technologies, maintenance work has increasingly become more central to the stability of disease management. There is a constant necessity of holding together the care collective, which consists of heterogeneous entities. My paper has argued that the maintenance of complex technical systems requires a constant state of vigilance and readiness, which I have termed being on standby. In this, I consider being on standby as an internal and affective state necessary to re-organize, re-stabilise and coordinate complex and convoluted sociotechnical entanglements. Through the argumentation made here, the paper aims to contribute to the growing field of maintenance and repair studies, and offers the lens of standby as a valuable tool for further enquiries. With standby, an important perspective is added: in the background of complex digital entanglements, the activities of maintaining stability imply a certain degree of being someone or something on standby. I suggest that it is valuable to take this notion of being on standby into account because it is a lens that displays how frequent maintenance work is (affectively) organized. In the context of DIY health technologies, Elizabeth Kaziunas (2018: 165) has already pointed out that there is a great deal of emotional work involved in maintaining and interacting with data and technologies.

Of course, living with a disease always requires attentiveness. In the case of DIY-looping this attention is, to a great extent, directed at battery bars, interfaces, Bluetooth connections, alarms and software error messages. Thus, the state of being on standby is closely related with a shift from caring for the body towards caring for running technologies. An entanglement of sophisticated medical devices is simply more complex than colour charts, portable meters or an insulin pen. However, since the algorithm generally takes good care of metabolism and CGM system alerts as soon as low or high blood glucose values arise, patients do not always have to be vigilant and alerted concerning body signs. Certainly, this is also an analytical 'exaggeration', since care for the body is not utterly replaced by care for technologies. Bodies, like technologies, are unruly and vulnerable, and as we have seen, the algorithm must often be navigated by patients.

In this sense, the findings stand in contrasts with public euphoria concerning digital possibilities for the algorithmic automation of disease management.

Instead, we see how the demand of constant readiness and the fragility of care are visualized. Mundane care work is not yet a cybernetic loop, and full control is an illusion (Mol, 2009: 1757). No matter how sophisticated algorithms are, they inevitably contend with unreliable energy cells, erratic bodies or similar. It becomes apparent that the fragility of hardware as well as software must be considered a normal part of everyday life as soon as sophisticated technologies are involved in disease management. Even if algorithms take on a large amount of the workload, they are not able to maintain the delicate balance themselves. Of course, DIY-looping is also an exceptional case and since it is not legal, further complications arise. Nevertheless, on a general level, this paper has shown that the workflows algorithms take on must be vigilantly accompanied as soon as numerous heterogeneous actors are involved and the 'agentic capabilities' of algorithms depend on joint work (Schwennesen 2019: 178).

As has been highlighted by others, maintenance work often takes place behind the scenes (e.g., Denis and Pontille, 2015; Jackson, 2014; Graham and Thift, 2007) and belongs to the field of 'invisible work' (Star and Strauss, 1999). Likewise, behind diabetic maintenance work there are hidden practices that remain mostly invisible to the public or academic view. How digital technology changes the management of chronic disease is a question that has often been addressed over the last decade. With the advent of digital technologies, discourses on the 'digitally engaged patient' (Lupton, 2013), 'healthcare and big data' (Ebeling, 2016), 'datafied health' (Smith and Vonthethoff, 2016) and 'M-health' (Lupton, 2012) have emerged. The effect that smart assistance technology requires a constant 'care of things' (Denis and Pontille, 2015) seems to be barely mentioned.

The question of which daily routines are capable of integrating an ongoing state of standby, or which patients are willing to bear with a constant readiness, remains open for further research. So, too, it can be assumed that not everyone feels comfortable with or is willing to trust a partially automated system that administers a potentially lethal hormone. My interviewees represent a type of patient having the financial resources, the time and the knowledge to tinker with technologies for improvements. Moreover, they have access to the hardware to loop, and the high costs of the systems are reimbursed by their insurance. In this context, it is worth pointing out that

CGM systems and insulin pumps ‘are still not worn by the majority of type 1 patients in North America or Europe’ (Heinemann, 2017: 864). In Germany, for instance, the costs of a CGM system have, theoretically, been covered by health insurance since 2016, but ‘insurance companies try to avoid the high costs associated by establishing additional bureaucratic burdens’ (*ibid.*: 865). In this respect, it is not an old-fashioned way of diabetes management to prick one’s finger and handle syringes.

Although more fundamental power struggles still need to take place, it should be noted: the ‘commercial medical device industry has a huge opportunity to leverage a wide-ranging body of knowledge from the patient community that is using DIY technology’ (Lewis, 2019b: 792). There is ample room for codesign, and designers of the systems should especially consider maintenance work, for instance, by paying particular attention to technical support, the interoperability of devices, and to their battery run times. Likewise, the limits of automation and the background work of care should be publicly discussed more often. Even officially approved systems cannot be switched on and then forgotten. Diabetes, like other chronic diseases, ‘requires’ attention, and ‘that’s what it will always be – with or without the loop’, to quote Olivia once more.

references

- Battelino, T., I. Congetts, B. Olsen, I. Schütz-Fuhrman, E. Hommel, R. Hoogma and et. al. (2012) ‘The use and efficacy of continuous glucose monitoring in type 1 diabetes treated with insulin pump therapy: a randomised controlled trial’, *Diabetologia*, 55 (12): 3155-3162.
- Bruni, A. and C. Rizzi (2013) ‘Looking for data in diabetes healthcare: Patient 2.0 and the re-engineering of clinical encounters’, *Science & Technology Studies*, 26 (2): 29–43.
- Clarke, S.F. and J.R. Foster (2012) ‘A history of blood glucose meters and their role in self-monitoring of diabetes mellitus’, *British Journal of Biomedical Science*, 69(2): 83-93.
- Crabtree, T. A. McLay and E. G. Wilmot (2019) ‘DIY artificial pancreas systems: here to stay?’, *Practical Diabetes*, 36 (2): 63–68.

- Danesi, G., M. Pralong and V. Pidoux (2018) 'Embodiment and agency through self-tracking practices of people living with diabetes', in A. Btihaj (ed.) *Metric culture: Ontologies of self-tracking practices*. United Kingdom: Emerald Publishing.
- Danholt, P. (2012) 'Factish relations: Affective bodies in diabetes treatment', *Health*, 17(4): 375-390.
- Danholt, P., K. Bødker, M. Hertzum and J. Simonsen (2004) 'Healthcare IT and patient empowerment: The case of diabetes treatment', in *Proceedings of the eighth Participatory Design Conference 2004*, Vol. II:80-83, Toronto, Canada, July 27-31.
- Dant, T. (2010) 'The work of repair: gesture, emotion and sensual knowledge', *Sociological Research Online*, 15 (3): 97-118.
- Denis, J. and D. Pontille (2015) 'Material ordering and the care of things', *Science, Technology, & Human Values*, 40 (3): 338-367.
- Denis, J. and D. Pontille (2019) 'Why do maintenance and repair matter?', in A. Blok, I. Farias and C. Roberts (eds.) *The Routledge Companion to Actor-Network Theory*. London: Routledge.
- DSCCommunity (2016). *My pancreas runs on AAA batteries* [Twitter]. [<https://twitter.com/DSCCommunity/status/738445390232461312?s=19>] Accessed on: October 15, 2020.
- Ebeling, M. (2016) *Healthcare and big data: Digital specters and phantom objects*. Houndmills: Palgrave Macmillan.
- Fenwick, T. (2014) 'Sociomateriality in medical practice and learning: attuning to what matters', *Medical Education*, 48 (1): 44-52.
- Fisher, B. and J. Tronto (1990) 'Toward a feminist theory of caring', in E.K. Abel and M.K. Nelson (eds.) *Circles of care: Work and identity in women's lives*. New York: SUNY Press.
- Graham, S. and N. Thrift, (2007) 'Out of order: Understanding repair and maintenance', *Theory, Culture & Society*, 24(3): 1-25.
- Gregson, N., A. Metcalfe and L. Crewe (2009) 'Practices of object maintenance and repair: How consumers attend to consumer objects within the home', *Journal of Consumer Culture*, 9(2): 248-272.

- Grief, J. (2019) Type 1 on 1 Episode 8: Pete Davies [Blog and Podcast] *Miss Jen Grieves*. [<http://missjengrieves.com/type-1-on-1-podcast-episode-8-pete-davies/>] Accessed on: October 15, 2020.
- Heinemann, L. (2017) 'Future of Diabetes Technology', *Journal of Diabetes Science and Technology*, 11 (5): 863–869.
- Heinemann, L. and K. Lange (2019) 'Do It Yourself' (DIY)-Automated Insulin Delivery (AID) Systems: Current Status From a German Point of View', *Journal of Diabetes Science and Technology*, DOI: 10.1177/1932296819889641.
- Henke, C. R. (2000) 'The mechanics of workplace order: Toward a sociology of repair', *Berkeley Journal of Sociology*, 44: 55–81.
- Hommels, A., J. Mesman and W.E. Bijker (2014) (eds.) *Vulnerability in technological cultures. New directions in research and governance*. Cambridge: MA.
- Jackson, S. (2014) 'Rethinking repair', in T. Gillespie, P. Boczkowski and K. Foot (eds.) *Media technologies: Essays on communication, materiality, and society*. Cambridge: MIT Press.
- Kaziunas, E.S. (2018) *Designing for lived health: Engaging the sociotechnical complexity of care work*. Dissertation. Ann Arbor: University of Michigan.
- de Laet, M. and A. Mol (2000) 'The Zimbabwe bush pump: Mechanics of a fluid technology', *Social Studies of Science*, 30(2): 225–263.
- Law, J. (2010) 'Care and killing: Tensions in veterinary practice' in A. Mol, I. Moser and J. Pols (eds.) *Care in practice: On tinkering in clinics, homes and farms*. transcript: Bielefeld.
- Lewis, D. (2019a) *Maintenance mode: When you're successfully looping* [Online]. Artificial pancreas book. [<https://www.artificialpancreasbook.com/5.-maintenance-mode-when-youre-successfully-looping>] Accessed on: October 15, 2020.
- Lewis, D. (2019b) 'History and perspective on DIY closed looping', *Journal of Diabetes Science and Technology*, 13 (4): 790–793.
- Looped (2016) *The looped Facebook group* [Online]. Accessed on: October 15, 2020.

- Lupton, D. (2012) 'M-health and health promotion: The digital cyborg and surveillance society', *Social Theory & Health*, 10(3): 229-234.
- Lupton, D. (2013) 'The digital engaged patient: Self-monitoring and self-Care in the digital health era', *Social Theory & Health*, 11(3): 256-270.
- Marshall, D.C., M. Holloway, M. Korner and et al. (2019) 'Do-it-yourself artificial pancreas systems in type 1 diabetes: Perspectives of two adult users, a caregiver and three physicians', *Diabetes Therapy*, 10 (5):1553–1564.
- Medtronic (2020) *MiniMed 670G insulin pump system* [Online]. Medtronic diabetes. [<https://www.mendeley.com/guides/web-citation-guide/>] Accessed on: October 15, 2020.
- Mol, A. (2000) 'What diagnostic devices do: The case of blood sugar measurement', *Theoretical Medicine and Bioethics*, 21(1): 9-22.
- Mol, A. (2002) *The body multiple: Ontology in medical practice*. Durham: Duke University Press.
- Mol, A. (2008) *The logic of care: Health and the problem of patient choice*. London: Routledge.
- Mol, A. (2009) 'Living with diabetes: Care beyond choice and control', *The Lancet*, 373(9677): 1756–1757.
- Mol, A. (2010) 'Actor-network theory: Sensitive terms and enduring tensions', *Kölner Zeitschrift für Soziologie und Sozialpsychologie*, Sonderheft 50: 253–269.
- Mol, A. and J. Law (2004) 'Embodied action, enacted Bodies: The example of hypoglycaemia', *Body & Society*, 10(2-3), S. 43-62.
- Mol, A., I. Moser and J. Pols (2010) 'Care: putting practice into theory', in A. Mol, I. Moser and J. Pols (eds.) *Care in practice: On tinkering in clinics, homes and farms*. transcript: Bielefeld.
- Müggenburg, J.K (2019) 'Battery as a mediating technology of organization', in T. Beyes, C. Pias, and R. Holt (eds.) *The Oxford Handbook of Media, Technology, and Organization Studies*. Oxford: Oxford University Press.
- OpenAPS (2019) *What is #OpenAPS?* [Online]. OpenAPS. [<https://openaps.org/what-is-openaps/>] Accessed on: October 15, 2020.

- Orr, J. E. (1996) *Talking about machines: An ethnography of a modern job*. Ithaca: ILR Press.
- Oudshoorn, N. (2016) 'The vulnerability of cyborgs: The case of ICD shocks', *Science, Technology, & Human Values*, 41 (5): 767–792.
- Puig de la Bellacasa, M. (2011) 'Matters of care in technoscience: Assembling neglected things', *Social Studies of Science*, 41(1): 85–106.
- Puig de la Bellacasa, M. (2017) *Matters of care. Speculative ethics in more than human worlds*. Minneapolis: University of Minnesota Press.
- Pols, J. (2012) *Care at a distance. On the closeness of technology*. Amsterdam: Amsterdam University Press.
- Schwennesen, N. (2019) 'Algorithmic assemblages of care: Imaginaries, epistemologies and repair work', *Sociology of health & illness*, 41: 176–192.
- Shivers, J. P., L. Mackowiak, H. Anhalt and H. Zisser (2013) "'Turn it off!': diabetes device alarm fatigue considerations for the present and the future', *Journal of Diabetes Science and Technology*, 7 (3): 789–794.
- Schreiner, G. (2004) *Think like a pancreas. A practical guide to managing diabetes with insulin*. Cambridge, MA: Da Capo.
- Shildrick, M., A. Carnie, A. Wright, P. McKeever, E. Jan, E. Luca et al. (2018) 'Messy entanglements: research assemblages in heart transplantation discourses and practices', *Medical Humanities*, 44 (1): 46–54.
- Smith, G.J.D. and B. Vonthethoff (2016) 'Health by numbers? Exploring the practice and experience of datafied health', *Health Sociology Review*, 26(1): 6–21.
- Star, S. L. and A. Strauss (1999) 'Layers of silence, arenas of voice: The ecology of visible and invisible work', *Computer Supported Collaborative Work*, 8: 9–30.
- Suchman, L.A. (1987) *Plans and situated actions: The problem of human-machine communication*. Cambridge: Cambridge University Press.
- Weaver, K.W. and I.B. Hirsch (2018) 'The hybrid closed-loop system: Evolution and practical applications', *Diabetes Technology & Therapeutics*, 20 (2): 216–S223.

Wiedemann, L. (2019) *Self-Tracking. Vermessungspraktiken im kontext von quantified self und diabetes*. Wiesbaden: VS Verlag für Sozialwissenschaften.

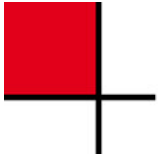
acknowledgements

I would like to thank the editors of *ephemera* and the three anonymous reviewers for providing constructive suggestions on earlier versions of this paper.

the author

Lisa Wiedemann is a postdoctoral researcher at the Department of Sociology, Helmut-Schmidt-University Hamburg. Her research focuses on Science and Technology Studies, Sociology of the Senses, Quantifications of Body and Self, Biopolitics and everyday living with chronic illness.

Email: wiedemal@hsu-hh.de



Standing by for data loss: Failure, preparedness and the cloud

A.R.E. Taylor

abstract

This article explores how the anticipated failure of digital technologies positions cloud storage providers and cloud users on 'standby' for data loss. With their fragile components and limited lifespans, digital devices are not built to last. Users must take preparatory action if they want to avoid losing data when their devices fail. Cloud-based back-up solutions have emerged as key technologies with which individuals and organisations prepare for data loss. For a monthly subscription, cloud providers offer an online data storage space safely removed from the local storage of personal devices or office computer systems, with the promise that clients' data will be protected and continuously available. Yet for those who work in the data centres that underpin the cloud, ensuring this constant availability requires a tremendous amount of equipment, infrastructure and human labour. With reputational damage and revenue at stake with every second of data centre downtime, 'standby' arises as the guiding logic for organising the operations of cloud infrastructure and the daily working lives of those who manage and maintain it. Drawing from ethnographic fieldwork, this article traces the technologies, affects and 'backed up' subjects that standing by for data loss generates in and out of the cloud, and embeds cloud storage within a longstanding industry of data back-up, recovery and salvage services. The prospect of data loss, it is argued, arises as both a growing threat and opportunity in digital capitalism, as the accelerating obsolescence of our digital technologies increasingly makes data 'preppers' of us all.

Introduction

Okay. Now everything on your other phone and on your hard drive is accessible here on the tablet and your new phone, but it's also backed up in the cloud and in our servers. Your music, your photos, your messages, your data. It can never be lost. You lose this tablet or phone, it takes exactly six minutes to retrieve all your stuff and dump it on the next one. It'll be here next year and next century. (Brandon, in Dave Eggers' *The Circle*, 2013: 43)

I begin with this short excerpt from Dave Eggers' 2013 techno-dystopian novel *The Circle* because it captures the promise of transcendental and perpetual data storage that lies at the heart of cloud computing. If digital technologies are prone to failure, the cloud purports to provide users, be they individuals or organisations, with a space in which they can safely store their data beyond the fragile material forms of their personal devices or office IT systems. Cloud providers strive to ensure that no matter what should happen to users' smartphones, tablets or computers, the data from these devices, backed-up in their data centres, is continuously available, ready to be instantly retrieved and re-downloaded without delay.

This article explores how the anticipated failure of digital technologies positions cloud storage providers and cloud users on 'standby' for data loss. 'Standing by for data loss' describes an affective mode of living towards an anticipated future of technology failure and taking preparatory measures in the present to ensure that device breakdown doesn't result in data loss. Packed full of fragile microelectronics and with their ever-shortening lifespans, the digital devices that surround us are often not built to last. Consumers are increasingly aware that failure is strategically built into these electronics. Planned obsolescence, battery degradation and black-boxed, unrepairable devices sustain a culture of perpetual upgrading, leading to ever-accumulating (and unevenly distributed) deposits of e-waste (Parks, 2007; LeBel, 2012). The regularity with which digital technologies crash, malfunction or otherwise fail, increasingly requires their users to stand by for their inevitable decline and take anticipatory action if they want to avoid losing the valuable files stored on their devices. Programs like Apple's 'Time Machine' or Windows' 'Backup and Restore' make it easy for users to back-up

their computers onto external hard drives. These programs regularly prompt users with push notifications if a back-up is overdue, reminding them that device failure and data loss can occur at any moment, for which they must be prepared (Figure 1). Increasingly, more and more users are turning to cloud storage solutions to back-up their files online. Dropbox, Google Drive, Apple's iCloud, Microsoft's OneDrive and other cloud services provide users with quick, easy and supposedly infinite data storage space, for a monthly subscription fee.



Figure 1: A push notification from Apple's Time Machine application in the top right corner of the screen reminds the user to back-up their computer. Screenshot by A.R.E. Taylor.

Backing-up into the cloud has the advantage of requiring little action on the user's part. If backing-up to an external hard drive is a task that users easily postpone, most cloud services offer to automatically back-up device data at a designated time of day (providing there is a Wi-Fi connection). Most crucially, the cloud provides a centralised online data storage space from which users can access and synchronise their files across their devices. In doing so, cloud providers strive to render device breakdowns, thefts and upgrades as non-disruptive as possible by guaranteeing that user data will not be lost and is ready and waiting to be swiftly accessed and re-installed (within 'six minutes'

in *The Circle*) on their next device as and when failure should arise. Yet, for those who work in the data centres where cloud data is stored, ensuring the constant availability of online data services is no easy task. Despite the image of transcendental data storage that the 'cloud' metaphor conjures, for data centre professionals, this infrastructure is experienced as material, highly fragile and prone to failure. IT failure is an inherent part of everyday working life in the cloud: computers crash, servers go down, connections time out and hard disk drives malfunction. To maintain the cloud's promise of uninterrupted, even eternal data storage (data that will, in Circle employee Brandon's words, 'be here next year and next century') requires a tremendous amount of infrastructure, energy and human labour. At the same time, as commercial cloud providers compete to attract business, they promise to guarantee increasingly extreme levels of data availability and system uptime that their competitors cannot match. Data centre uptime is measured by the number of 'nines' of critical system availability that a provider guarantees, typically ranging from services that will remain online for 90% of the time ('one nine') up to 99.99% of the time ('four nines'). In their service level agreements (SLAs), some data centre providers will even promise their clients up to 99.9999% service availability (which translates into only 31.56 seconds of downtime a year). Data centre professionals must thus navigate the requirement of needing to offer continuous service availability in the face of IT failure that is understood as inevitable. This calls forth 'standby' as the strategic operating logic of the data centre industry. Inside any data centre one encounters an array of back-up servers, generators, air conditioners and other equipment, idling in a state of readiness, waiting to be activated in the event of an emergency. Scaled up to the level of architecture, the logic of standby produces an ever-expanding network of data centres that are being constructed as back-up sites. Standby further arises as a more-than-material security practice, generating anticipative affects among data centre employees, who work on high alert, constantly attuned to the possibility of IT failure. It is, after all, their job that is on the line if they should be responsible for losing a client's data.¹

¹ As Vincent Mosco (2014: 133) puts it, 'engineers working for cloud companies labor in fear of losing their jobs if they are caught with their servers down'.



Figure 2: A technician runs diagnostic tests as part of routine server maintenance in a London data centre. Photo by A.R.E. Taylor.

Standing by for data loss, for cloud users and cloud providers alike, thus entails occupying a specific subject position in relation to the precarious nature of digital technologies. This mode of standby materialises in the form of back-up hard drives or cloud subscriptions at the user-end, and redundant servers, power generators and back-up data centres at the service-provider end.

A focus on the subjectivities and practices that standing by for data loss generates, provides an entry-point for thinking about the convergence of digital capitalism and disaster capitalism. Naomi Klein (2007) has used the phrase ‘disaster capitalism’ to describe the political-economic complex that converts disasters into profitable opportunities under neoliberal rule. Klein is predominantly concerned with the exceptional policy or economic measures (often involving deregulation schemes and the promotion of privatisation) that neoliberal reformers justify in the wake of disaster events. Media scholar Wendy Chun (2016) has taken some steps towards embedding digital media technologies within the context of catastrophe-orientated capitalism. Chun productively links practices of device updating to the perpetual state of crisis

that has been widely theorised as forming the operating conditions of neoliberal economics. Chun's work provides an entry-point for exploring how the rapid obsolescence, regular breakdowns and other 'crises' that shape user experiences of digital media technologies, encourage habits of constant upgrading. 'In new media, crisis has found its medium', Chun (2016: 74) writes, 'and in crisis, new media has found its value'. Commenting on the economic value of failure-ridden digital devices, Arjun Appadurai and Neta Alexander (2020: 23) have observed that '[t]echnological failures such as limited battery life, digital lags, or frozen, irresponsive screens effectively support a business model of upgrading'. But device failure is not only rendered economically productive through consumers perpetually upgrading or replacing their digital gadgets. Just as disasters do not need to occur in order to be rendered profitable (as we see with private sector consultancies that make money from selling preparedness services), device failure and the ensuing crisis of data loss does not need to materialise in order to generate economic value. Indeed, the cloud enables technology corporations to extract profit from the mere prospect of device failure, by encouraging users to invest in data back-up and recovery services to ensure that IT malfunction does not result in data loss. If, as Paul Virilio (2007) famously suggested, new technologies produce new opportunities for technological failure, in doing so, they also open up new markets for the *anticipation* of failure.

The cloud itself is merely the latest instantiation of a longstanding industry of data back-up and IT disaster recovery services that has steadily emerged since the mid-late twentieth century precisely to capitalise on the anticipated prospect of data loss, as precarious computer systems became permanent fixtures in organisational environments. The aim of this article is thus to draw attention to the cloud data centre not simply as a built response to growing demands for data storage (i.e. an architectural solution to the so-called 'data deluge') but as part of an ever-expanding economy of 'data preparedness' that has arisen since the late 1960s to protect against - and profit from - the unending prospect of data loss that lurks in the background of daily life in an increasingly digital world.

The material presented here is based on empirical data collected from ongoing fieldwork that I have been conducting in the data centre industry since summer 2015 (Taylor, 2019; 2021). During this time, I have shadowed the

work of data centre professionals, including data centre managers, security guards, disaster recovery consultants and IT technicians, as well as attended data centre industry events and training programmes. The historical material in this article draws from archival IT industry magazines as well as interviews with data centre professionals, many of whom have worked in the industry for the last forty years. The discussion that follows is predominantly situated at the intersection of two literatures. The first is the body of scholarly work on preparedness which has explored how this anticipatory security rationality has emerged as a key strategic logic through which everyday life has come to be organised (Lakoff, 2006: 265, 2017; Anderson, 2010). The second body of literature is the recent work in media, technology and infrastructure studies, that has turned to breakdown, malfunction, repair and failure as theoretical and methodological frameworks for studying the materialities of digital technologies as well their supporting infrastructures, industries and workers (or ‘maintainers’) (Graham and Thrift, 2007; Jackson, 2014; Carroll, 2017; Russell and Vinsel, 2018; 2020; Mattern, 2018; Graziano and Trogal, 2019; Appadurai and Alexander, 2020).

Amidst growing interest in media materialities, the broken computers, frozen loading screens and outdated phones that we frequently encounter today have provided windows onto the limitations of technological progress and the narratives of newness and innovation that underpin their development, design and marketing (Gabrys, 2013; Alexander, 2017; Russell and Vinsel, 2018; 2020). Discarded digital objects have also surfaced as valuable entry-points for exploring contemporary configurations of capitalism, particularly the unethical and unsustainable operating logics of a technology industry that capitalises on the failure of digital commodities (Mantz, 2008; Burrell, 2012). While discarded devices are now drawing significant scholarly attention, a focus on the cloud as a technology of preparedness expands the temporal horizons of existing studies of failed digital technologies, directing attention to the anticipation rather than aftermath of failure. Indeed, if failure has become an inevitable, or even accepted future of digital devices for consumers, this is partly because an entire infrastructure of data preparedness has arisen to render device failure as non-disruptive and tolerable as possible by ensuring that the data contained on these technologies is not lost along with them. The cloud is a key service through which the anticipated disaster

of device failure is transformed from a shocking or rupturing event into a forgettable, permissible and (relatively) non-disruptive event. By striving to ensure that device failure does not result in data loss and by ensuring that data can be quickly re-downloaded onto a new device, the cloud, I ultimately argue, both capitalises on the prospect of data loss and also facilitates the quick and easy turnover of digital electronics, bolstering a techno-economic system based on planned obsolescence and perpetual upgrades.

This first two sections of this article trace the role that cloud back-up and recovery services play in end-user plans for anticipating IT failure. I begin by sketching an analysis of the basic logic of data preparedness that underpins and drives practices of standing by for data loss. I then trace a brief history of data preparedness from an IT disaster recovery perspective, exploring the role that data back-up vendors and, later, cloud providers have played in this security market. The final two sections of this article move us into the 'cloud' to look at the work that standing by for data loss entails in the data centre industry, focusing on the hypervigilant data centre subjectivities as well as the material infrastructure and equipment through which standby is measured and produced in the cloud.

Data preparedness

Originally sponsored by cloud back-up vendors such as Crashplan and Backblaze, since 2011, March 31 has been designated 'World Back-up Day' (Figure 3). An introductory video on the official World Back-up Day website invites visitors to imagine various data loss scenarios, such as their smartphones being stolen or their computers crashing, asking, 'What would you do if you lost everything?' and 'What would you lose forever?' Encouraging viewers to imagine their data under threat and to accordingly develop the habit of backing-up their devices regularly, these rhetorical prompts aim to transform users into responsible 'backed-up' subjects. Here, the present is configured as a time-space of impending device failure in which users must take appropriate anticipatory action to protect the photos, files and other precious data stored on their personal electronics. Technological failure is positioned as something that cannot be prevented. Computers will inevitably crash and smartphones will inevitably be stolen, lost or irreparably

damaged, but, with the right preparations, by internalising a rationality of preparedness, users can ensure that they don't lose their data along with their devices.

WHAT WOULD YOU DO IF YOU LOST EVERYTHING?

////////////////////
GO TO WORLDBACKUPDAY.COM
TO LEARN MORE



Figure 3: A promotional poster for the annual awareness day 'World Back-up Day'. A video on the World Back-up Day website informs visitors that: 'More than sixty-million computers will fail worldwide this year. And that's not all. More than two-hundred-thousand smartphones are lost or stolen every year. That's countless irreplaceable documents and treasured memories destroyed'. Image from worldbackupday.com, reproduced under Fair Use Licence.

‘Preparedness’ has been loosely defined by anthropologist Frédéric Keck (2016) as ‘a state of vigilance cultivated through the imagination of disaster’. By envisioning dystopian future scenarios, preparedness practitioners seek to produce and administer a world in which threatening events do not catch humanity off guard. These threatening events - which can range from pandemic outbreaks to cyberattacks to extreme weather events - are constructed as inevitable and unpreventable, but potentially manageable if the right measures are taken to anticipate them. If action is not taken, ‘a threshold will be crossed and a disastrous future will come about’ (Anderson, 2010: 780). Preparedness emerged as part of Cold War civil defence projects to secure the future when faced with the need to anticipate a surprise nuclear attack (Collier and Lakoff, 2010; 2015). The probability and predictability of such an attack was not calculable and the potentially catastrophic consequences were equally incalculable. Preparedness thus surfaced as a style of reasoning with which security planners and strategists could grapple with ‘a foreseeable, but not statistically calculable event’ (Lakoff, 2008: 406). Rather than rely on risk-based statistical and calculative methods for managing uncertainty, under the rubric of preparedness Cold War strategists developed imaginative new methods such as duck-and-cover drills, scenario planning, disaster simulations and resource stockpiling, as tools with which they could prepare the nation for thermonuclear warfare. Through these techniques, new modes of civilian and military subjectivity were generated that could live with the constant possibility of annihilation (Lutz, 1997).

While preparedness was most fully articulated as a mode of governance during the Cold War, throughout the second half of the twentieth century, practices of preparedness were mobilised as generic tools with which to manage a diversity of disaster scenarios across a range of sectors and policy domains, from public health to international terrorism to critical infrastructure protection (Lakoff, 2008; Collier and Lakoff, 2015). In the process, new security markets for preparedness have emerged, with private sector consultancies providing ‘business continuity’ advice, guidance and resources. Preparedness does not only offer a formal framework for governments and organisations to manage uncertainty. As the permanent crises and intensifying conditions of everyday insecurity associated with late neoliberalism accelerate, preparedness has also increasingly seeped into

everyday life, giving rise to growing communities of ‘preppers’ (Huddleston, 2017; Mills, 2018; Garrett, 2020). By conjuring the perpetual potential for disaster, preparedness fosters subjects that can adapt themselves to ever-expanding horizons of threat and precarity, often under the imperative of becoming ‘resilient’ (Grove, 2016: 30; Chandler and Reid, 2014).

If conditions of perpetual threat entail the production of new forms of preparedness among populations, then the ever-present possibility of digital device failure has made standing by for data loss part of the fabric of everyday life in the digital world. Standing by for data loss arises as a normative affective state when the prospect of digital device or IT system failure becomes an imminent and permanent possibility, requiring digital citizens to partake in routinised practices of backing-up their data. A ‘how-to’ guide on cloud back-ups articulates the basic logic of data preparedness: ‘If something untoward should happen to your computer, then a good backup is all that stands between you and complete disaster - it may seem like a chore to duplicate all your files but you’re going to be glad you did if your machine gets beyond repair’ (Nield, 2015). Backing up, it is hoped, can prevent device failure from escalating into the disaster of data loss.

While devices are largely replaceable, the data they contain is not. Losing the digital photos, videos and other files that users store on their smartphones, tablets, laptops and personal devices could be a potentially devastating experience. Natasha Dow Schüll (2018: 44) has used the language of existential risk to capture the impact of data loss on peoples’ lives today, describing ‘the annihilating sense of loss that strikes when personal information archives crash, inexplicably disappear into the ether of the so-called cloud, or become mysteriously corrupt and inextractable’.² For most organisations today, data loss has a similarly existential quality to it, potentially putting an end to their operations. Data loss has gradually surfaced as a growing fixture in the collective imagination of catastrophic futures in recent decades. The plots of films like *Blade Runner 2049* (2017), TV shows like *Mr Robot* (2015-2019) and graphic novels like Enki Bilal’s *Bug* (2017) all pivot around large-scale data erasure events that lead to widespread

² Shannon Mattern (2018) has similarly observed that, for the techno-dependent citizens of the global north, ‘a cracked screen can mean death’.

societal collapse.³ In other equally dystopian visions, with more and more cultural heritage now being ‘born’ digital or rapidly being digitised as part of preservation programmes, a growing number of digital archiving projects have been motivated by the prospect of the ‘digital dark age’; a future scenario in which vast swathes of data are lost due to obsolescence, digital decay or bit rot.

While imaginaries of data-based disasters are intensifying, data loss has long been a source of threat for businesses and organisations constructed around a dependence on digital computer systems and the data they generate.⁴ In the following section, I explore how the prospect of data loss has energised an entire industry dedicated to data preparedness since the late 1960s. A longstanding body of scholarship has examined the critical role that information technologies play within modern capitalist economies (Beniger, 1986; Castells, 1996; Zuboff, 1988; Mahoney, 1988; Rochlin, 1997), as well as the new horizons of threat, such as cyberattacks and computer bugs, that IT systems enabled (Cavelty, 2008; Edwards, 1998; McKinney and Mulvin, 2019). Less attention, however, has been directed towards the data back-up and recovery industry that developed in tandem with the integration of digital computing systems into everyday life, as well as the threat (and opportunity) that data loss has long posed to digital capitalism.

³ *Blade Runner 2049* is set in the aftermath of a mass data loss event known as ‘The Blackout’ in which electronic records have been wiped. This event is dramatised in the official online prequel *Blackout 2022* (2017). *Mr Robot* focuses on a hacker who erases the consumer debt records held by a multinational conglomerate. *Bug* is set in 2041 where a computer virus manufactured by extra-terrestrials wipes data from every digital device in the world, depriving citizens of their ‘digital addiction’.

⁴ The history of protecting non-digital data extends far beyond the practices described here and would include data storage sites such as libraries, museums and archives. In some cases, digital data storage sites have been located in the same material spaces that were originally used as document vaults for the storage of valuable paper records, such as bank documents or sensitive medical and legal files, e.g. see Tung-Hui Hu’s (2015: 96-97) discussion of the data management company Iron Mountain.

Standing by for data loss: A brief history

With the introduction of general-purpose business computers, such as the IBM 360 (1965) and IBM 370 (1970), into organisational environments, the loss of vital digital records was increasingly understood as a threat of potentially disastrous proportions, for which anticipatory measures needed to be taken. Large bureaucracies, such as governments and multidivisional corporations, quickly became dependent on their computer systems. Yet digital computers were susceptible to failure and their rapid and widespread use opened up new fronts of data-based vulnerability. As disaster preparedness and crisis management became norms of organisational practice in the 1960s and 1970s (Hermann, 1963), organisations turned their attention towards their electronic data processing (EDP) activities (Herbane, 2010: 982). This led to the development and implementation of new forms of business continuity management, such as IT disaster recovery, that sought to integrate the protection of precarious computer systems into crisis planning.

The prospect of data loss presented new opportunities for profit. A commercial IT disaster recovery industry swiftly emerged, comprising of data back-up, restoration and salvage services as well as suppliers of emergency recovery centres. Sun Information Systems (which later became Sungard Availability Services) became one of the first major commercial disaster recovery vendors, established in 1978 in Philadelphia. Cisco Systems, founded in 1984, quickly followed. Disaster recovery vendors offered subscriptions to dedicated recovery sites and back-up services, providing standby IT resources with the aim of ensuring that the failure of an organisation's computer system would not result in significant or disruptive data loss. These vendors would copy critical data onto a direct access storage device (DASD) (magnetic tape was the most frequently used digital storage media until the early 2000s). This data back-up work was typically undertaken by storage managers working overnight on 'graveyard' shifts when the organisation's operations were not running. After the system data was copied to tape, it would be stored at a secure off-site facility. Should a disaster arise, these vendors would deliver the tape to the client's workplace, mount it on their computer systems and then re-load it so the organisation could begin operations, usually within

twenty-four hours.⁵ As well as providing off-site data storage, disaster recovery contractors also provided emergency recovery sites that often came in three forms: hot, warm and cold.⁶ The metaphor of temperature was used to describe different temporalities (and price points) of recovery in relation to different modes of standby IT infrastructure: hot sites duplicated an organisation's entire infrastructure at an alternative location so they could simply transfer staff to this site and continue operations almost immediately; warm sites allowed some, but not all of the core processes to be resumed immediately; cold sites simply provided an alternative site to set up operations in the event of a disaster striking the day-to-day workplace.

As 'always-on' computing became a standard business requirement over the next two decades, any duration of downtime became increasingly unfeasible. Loss of access to data, even for short lengths of time, could be disastrous for data-dependent businesses, both financially and legally. In the late 1980s, two out of every five companies that experienced a major data loss disaster never resumed operations (Radding, 1999: 8). The sheer volume of data that organisations were now working with, and the pressure to back-up and restore data fast, led to the development of new storage techniques and technologies. The increasing availability of high-speed, low-cost fibre connections in urban centres of the global north meant that clients could now back-up and retrieve their data remotely. This model of remote back-up formed the foundation for cloud-based back-up and recovery.

Cloud computing enables clients to access files over a network as if they are stored locally on their computer systems. At its most basic, the cloud marks a shift in data storage practices from storing information locally on the hard drives of personal computers to a form of online data storage, where files are

⁵ The history of IT disaster recovery is also a history of digital storage media. Magnetic tape became the storage medium of choice in the 1970s, replacing the punch card that had been the primary storage medium for mass-information processing since the late nineteenth century (Driscoll, 2012). In the 1990s, data storage managers would also use CDs and diskettes to back-up certain parts of a system, while hard disk drives became an affordable alternative for industrial-scale data storage operations in the late 1990s (Radding, 1999).

⁶ As Wolfgang Ernst (2019: 42) has observed, '[t]he vocabulary of storage media is significantly dominated by the language of temperature'.

stored on the hard drives of servers in data centres that are accessed remotely 'as a service' through the Internet (Figure 4). For this reason, data centres are often described as sites where 'the cloud touches the ground' (Holt and Vonderau, 2015: 75; see also Bratton 2015: 111). Data centres had emerged in the late 1980s, when corporations began to share computing infrastructure in order to avoid the large capital outlays of purchasing expensive mainframe computers. However it was during the dot-com boom that the data centre became the dominant service model for corporate IT operations. The growing adoption of Internet technologies had made it cheaper, easier and quicker for firms to store and process data at a distance. Terrorist attacks in major urban centres in the early 1990s had also led to a growing corporate awareness of the need to move computing equipment out from their urban office complexes in order to further increase their chances of maintaining continuity during catastrophic events.⁷ Offering greater physical security than office-based IT departments and round-the-clock maintenance, data centre providers promised their clients new forms of 'uninterruptible' reliability in the face of an ever-expanding horizon of security threats. Often including back-up and disaster recovery services as part of their packages, the aim of the data centre was not only to ensure that business-critical IT systems could 'recover' quickly in the event of failure, but to reduce the need to recover in the first place by investing in deployments of standby equipment and infrastructure.

⁷ Such as the London Stock Exchange in 1990, the London financial district in 1992 and 1993, the World Trade Centre in 1993 and the Oklahoma City bombing in 1995. Terrorism would continue to drive demand for remote data storage. Observing the post-9/11 boom in data recovery services, urban theorist Mike Davis (2002: 12) commented that '[t]error, in effect, has become the business partner of technology providers'.

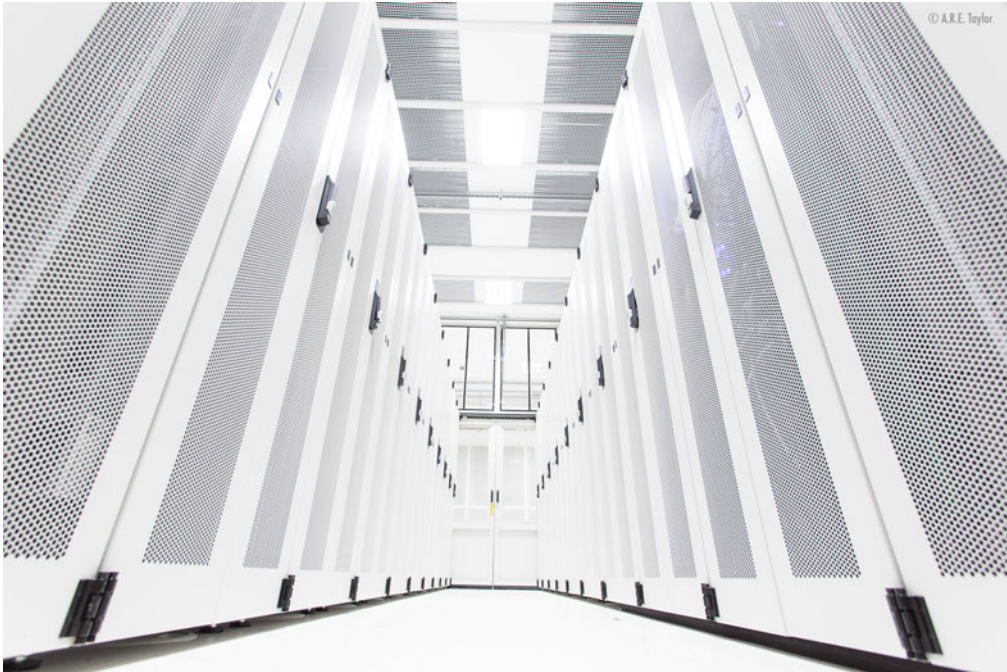


Figure 4: Cloud data is stored on the hard drives of servers (pizza-box shaped computing machines), which are securely encaged inside cabinets arranged in aisles. Photo by A.R.E. Taylor.

As microcomputers and portable digital gadgets began to disperse throughout the social field in the 1990s, standing by for data loss become an imperative not only for organisations but for individual end-users. New mass markets for data preparedness had already emerged a decade prior, with floppy disks providing back-up storage capacity. With users generating increasing volumes of digital information, data storage corporations like Western Digital and Seagate Technology began to manufacture portable back-up hard disk drive products for personal consumers. These had a greater storage capacity than media such as floppy disks and CDs. Of course, they were also prone to failure. If dropped, the data could become corrupted and, if not regularly used, their mechanical parts would deteriorate. From the mid-2000s, cloud storage providers began to target this new market of personal consumers, providing them with access to scalable online data storage in dedicated data centres that

had previously only been available for industrial-scale storage operations.⁸ If floppy disks and external hard drives were once primary technologies of personal data preparedness, the last decade has seen the cloud quickly taking on this role. For cloud users, with their data stowed away and automatically backed up in data centres, the anticipated disaster fades into the background operations of daily life: a constant possibility that they are nevertheless prepared for. This logic is nicely captured by the cloud back-up guide previously cited: ‘backing up is now easier than ever: the new wave of cloud storage services can do the job for you in the background while you work’ (Nield, 2015). However, the language of ease, simplicity and automation that underpins cloud back-up rhetoric erases the work that takes place behind the screens to deliver these services.

Standing by in the cloud

For those who work in the cloud, standing by for data loss surfaces as a state of anticipation for IT failure that could occur at any moment. Just as personal digital devices regularly crash, freeze or break down for consumers, so too, do the industrial servers and other computing equipment that fill the floorspace of data centres. While the cloud promises to protect data by separating it from the fragile materiality of personal devices and office computers, it does so by duplicating it on equally fragile servers in data centres that must be constantly maintained by technicians and storage managers. The inevitability of IT failure is captured by the preparedness maxims that are regularly repeated in data centre management training programmes and during talks at cloud security trade shows. When it comes to IT failure, ‘it’s only a matter of time’, ‘it’s not a question of if, but when’ and ‘never say never’ are phrases one frequently encounters in the industry. Such phrases seek to reduce complacency among data centre professionals, cultivating a sense of alertness for impending infrastructure failure for which they must perpetually prepare.

⁸ The online back-up service Mozy was founded in 2005, while Dropbox was founded in 2007. That same year Microsoft launched OneDrive. In 2011, Apple launched iCloud and Google Drive was released in 2012.

Infrastructure studies and maintenance studies scholars have demonstrated that error, neglect, breakage and failure are not atypical of technological systems but ‘a normal condition of their existence’ (Graham and Thrift, 2007: 5; see also Henke, 1999; Star, 1999; Denis and Pontille, 2014; Russell and Vinsel, 2018; 2020).⁹ If the idea of the ‘cloud’ may evoke imaginaries of weightless and placeless ethereality for those at the user-end, for the technicians and maintenance teams that work in the cloud this is certainly not the case.¹⁰ The data centre professionals I met during my fieldwork often voiced concerns that the cloud’s promise of transcendence beyond the material world leads to intense pressure to meet stringent service level agreements for data availability.¹¹ As one data hall technician told me, ‘for most end-users, the cloud is the solution to their data loss problems [but] what most of them don’t realise is that the problem hasn’t disappeared, it’s just become someone else’s problem, our problem’. Data centre professionals primarily address this ‘problem’ through the deployment of standby resources. Standby capability and capacity, in the form of redundant or back-up systems and reserve staff, has long played a central role in building preparedness in organisational contexts where very high levels of operational reliability must be maintained. Much like nuclear power plants, aircraft

⁹ Ethnographic work has demonstrated that perceptions that infrastructures remain ‘hidden’ or ‘invisible’ until breakdown are unable to adequately capture the ‘range of visibilities’ (Larkin, 2013: 336) that shape different social groups’ experiences of infrastructure services. As Shannon Mattern (2016) has observed, ‘[t]he presumption that infrastructures are “hidden” [...] signals great privilege.’ The experience of infrastructure failure is thus unevenly distributed across social and geopolitical vectors. Malfunction is particularly visible for maintenance workers, whose work ensures that breakdown remains invisible for service end-users. The disruption of infrastructure and technology service provision is also a regular occurrence for those who live in the global south (Graham, 2010; Harvey and Knox, 2015; Trovalla and Trovalla, 2015). For discussions of the different registers through which cloud data centre visibility is governed, see Furlong (2020) and Taylor (2021).

¹⁰ As David Ribes and Thomas A. Finholt (2009: 378) have observed ‘one person’s infrastructure is another person’s daily routine of upkeep’ (see also Star and Ruhleder, 1994).

¹¹ Elsewhere (Taylor, 2021) I have explored how the material vulnerability of cloud storage is leveraged in the marketing practices of commercial data centres that have been retrofitted inside nuclear bunkers.

control centres, power distribution grids and other high-reliability organisations, the standby imperative that underpins cloud infrastructure is similarly rooted in logics of ‘excess, redundancy, and contingency, governed by the looming specter of worst-case scenarios’ (Holt and Vonderau, 2015: 205).

Driven by the imperative of guaranteeing unstoppable operation in the face of a range of failure scenarios, data centres ensure that their critical systems are always backed up, with the aim of eradicating any single points of failure. The basic logic that guides this practice is that of ‘N+1 redundancy’: for every primary system or piece of equipment (N) there must be at least one duplicate (+1) to support the goal of uninterruptable service continuity and avoid unplanned disruption. There are a number of variations of this formula, such as N+2, 2N or 2N+1, each of which refer to different levels of data centre redundancy. Certification and standards organisations offer various tier systems that evaluate and classify data centre resilience, which is measured through performance history and the levels of back-up equipment and infrastructure a facility has available.¹² One of the most prominent international standards for evaluating data centre resilience was developed by the Uptime Institute, a US-based advisory and certification body established in the mid-1990s. The Uptime Institute uses a tier scale system that has been widely adopted throughout the data centre industry as a tool to rate and certify the maintenance, power, cooling and fault capabilities of a facility. A Tier I data centre will have basic redundant capacity in the form of chillers, pumps, engine generators and uninterruptible power supply (UPS) modules for power outages and spikes. At the other end of the scale, Tier IV data centres are ‘fault tolerant facilities’ that have multiple independent and physically isolated systems, as well as several independent active distribution paths to the compute devices. When equipment fails, or if there is an

¹² While the Uptime Institute is globally recognised, other data centre resilience standards are also used throughout the industry. The Telecommunications Industry Association’s TIA-942-A Telecommunications Infrastructure Standard for Data Centers also uses a tier model. Syska Hennessy use a classification system based on ten Criticality Levels. The UK-based Building Industry Consulting Service International (BICSI) categorises data centre availability into four classes: Class F1 (99.0% uptime); Class F2 (99.9% uptime); Class F3 (99.99% uptime); and Class F4 (99.999% uptime).

interruption in the distribution path, IT operations should not be affected. While the Tiers are progressive, this progression does not mean that a Tier IV facility is superior to a Tier I, II or III. Rather, these Tiers align with different business needs and requirements.

In the data centre industry, standby is both an energy-intensive and capital-intensive enterprise. Powering, cooling and maintaining data centre equipment is an expensive process. Servers consume considerable sums of electricity and generate huge amounts of heat (Velkova 2016). This requires extensive investments in air conditioning systems to prevent overheating, which adds to the electricity and water consumption costs (Hogan 2015). The extreme energy consumption of the data centre industry has been widely noted, with some reports suggesting that 'if the cloud were a country, it would have the fifth largest electricity demand in the world' (Greenpeace, 2012: 10). The duplication of equipment under the standby imperative thus further adds to the already significant capital outlay and carbon costs of the data centre. The logic of preparedness that drives data centre security discourses and practices leads many facilities to operate their power and cooling systems 'at excess capacities of upwards of 80 percent' (Furlong, 2020: 4), with the aim of anticipating any sudden spikes in demand. While in most cases a data centre will never reach the maximum loads it prepares for, this spare power and cooling capacity reassures data centre operators and their clients that their facilities are 'ready for anything'. The cost of standby is in fact often higher than that of running the facility. Based on an investigation into data centre energy use, *New York Times* journalist James Glanz (2012) reported that, on average, the data centres analysed used only 6-12% of their electricity to power their servers. 'The rest', Glanz observed, 'was essentially used to keep servers idling and ready in case of a surge in activity that could slow or crash their operations'.¹³ New models of data centre capacity planning have arisen over the last decade with the aim of alleviating the operational expense (and carbon footprint) of overprovisioning. Yet, as data centre professionals strive to balance criticality against cost, excess capacity remains a relatively standard operating condition.

¹³ Vincent Mosco (2014: 133) thus sums up the driving logic of standby in the data centre industry: 'Better to power unused servers than to face an angry customer'.

Data centres require multiple sources of power generation to deliver their uninterrupted service provision. Back-up power systems, often in the form of diesel-powered generators, are used when the primary electricity supply shuts down. For data centre professionals, every second counts during downtime and a big drawback of most diesel generators is that there is a 5-40 second period between mains failure and the generator coming online. While diesel generators are able to provide a longer-term power supply, valuable data could be lost in the few seconds they take to start up. This problem is typically overcome by using an uninterruptible power supply (UPS) system. These systems are powered by batteries or flywheels and are able to power most critical loads for a short amount of time (usually fifteen to twenty minutes) until the standby generator is ready. This UPS/generator combination enables data centre providers to promise their clients ‘total power protection’.



Figure 5: Servers wait on standby in a cloud provider’s back-up data centre.
Photo by A.R.E. Taylor.

As well as investing in standby equipment within the facility, the standby imperative also spawns an ever-expanding range of back-up data centres that are often distributed across different geographic regions. Through the construction of multiple, globally-distributed facilities that operate as mirror

images of each other, cloud providers strive to ensure that client data is constantly available. If for any reason the primary data centre should experience a local-level outage (due to fires, flooding, power loss, system failure, security breaches, etc.), it will automatically switch over, or, in data centre parlance, ‘failover’, to the back-up data centre(s), which is ideally located outside of the disaster region. This model of service delivery is known as an ‘active-passive’ deployment because the back-up data centre does not actively participate within the system during normal operation. Ever-increasing demands on data centre availability have led to new models of infrastructure provision that increasingly push beyond the logic of standby. For example, in ‘active-active’ setups, where multiple data centres jointly deliver an organisation’s IT services simultaneously, there is no ‘standby’ data centre as such. Rather, all of a cloud provider’s data centres are switched on and co-delivering services, blurring distinctions between ‘primary’ and ‘standby’ facilities. If one data centre should fail, then the others will pick up the workload, with the aim of ensuring that clients’ files are always available and accessible. The end result of this extensive failover infrastructure is ‘a massively-distributed geography of back-up and repair spread across the world’ (Graham, 2015: 30). While standby equipment and infrastructure has a significant environmental and financial impact, data centre professionals justify this continuous investment with the argument that ‘the cost of preparedness is much smaller than the cost of disaster’.

Significantly, standby equipment does not prevent failures from arising. Rather, it promises to reduce the impact of failure, with the aim of preventing unplanned errors or malfunctions (such as hardware failures or network errors) from escalating into catastrophic events. Vincent Mosco (2014: 130) has highlighted the Sisyphean nature of this investment in standby, reminding us that, ‘even with all of this expensive, polluting backup, there is still no guarantee of 24/7 performance’. Mosco’s observation parallels that of disaster recovery specialists. As any disaster recovery planning manual will highlight: ‘no amount of preparation and backup systems can totally eliminate the risk posed by emergencies’ (Gustin, 2010: 209). The aim of such guidance is to reduce complacency among preparedness practitioners, encouraging them to remain vigilant and alert, especially after standby equipment has been put in place, when temptations to relax might set in. To

this end, data centre failure scenarios perpetually circulate in the data centre industry and play an important role in cultivating an affective state of readiness for disaster among data centre workforces.

During data centre training and security programmes, instructors provide course attendees with a seemingly never-ending list of threats to data centres. Along with the widely known risks of cyberattacks and human error, myriad other dangers pose a threat to the continuous operation of these buildings (McMillan, 2012). Subterranean and undersea fibre-optic cables are regularly cut by ships dropping anchor or by construction equipment at building sites (Starosielski, 2015). Particulate matter in the form of dust or pollen can block server fans, causing vital equipment to overheat. Weeds can cause damage to the foundations of data centres if left to grow, producing a potential point of structural vulnerability. Squirrels regularly chew through cable, causing damage to aerial fibre. Threats to data centre security thus extend across scales from the sub-visible worlds of particulate matter to malicious rodents and vegetation, to cyberterrorists, to the complacency or negligence of staff (Taylor and Velkova, 2021). Like any large infrastructure, the cloud is a fragile and unpredictable assemblage of people and things, with data centre failure often throwing into sharp relief complex entanglements of human and nonhuman activity (Bennett, 2005). As media scholar and former network engineer Tung-Hui Hu (2015: ix) has observed, for ‘a multi-billion-dollar industry that claims 99.999 percent reliability’, the cloud ‘breaks far more often than you’d think’.

Data centre failure scenarios like these arise in industry training programmes as moral tales about lax security practices and the limitless horizon of threats that face the data centre professional. As such, they are valuable tools with which data centre staff are transformed into vigilant infrastructure operators, always on alert for events that could arise from even the most unexpected of sources. These scenarios are often accompanied with startling statistics about the financial fallout of failure. During a data centre management training course that I audited in London in 2016, the instructor informed the group that, ‘Time is money. On average a data centre will experience twenty-four minutes of downtime a year, which can translate into thousands of pounds of lost revenue for the data centre [and] even more for the clients who rely on that data. This is unacceptable.’ A 2016 report on data centre downtime

quantified the average cost of an unplanned data centre outage at US\$9,000 per minute, with the most expensive unplanned outage costing over US\$17,000 per minute (Ponemon Institute, 2016).

Given the financial and reputational damage that downtime can cause, key data centre personnel must also ensure that they are contactable twenty-four hours a day, three-hundred-and-sixty-five days a year, in case a failure event should arise. Many of the data centre professionals with whom I worked used mobile apps to remotely check the current service levels of their facility when not at the workplace. As most data centres have clients that are globally dispersed, this state of readiness is maintained around the clock. The data centre managers with whom I spoke were perpetually 'on call'. It is not uncommon for managers to receive emergency phone calls in the middle of the night that require them to drive to their workplace to tend to some unfolding scenario. It thus takes considerable work, energy and infrastructure to realise the cloud's promise of 'indefinite continuance' (Schüll, 2018: 45).

Failure, denied?

Standing by for data loss thus arises in the cloud both as an affective anticipatory state and as an infrastructural condition. Guided by the techno-economic imperative of ensuring uninterrupted data availability, standby is the default mode of organising the operations of digital-industrial infrastructure and the daily working lives of those who manage and maintain it. Standby equipment and multi-sited data delivery models aim to render data continuously available in the face of ever-present technological failure, with multiple facilities either co-delivering services or waiting on standby to immediately respond to disasters in real-time. While the failure of data centre equipment is frequently experienced (and imagined) by data centre staff, by choreographing and connecting an expanding network of data centres, cloud providers seek to deny disruption at the user-end. The ultimate goal is to close off 'the very possibility of spaces and times' (Graham and Thrift, 2007: 11) when client data is not accessible, with the aim of producing a 'world without events' (Masco, 2014: 31) for their clients. That is, a world in which device malfunction, obsolescence, theft or upgrades are barely experienced as disruptions because clients can simply access their data from another device

or quickly re-install their data on new systems. Working to ensure that device failure does not result in data loss, cloud providers strive to reconfigure breakdowns and malfunctions into uneventful and forgettable moments, rather than traumatic or catastrophic data loss events.¹⁴ This has implications for how we think about and theorise failure in relation to digital technologies.

It has long been a commonplace in analyses of human-machine relations that the failure of technological objects, systems or tools is a disruptive event. Stemming from Heidegger's (1962) philosophy of technology, it has been widely theorised that, in their moments of malfunction, technologies shift status from being almost-invisible tools that facilitate work into stubborn and unruly objects that disrupt routines or habits (Verbeek, 2004: 79; Harman, 2009). If technologies – from computer systems to infrastructures – are designed to disappear into the background of everyday life, upon breakdown, they forcefully reappear. This moment of reappearance via breakdown has been of great interest to social theorists because it provides an opening onto complex and fragile relations between people, technology and the industries that design and provision them – relations that are concealed or go unnoticed when the system is working smoothly.¹⁵ From this perspective, failure and breakdown are valuable revelatory moments (and valuable analytical opportunities) precisely because they are understood as exceptional, disruptive events rather than normal operating states, through which we can therefore learn something new about our world. This line of thinking has perhaps been most prominent in disaster studies scholarship, in which disasters are valuable precisely because they are not the norm but 'messy times when norms [...] fail' and which therefore provide a momentary window

¹⁴ Of course, the extent to which device failure is considered catastrophic depends not only on the data lost, but also on the sentimental or financial value of the lost, broken or stolen device itself.

¹⁵ Recent work from infrastructure studies scholars and historians of technology has begun to move analyses of technology failure beyond the 'invisible until breakdown' paradigm developed by Susan Leigh Star (1999), exploring shifting layers of (in)visibility (Furlong, 2020) through a focus on those whose work revolves around practices of maintaining, fixing and repairing (Denis and Pontille, 2014; Russell and Vinsel, 2018; Mattern, 2018; Graziano and Trogal, 2019)

through which we can ‘analytically denaturalise and examine these practices that create norms’ (Petersen cited in Guggenheim, 2014: 7).

But what happens when failure becomes the norm? What happens when failure ‘fails’ to disrupt, to produce new knowledge or to register as an ‘event’? Arjun Appadurai and Neta Alexander (2020: 120) have recently suggested that, given the regularity with which digital technologies freeze, crash and breakdown, the relationship between failure and knowledge production itself begins to breakdown. ‘[O]ur technological failures’, they suggest, ‘do not teach us something new about our world; their repeated breakdowns do nothing more than further obstruct the underlying logic and hidden infrastructures that sustain them’ (ibid.). These ‘hidden infrastructures’ themselves might work to render failure non-disruptive and non-revelatory, as with the cloud. Indeed, if, for Appadurai and Alexander, it is the regularity of device breakdown that renders failure ordinary rather than revelatory, the cloud further obfuscates and limits the subversive capacity of failure by absorbing the disruptive or traumatic impact of data loss that might otherwise accompany routine device malfunction. With its promise to ensure data is safe and instantly downloadable, the cloud works to reduce and deny moments of IT disruption and to increase digital productivity by ensuring that work need not stop when a device malfunctions but can simply be picked up again from another device.

This is not to say that the cloud always delivers on its techno-productive promise of uninterrupted data continuity. Indeed, while working to render failure forgettable it also produces new opportunities for disruption. With users working from documents stored in the cloud, loss of Internet connectivity can mean loss of access to these documents. While working to conceal routine, run-of-the-mill failure events, the ‘infrastructural excess’ (Taylor, 2018) of cloud storage also increases the potential for large-scale, cascading failures. As Hu (2015: 98) observes, ‘one cloud server fails to synch with another, or one network’s router misfires, causing a chain of errors that ripple through all other interconnected networks’. A good example of such an event occurred in May 2017 when British Airways’ (BA) primary and standby data centres in London both failed, resulting in a series of domino-like server crashes that were described in the data centre press as a ‘contagion [that] spread around the world and grounded all BA flights at the height of the

failure' (Corfield, 2017). During such moments of disruption the cloud fantasy of seamless continuity fails. Here we see that the 'world-disclosing properties of breakdown' (Jackson, 2014: 230), have not entirely been sealed off by the cloud, but redistributed and rescaled.

Conclusion: Economies of failure and preparedness

The cloud is an infrastructure that is made through and for the failure of digital technology. Underpinning the growing adoption of cloud-based back-up solutions is an awareness and anticipation of the anytime-anywhere potential of digital devices to crash or break, coupled with the need to ensure the continuous availability of data across these devices that could fail at any moment. Standing by for data loss is thus driven by a form of 'broken world thinking' (Jackson, 2014: 221), which assumes that technology failure is inevitable and requires anticipatory investments in standby from end-users and cloud providers alike to prepare for this eventuality. This form of standby involves the synchronisation of people, devices, infrastructure and back-up equipment into arrangements of preparedness for IT failure. Standing by for data loss thus provides a salient example of the anticipatory subject positions and practices that have been identified as a defining quality of our current historical and political moment (Adams et al., 2009; Anderson, 2010; Harvey et al., 2013).

Since the mid-twentieth century, data loss has arisen within digital capitalism as both a source of 'threat and opportunity, danger and profit' (Anderson, 2010: 782), generating new imaginaries of data-based disaster and profitable new industries dedicated to data preparedness. Today, for technology behemoths like Microsoft, Apple and Google, all of whom now offer cloud-based back-up space for a monthly subscription, cloud storage is becoming a key strategic tool in the long game for revenue growth (Gartenberg, 2019). As users generate increasingly large volumes of data through their devices, their cloud storage needs for these ever-accumulating personal digital archives will continue to grow over their lifetimes, as will the cloud subscription fees. While a few gigabytes of introductory cloud storage space are often provided for free, the costs for additional storage can quickly become expensive.

By separating data from the fragile materiality of digital devices, cloud providers promise their clients a form of transcendental and perpetual data storage that will last indefinitely into the future, from 'next year' to 'next century' (Eggers, 2013: 43). Different scales of digital time are at work here. If digital commodities are defined by their rapid obsolescence, the cloud offers a longer-term temporality that transcends the lifespan of the device. Smartphones, tablets and laptops are thus valuable tools with which technology companies can lock users into their cloud service, converting owners of time-limited devices into potentially lifelong cloud-customers within tightly integrated brand ecosystems. At the time of writing this essay, there is no 'switching service' that enables users to quickly and easily transfer their data between cloud providers who may offer better rates or security.

Striving to render IT failure as uneventful, non-disruptive and forgettable as possible, the cloud props up and supports the continuity of a techno-economic system based on the continuous failure and upgrading of devices. By making it quick and easy for users to simply re-download their system data to a new device, rather than change the sociotechnical and economic conditions that culminate in the recurrent crises of device failure in the first place, the cloud facilitates the rapid turnover of digital electronics, further reinforcing business and marketing models based around logics of planned obsolescence and perpetual upgrading. In this sense, standby might be understood as an anticipatory form of maintenance-work that serves to sustain existing socioeconomic orders (Russell and Vinsel, 2018: 7; Sims, 2017). When failure becomes regular and intentional (as an 'engineered' or 'planned' design strategy of digital technologies) it requires labour and infrastructure to render it tolerable. This is where the cloud, as a dedicated infrastructure of data preparedness, steps in. The cloud and the device must thus be seen as two parts of a self-perpetuating economy of data preparedness and technological failure. IT failure becomes something to be managed and maintained, a precarity that we must learn to live with and constantly stand by for, if we don't want to lose our data.

references

- Adams, V., M. Murphy and A.E. Clarke (2009) 'Anticipation: Technoscience, life, affect, temporality', *Subjectivity*, 28(1): 246-265.
- Alexander, N. (2017) 'Rage against the machine: Buffering, noise, and perpetual anxiety in the age of connected viewing', *Cinema Journal*, 56(2): 1-24.
- Anderson, B. (2010) 'Preemption, precaution, preparedness: Anticipatory action and future geographies', *Progress in Human Geography*, 34(6): 777-798.
- Appadurai, A. and N. Alexander (2020) *Failure*. Cambridge: Polity Press.
- Beniger, J. (1986) *The control revolution*. Boston, Massachusetts: Harvard University Press.
- Bennett, J. (2005) 'The agency of assemblages and the North American blackout', *Public Culture*, 17(3): 445-465.
- Bratton, B.H. (2015) *The stack: On software and sovereignty*. Cambridge, Massachusetts: MIT Press.
- Burrell, J. (2012) *Invisible users: Youth in the internet cafes of urban Ghana*. Cambridge, Massachusetts: MIT Press.
- Carroll, T., D. Jeevendrampillai, A. Parkhurst and J. Shackelford (eds.) (2017) *The material culture of failure: When things do wrong*. London and New York: Bloomsbury.
- Castells, M. (1996) *The rise of the network society*. Oxford: Blackwell.
- Cavelty, M.D. (2008) *Cyber-security and threat politics: US efforts to secure the information age*. London: Routledge.
- Chandler, D. and J. Reid (2016) *The neoliberal subject: Resilience, adaptation and vulnerability*. London and New York: Rowman and Littlefield International.
- Chun, W. (2016) *Updating to remain the same: Habitual new media*. Cambridge, Massachusetts: MIT Press.

- Collier, S.J. and A. Lakoff (2010) 'Infrastructure and event: The political technology of preparedness', in B. Braun and S. Whatmore (eds.) *Political matter: Technoscience, democracy and public life*. Minneapolis: University of Minnesota Press.
- Collier, S.J. and A. Lakoff (2015) 'Vital systems security: Reflexive biopolitics and the government of emergency', *Theory, Culture & Society*, 32(2): 19-51.
- Corfield, G. (2017) 'BA IT systems failure: Uninterruptible power supply was interrupted'.
[https://www.theregister.co.uk/2017/06/02/british_airways_data_centre_configuration]
- Davis, M. (2002) *Dead cities and other Tales*. New York: The New Press.
- Denis, J. and D. Pontille (2014) 'Maintenance work and the performativity of urban inscriptions: The case of Paris subway signs', *Environment and Planning D*, 32(3): 404-416.
- Driscoll, K. (2012) 'From punched cards to "big data": A social history of database populism', *Communication + 1*, 1(4): 1-33.
- Edwards, P.N. (1998) 'Y2K: Millennial reflections on computers as infrastructure', *History and Technology*, 15: 7-29.
- Eggers, D. (2013) *The Circle*. London: Hamish Hamilton.
- Ernst, W. (2019) 'Archival metahistory and inhuman memory', in S.K. Frank and K.A. Jakobsen (eds.) *Arctic archives: Ice, memory and entropy*. Bielefeld: Transcript Verlag.
- Furlong, K. (2021) 'Geographies of infrastructure II: Concrete, cloud and layered (in)visibilities', *Progress in Human Geography*, 45(1):190-198.
- Gabrys, J. (2013) *Digital rubbish: A natural history of electronics*. Ann Arbor: The University of Michigan Press.
- Garrett, B. (2020) 'Doomsday preppers and the architecture of dread', *Geoforum*, doi: 10.1016/j.geoforum.2020.03.014.
- Gartenberg, C. (2019) 'How Apple makes billions of dollars selling services', *The Verge*, 20 March.
[<https://www.theverge.com/2019/3/20/18273179/apple-icloud-itunes-app-store-music-services-businesses>]

- Glanz, J. (2012) 'The cloud factories: Power, pollution and the Internet' [<https://www.nytimes.com/2012/09/23/technology/data-centers-waste-vast-amounts-of-energy-belying-industry-image.html>].
- Graham, S. and N. Thrift (2007) 'Out of order: Understanding repair and maintenance', *Theory, Culture & Society*, 24(3): 1-25.
- Graham, S. (2010) 'When infrastructures fail', in S. Graham (ed.) *Disrupted cities: When infrastructure fails*. London and New York: Routledge.
- Graham, S. (2015) 'Stealth architectures and the geographies of back-up', in A. Fard and T. Meshkani (eds.) *New Geographies 7*. Boston: Harvard Graduate School of Design.
- Graziano, V. and K. Trogal (2019) 'Repair matters', *ephemera*, 19(2): 203-227.
- Greenpeace (2012) *How clean is your cloud?* Amsterdam: Greenpeace International.
- Grove, K. (2016) 'Disaster biopolitics and the crisis economy', in J.L. Lawrence and S.M. Wiebe (eds.) *Biopolitical disaster*. London and New York: Routledge.
- Guggenheim, M. (2014) 'Introduction: Disasters as politics – politics as disasters', in M. Tironi, I. Rodríguez-Giralt and M. Guggenheim (eds.) *Disasters and politics: Materials, experiments, preparedness*. Chichester, West Sussex: Wiley Blackwell.
- Gustin, J.F. (2010) *Disaster and recovery planning: A guide for facility managers* (fifth edition). Lilburn, Georgia: The Fairmont Press.
- Harman, G. (2009) 'Technology, objects and things in Heidegger', *Cambridge Journal of Economics*, 34(1): 17-25.
- Harvey, P., M. Reeves and E. Ruppert (2013) 'Anticipating failure: Transparency devices and their effects', *Journal of Cultural Economy*, 6(3): 294-312.
- Harvey, P. and H. Knox (2015) *Roads: An anthropology of infrastructure and expertise*. Ithaca: Cornell University Press.
- Heidegger, M. (1962) *Being and time*, trans. J. Macquarrie and E. Robinson. New York: Harper and Row.

- Henke, C.R. (1999) 'The mechanics of workplace order: Toward a sociology of repair', *Berkeley Journal of Sociology*, 44: 55-81.
- Herbane, B. (2010) 'The evolution of business continuity management: A historical review of practices and drivers', *Business History*, 52(6): 978-1002.
- Herman, C.F. (1963) 'Some consequences of crisis which limit the viability of organisations', *Administrative Science Quarterly*, 12: 61-82.
- Hogan, M. (2015) 'Data flows and water woes: The Utah Data Center', *Big Data & Society*, 2(2): 1-12.
- Holt, J. and P. Vonderau (2015) "'Where the Internet lives": Data centers as cloud infrastructure', in L. Parks and N. Starosielski (eds.) *Signal traffic: Critical studies of media infrastructures*. Urbana, Chicago, and Springfield: University of Illinois Press.
- Hu, T. (2015) *A prehistory of the cloud*. Cambridge, Massachusetts: MIT Press.
- Huddleston, C. (2016) "'Prepper" as resilient citizen: What preppers can teach us about surviving disaster', in M. Companion and M.S. Chaiken (eds.) *Responses to disasters and climate change: Understanding vulnerability and fostering resilience*. Boca Raton: CRC Press.
- Jackson, S.J. (2014) 'Rethinking repair', in T. Gillespie, P.J. Boczkowski and K.A. Foot (eds.) *Media technologies: Essays on communication, materiality, and society*. Cambridge, Massachusetts and London: MIT Press.
- Keck, F. (2016) 'Preparedness' Theorizing the Contemporary, *Fieldsights*, September 30. [<https://culanth.org/fieldsights/preparedness>].
- Klein, N. (2007) *The shock doctrine: The rise of disaster capitalism*. New York: Metropolitan Books.
- Lakoff, A. (2006) 'Techniques of preparedness', in T. Monahan (ed.) *Surveillance and security: Technological politics and power in everyday life*. New York: Routledge.
- Lakoff, A. (2008) 'The generic biothreat, or, how we became unprepared', *Cultural Anthropology*, 23(3): 399-428.
- Larkin, B. (2013) 'The politics and poetics of infrastructure', *Annual Review of Anthropology* 42: 327-343.

- LeBel, S. (2012) 'Wasting the future: The technological sublime, communications technologies and e-waste', *Communication +1*, 1(1): 1-19.
- Lutz, C. (1997) 'Epistemology of the bunker: The brainwashed and other new subjects of permanent war', in J. Pfister and N. Schnog (eds.) *Inventing the psychological: Toward a cultural history of emotional life in America*. New Haven and London: Yale University Press.
- Mahoney, M.S. (1998) 'The history of computing in the history of technology', *IEEE Annals of the History of Computing*, 10(2): 113-125.
- Mantz, J. (2008) 'Improvisational economies: Coltan production in the eastern Congo', *Social Anthropology*, 16(1): 34-50.
- Masco, J. (2014) *The theatre of operations: National security affect from the Cold War to the war on terror*. Durham, North Carolina: Duke University Press.
- Mattern, S. (2016) 'Cloud and field' [<https://placesjournal.org/article/cloud-and-field/>].
- Mattern, S. (2018) 'Maintenance and care' [<https://placesjournal.org/article/maintenance-and-care/>].
- McKinney, C. and D. Mulvin (2019) 'Bugs: Rethinking the history of computing', *Communication, Culture & Critique*, 12: 476-498.
- McMillan, R. (2012) 'Guns, squirrels and steel: The many ways to kill a data center' [<https://www.wired.com/2012/07/guns-squirrels-and-steal/>].
- Mills, M.F. (2018) 'Preparing for the unknown unknowns: "Doomsday" prepping and disaster risk anxiety in the United States', *Journal of Risk Research*, 22(10): 1267-1279.
- Mosco, V. (2014) *To the cloud: Big data in a turbulent world*. Boulder: Paradigm Publishers.
- Nield, D. (2015) 'How to replace your external hard drive with cloud storage' [<https://www.t3.com/news/how-to-replace-your-external-hard-drive-with-cloud-storage/>].
- Parks, L. (2007) 'Falling apart: Electronics salvaging and the global media economy', in C.R. Acland (ed.) *Residual media*. Minneapolis: University of Minnesota Press.

- Ponemon Institute (2016) 'Cost of data Center outages' [https://www.vertiv.com/globalassets/documents/reports/2016-cost-of-data-center-outages-11-11_51190_1.pdf].
- Radding, A. (1999) 'The great tape hunt', *Infoworld*, 21(15): 3-8.
- Ribes, D. and T.A. Finholt (2009) 'The long now of technology infrastructure: Articulating tensions in development', *Journal of the Association for Information Systems*, 10: 375-398.
- Rochlin, G.I. (1997) *Trapped in the net: The unanticipated consequences of computerisation*. Princeton, New Jersey: Princeton University Press.
- Russell, A.L. and L. Vinsel (2018) 'After innovation, turn to maintenance', *Technology and Culture*, 59(1): 1-25.
- Russell, A.L. and L. Vinsel (2020) *The innovation delusion: How our obsession with the new has disrupted the work that matters most*. New York: Random House.
- Schüll, N.D. (2018) 'Digital containment and its discontents', *History and Anthropology*, 29(1): 42-48.
- Sims, B. (2017) 'Making technological timelines: Anticipatory repair and testing in high performance scientific computing', *Continent*, 6(1): 81-84.
- Smith, S. (2015) 'The real cost of data loss and how to prevent it' [<http://techgenix.com/real-cost-data-loss-and-how-prevent-it>].
- Star, S.L. and K. Ruhleder (1994) 'Steps towards an ecology of infrastructure: Complex problems in design and access for large-scale collaborative systems', *Proceedings of the conference on computer supported cooperative work*, Chapel Hill, ACM Press.
- Star, S.L. (1999) 'The ethnography of infrastructure', *American Behavioral Scientist*, 43(3): 377-391.
- Starosielski, N. (2015) *The undersea network*. Durham and London: Duke University Press.
- Taylor, A.R.E. (2018) 'Failover architectures: The infrastructural excess of the data centre industry' [<https://failedarchitecture.com/failover-architectures-the-infrastructural-excess-of-the-data-centre-industry/>].

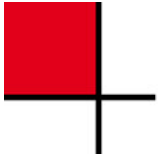
- Taylor, A.R.E. (2019) 'The data centre as technological wilderness', *Culture Machine*, 18.
- Taylor, A.R.E. (2021) 'Future-proof: Bunkered data centres and the selling of ultra-secure cloud storage', *Journal of the Royal Anthropological Institute*, doi: 10.1111/1467-9655.13481.
- Taylor, A.R.E. and J. Velkova (2021) 'Sensing Data Centres', in N. Klimburg-Witjes, N. Poehhacker and G.C. Bowker (eds.) *Sensing in/security: Sensors as transnational security infrastructures*. Manchester: Mattering Press.
- Trovalla, E. and U. Trovalla (2015) 'Infrastructure turned suprastructure: Unpredictable materialities and visions of a Nigerian nation', *Journal of Material Culture*, 20(1): 43-57.
- Velkova, J. (2016) 'Data that warms: Waste heat, infrastructural convergence and the computation traffic commodity', *Big Data & Society*, July-December: 1-10.
- Verbeek, P. (2004) *What things do: Philosophical reflections on technology, agency and design*. University Park: Pennsylvania State University Press.
- Virilio, P. (2007) *The original accident*. Cambridge: Polity Press.
- Zuboff, S.S. (1988) *In the age of the smart machine: The future of work and power*. New York: Basic Books.

the author

A.R.E. Taylor is an anthropologist based at the University of Cambridge. He works at the intersection of social anthropology, media archaeology and the history of technology. His research concentrates on imaginaries of digital collapse and on the material and temporal dimensions of data storage and security. He is an Editorial Assistant for the *Journal of Extreme Anthropology* and a founder of the Cambridge Infrastructure Resilience Group, a network of researchers exploring critical infrastructure protection in relation to global catastrophic risks. He is also a founding member of the Social Studies of Outer Space (SSOS) Research Network. His research interests include: data futures, digital preservation, outer-space, techno-apocalyptic narratives and pre-digital nostalgia.

Email: aret2@cantab.ac.uk

Twitter : @alexretaylor



Waiting on standby: The relevance of disaster preparedness

Joe Deville

abstract

This paper examines a disaster preparedness organisation for which waiting is, and has long been, an intensive yet frustrating state. Its focus is on the organisation most centrally concerned with disaster response in Switzerland: *Zivilschutz*, or 'Civil Protection'. Drawing on ethnographic and historical research, it explores how a particular modality of waiting – waiting on standby – is rendered fragile by the absence of disasters severe enough to authorise its activities. For many, participating in this organisational enterprise appears to incur the risk of becoming trapped in an endless present, in which training and exercises become the primary focus of organisational activity over and above responding directly to disasters. The paper suggests that a core challenge that has occupied the recent and more distant pasts of Swiss disaster preparedness is how to continue to claim its 'relevance', in the context of pasts and anticipated futures that threaten to undermine this very claim. The paper draws on work that has looked to the philosophy of Alfred North Whitehead to account for how, precisely, the world and conditions of possibility are continually made and remade. This includes in relation to practices of 'relevance-making', as well as the capturing of 'feeling'. By doing so, the paper examines how particular times and spaces, both past and future, become joined, sometimes unavoidably, to the practices, affects and devices of disaster preparedness. It adds to work on the temporal dimensions of organisational life, in particular that which has focused on the role of affect and the everyday.

Introduction

We practice constantly for the event that hopefully will never happen. We wait. (Interview with Swiss Regional Civil Protection Commander, 2012)¹

As this Civil Protection Commander whom I interviewed in 2012 makes clear, part of the task of disaster response forces is to wait for (and with) the events that will call them into action, that will make their training, their preparation *worth the wait*. But how are we to understand the character of this waiting? How does it intersect with other forces and potentialities that too lie in wait, perhaps – or perhaps not – on the verge of becoming present? How might we account for how these intersections and potentialities come to be relevant – come to matter – to one another?

In addressing these questions, the paper argues that the particular forms of waiting that disaster preparedness can give rise to need to be understood in relation to questions of *relevance*. This is relevance understood not as an absolute quality, but as a form of mutual connectivity through which different entities and forces become entangled with – become relevant to – one another. Conversely, where this fails, certain entities and forces tend towards mutual irrelevance, even as alternate relations of relevance are established elsewhere. In examining the sometimes contested struggles for relevance surrounding disaster preparedness, I focus on a single organisation's activities of attempted 'relevance-making', including analysing how these activities play out across three interrelated dimensions. As part of this, I examine how struggles for interrelatedness touch on entities including disaster preparedness personnel, organisational activities, the state, the population, disaster, and non-human forces including the slow-moving rhythms of the earth itself.

The organisation in question is *Zivilschutz*, or Civil Protection (to avoid confusion, the term 'Civil Protection' will be used to refer to the organisation; the more general activity will be referred to as 'disaster preparedness'), Switzerland's dedicated disaster preparedness force. It has a standing force of

¹ All quotes from Civil Protection personnel and documents are my own translations from the original German.

around 70,000 individuals², the vast majority of whom are men, subdivided – in keeping with Switzerland’s federal system – into regionally-managed forces across 26 cantons. Most of these men are conscripts (women can volunteer to join the organisation), choosing Civil Protection as an alternative to service in the army or ‘civilian service’ (this third option involves various forms of community service).

Waiting is, and has long been, an intensive yet simultaneously frustrating state for Civil Protection, stretching back to the Cold War, when the organisation prepared particularly comprehensively for a possible nuclear attack that (happily) never came, and extending into the present, where similarly anticipated disasters have largely failed to materialise. On the one hand, the paper therefore concerns one organisation’s specific relationship to both disaster and the wider population. On the other, the difficulties and tensions that have been experienced by Civil Protection highlight in an exaggerated form issues that are central not just to most if not all of disaster preparedness work, but to a range of organisational activities for which waiting is a routine mode. These issues concern the relationship between pasts, presents, futures and the practices, logics and events that connect them together. To explore these relationships, I draw on ethnographic fieldwork and twenty-three in depth interviews with Swiss Civil Protection personnel conducted in various parts of the country between 2012 and 2013, as well as historical research. This includes interviewees in different parts of the organisation, both at federal and regional levels, and at varying levels in the organisational hierarchy, from new recruits, established cadets, mid-level commanders, to highest rank commanders.

Waiting is a category of activity that can be experienced and performed in many different ways. I argue that Civil Protection’s struggles to achieve relevance result in a fragmentation of its activities of waiting into at least two related but analytically distinct forms: waiting as standby and ‘just waiting’. In waiting as standby, what is being waited for by disaster preparedness organisations and personnel is for the moment to arrive, the event to take place, which calls them into a form of organisationally coordinated action that

² Since 2013, the aim has been to maintain a force size of around 72,000, although this target has not always been fully reached (Das Schweizer Parlament, 2018).

has been prepared for. Waiting, in this mode, is premised on the imminent deployment of targeted practices oriented towards the effects of an unfolding disaster. It is this anticipated future activity that renders relevant practices in the present. In 'just waiting', by contrast, the relevance of a future event to practices in the present becomes far more fragile. In its stead, a different set of practices become more experientially and performatively intensive: the passing of time, dealing with a less goal-directed present.

In focusing on relevance in the way I have begun to describe, I draw on Martin Savransky's (2016) reclaiming of the category of relevance for social science, for which he has looked to the philosophy of Alfred North Whitehead to account for how, precisely, the world is continually made and remade. Relevance, from this perspective, is not simply a quality that is attached to entities via forms of subjective judgement, but a way of describing diverse relations of mutual capture. With this in mind, I also bring into my discussion another Whiteheadian concept: *feeling*, including examining how emergent 'lures for feeling' are 'captured'. I find the terms helpful as a way of describing the forms of intersecting relationality that surround attempts to achieve mutual relevance. In part, this is because at its most simple, bringing a notion of feeling into descriptions of organisational behaviour implies that the latter is inseparable from flows of emotion and affect. However, as I've argued in different terms elsewhere (Dewille, 2015), a Whiteheadian notion of feeling can be thought of as extending far beyond the affective, in that it describes '*a constant activity that touches all aspects of the experience of a subject*' (Debaise, 2017: 46; original emphasis), in which neither 'experience' nor subjectivity should be understood as necessarily human. Feeling, from this perspective, is a process of continual capture in which 'a subject is not a substance; it is a taking' (*ibid.*: 48). This 'taking' is an activity constantly happening through interacting forms of emergence, or 'prehension', or 'lures'. It occurs in the present, in which what is being taken and continually integrated and re-integrated is the past, both recent and distant (*ibid.*). Crucially, however, this includes not just events that happened but unrealised possibilities:

What might have been, the choices made, and the selections that have taken place, are constitutive of feeling. Feeling carries with it all that 'could have been', the eventualities that it had to avoid in its effective existence, all the alternatives that were presented to it. (*ibid.*: 52)

As this begins to imply, what may be at stake in disaster preparedness practices is the very relevance of simultaneously specific yet ever-changing pasts, presents and futures. Ultimately, therefore, this paper examines the ways in which particular times and spaces, both past and future, become joined, sometimes unavoidably, to disaster preparedness.

Waiting on standby

The editors of this special issue define standby as a mode of ‘active inactivity’, often dependent on the varied organisation of socio-technical infrastructures, in which actors must be ready to be re-activated at any time (Kemmer et al., 2021). This definition very much captures how disaster preparedness organisations understand their work. While their primary purpose is activity in direct response to the unfolding of a particular disaster, this purpose gives life to a second and arguably more internally meaningful organisational activity: filling the present, in advance of the anticipated disaster. It is these two purposes working in combination that leads to organisational and material infrastructures being put into place, troops being recruited, trained, and drilled, exercises being designed and carried out. The assumption is that *at any moment*, this secondary activity could be replaced by the more intense work of dealing with the unfolding chaos of a disaster. It remains the case, however, that the activity of a typical disaster preparedness organisation is far more routinely concerned with how to continue its existence in the *absence* of the object – disaster – that gives it its identity (more, then, of an absent present (Hetherington, 2004)) than responding to this object itself. If the fully realised activity of a disaster preparedness organisation is understood as only possible in the presence of a disaster, the organisation is destined for much of its existence to remain substantially ‘inactive’ even in the face of its ongoing activities of preparation.

To understand standby, we need to understand that it has a sometimes troubled relationship to an analytically distinct, less specific mode of active inactivity: waiting. In this respect, I echo Annika Kühn, who argues that standby is a modality of waiting concerned with the ‘pause’ (Kühn, forthcoming). That disaster preparedness is concerned not just with standby but also waiting is hinted at in the quote at the top of this article. Recent years

have seen a revival of interest in waiting in the social sciences. Particularly relevant in light of the themes of this article is a strand that has analysed what Craig Jeffrey identifies as ‘chronic waiting’ – in which waiting stretches over long periods of time: years, lifetimes (Jeffrey, 2008). The often damaging effects of chronic waiting have been explored across a variety of empirical settings: in the West Bank, as an inflicted strategy of colonial governance (Joronen, 2017), amongst lower middle class men in India, as connected to a particular form of classed dispossession (Jeffrey, 2010), for asylum seekers in the UK, as an endlessly precarious frustrating condition, punctuated by the hope of resolution (Rotter, 2016). In such studies, waiting is revealed as not simply a passive, empty mode of existence, but socially productive – of new social networks and forms of communality (Rotter, 2016; Foster, 2019), of activism and resistance (Jeffrey, 2010; Joronen, 2017). Yet we should not take this to mean that passivity and inertia play no role in waiting. As David Bissell (2007: 291) argues, waiting should more properly be considered as ‘a variegated affective complex’, characterised by ‘a mixture of activity and agitation of the world and conversely a deadness-to-the-world’. Waiting is also not a generic condition. Rather, Bissell suggests, there are different ‘styles’ or ‘modalities’ of waiting, ‘from active waiting of an intense pressing and being-in-the-world, to a more stilled sense of waiting that falls outside of the impulse to view subjectivity as auto-affective activity’ (2007: 278).

This paper suggests that waiting on standby is one such modality and, further, that to understand standby, we need to understand how it exists in relation to, potentially morphs into, and is sometimes disrupted by, other waiting modalities. It also argues that in tracking different temporal modalities, it may be helpful to use a focus on activities of ‘relevance-making’ that include the deliberate acts of humans and organisation, but also include potentialities that stem from a much wider canvas of actors. It shows that precisely how relevance is established to disaster preparedness is crucial to its ongoing processes of recomposition. This in turn adds to the emerging work on the temporal dimensions of organisational life, in particular that work that has focused on the role played by affect and the everyday (Orlikowski and Yates, 2002; Reinecke and Ansari, 2017; Johnsen et al., 2018). These arguments will be introduced via a detour into the more sedate world of modernist theatre.

Waiting for disaster

In his most famous play *Waiting for Godot*, Samuel Beckett appears to make waiting a stand-in for the human condition. The play, premiered in 1953, has often been read as an analysis of the dissolution of meaning under conditions of modernity. It concerns a changing group of figures – most centrally Vladimir and Estragon – whose lives seem to be simultaneously wholly directed towards, but never given transformative resolution by, the mysterious Godot: they wait for him, but he never appears. I am not the first social scientist interested in waiting to reference the play. Craig Jeffrey, for instance, compares the experience of his research participants – young men facing long-term unemployment in north India – to that of Vladimir and Estragon: like the latter, his participants ‘struggle to manage and escape the feeling of being trapped in an endless present’ (2008: 956). Drawing on the work of Harold Schweizer (2008), Rebecca Rotter uses the play to illustrate the condition of existential waiting, where ‘the object is not known, is hidden or is unknowable, but is regularly given a symbolic object, expressed in abstract terms’ (2016: 85). Vladimir and Estragon’s form of waiting, she writes, ‘is not waiting which will end in fulfilment or validation, but is rather the kind of waiting that we most fear: just waiting’ (*ibid.*). As we will see, ‘just waiting’ is a modality of waiting that haunts standby.

It is probably unwise to try to interpret *Waiting for Godot* in conventionally representationalist terms. As Schweizer makes clear, ‘[t]he play is not about anything, not strictly speaking about waiting, certainly not about Godot. Rather the play enacts, performs, requires waiting’ (2008: 9). The form(s) of waiting it enacts and requires nonetheless bears comparison to the forms of waiting that are enacted in disaster preparedness. The absent presences of both Godot and disaster are replete with uncertainty, although there is an assumption in disaster preparedness that the latter is at least partially knowable: even if how exactly a particular disaster will play out is not, disaster preparedness draws on experiences of previous disasters to inform its understanding of possible futures. What I want to focus on, is how waiting is conceived in relation to this uncertainty. Both disaster preparedness and Vladimir and Estragon want to believe that what they are concerned with is not ‘just waiting’, but rather waiting that will at any moment be shown to be justified by a sudden situational transformation. In this respect, *Waiting for*

Godot – with all its active inactivity – can be seen to be simultaneously enacting a version of standby, even while showing how standby is threatened with being transformed into a far less meaningful, far more frustrating form of waiting. ‘Just waiting’ threatens the ontological coherence of standby. In the next section, I will explore in more detail how this can happen in the case of disaster preparedness.

However, before doing so it is important to pull out some of the distinctions in the comparison I am sketching between disaster preparedness and *Waiting for Godot*, while introducing how attempts at ‘relevance-making’ are vital to activities of disaster preparedness. Beckett once claimed to be unconcerned with how his productions were judged by others – ‘I produce an object. What people make of it is not my concern’ (Duckworth, 1966: xxiv–xxv). The ambitions of disaster preparedness tend to be quite different. This is perhaps most evident in the preparedness exercises that constitute a significant component of disaster preparedness activity in advance of a potential disaster. Exercises are, as Adey and Anderson argue, ‘a way in which the promise of contingency planning can be demonstrated’ (2011: 1093). Disaster preparedness is indeed concerned with the judgements of others. As I will show, this is how relevance is often understood within Swiss disaster preparedness: as pertaining solely to matters of subjective judgement which, in the case of exercises, are potentially modifiable by public demonstrations of organisational effectiveness. What I want to show, however, is that the relations of relevance surrounding disaster preparedness extend beyond human perception alone.

A particular challenge for disaster preparedness in Switzerland in this regard, has been the tendency for an apparent absence to become relevant to its work: the relative absence, or at least the perceived absence, of major disaster. While disastrous events have occurred in Switzerland, few have led to the major loss of life, although that is not to downplay the potential harm, both social and economic, they may have nonetheless engendered.

An obvious exception is the outbreak of COVID-19, which I will return to at the end of the article. At the time of writing this has led to at least 1,700 fatalities in Switzerland and the active deployment of Civil Protection as an organisation, with the government making a total of 850,000 service days

available to Swiss regions (Bundesamt für Bevölkerungsschutz, 2020a), primarily to support health services, with troops being deployed to hospitals and care homes to perform various duties such as managing the higher number of visitors to hospitals, disinfection, catering support, and transportation. Another is the Mattmark disaster in 1965, in which 88 workers were caused by a single avalanche. Other particularly significant events include the 1986 Schweizerhalle environmental disaster, in which huge volumes of poisonous chemicals were discharged into the Rhine after a fire at a storage depot, 'Storm Lothar', which killed 15 people and caused widespread structural and environmental damage (Zeller, 2014), major flooding in 2005 (alongside a number of other more recent but smaller flooding incidents), in which six people died and may have caused up to three billion dollars' worth of damage (Aschwanden, 2015). Likely still the most significant disaster in the entirety of Swiss history is the Basel earthquake of 1356 (Figure 1). This historical event played a particularly central role in one of the exercises I observed, as I will explore. The disaster caused catastrophic damage to the city, likely considerable loss of life (although the precise extent is hard to ascertain), and has been described as 'one of the most damaging events in intra-plate Europe within historical times' (Fäh et al., 2009: 351). The initial earthquake combined with the fires that followed are held to have almost wholly destroyed the then city of Basel, with further damage spanning an area within a thirty-kilometre radius: 'no church, tower, or house of stone in this town or in the suburb endured, most of them were destroyed', wrote the author of an entry in the town's new record book in 1357 (Hoffmann, 2014: 307).



Figure 1: The 1356 Basel Earthquake, as imagined after the fact by Christian Wurstisen in his *Basel Chronik* (1580)

Switzerland has, then, experienced some apparently disastrous events over its history. However, as I will go on to explore, among many Swiss, there is a perception that, as well as being relatively infrequent, some of these events may not fully qualify as a ‘disaster’. Often this turns on questions of scale – however potentially damaging and distressing many of these events have been, when placed alongside major disasters around the world, they can seem comparatively small. Sometimes these questions turn on what ‘counts’ when determining a disaster. Is the loss of a dozen or so lives more a local tragedy than a national disaster? Is financial or structural damage equivalent to lives lost? The challenge of reinforcing the relations of relevance that connect disaster preparedness to disaster and not its absence is, therefore, felt keenly in Switzerland.

That said, this is a challenge that faces all forms of disaster preparedness, even if the degree to which it does so varies. With that in mind, I will begin by examining some of the more generic ways in which a preparedness organisation might itself attempt to make disaster relevant to its daily work, before later examining the particular consequences of the absence of disaster in Switzerland. In respect of the former, based on my observations, there are

at least three dimensions of attempted ‘relevance-making’, as you might call them, that were targeted in the exercises I observed in Switzerland. These respectively incorporate: (1) exercise participants, (2) disaster, and (3) a witnessing audience. Not all are necessarily targeted simultaneously or necessarily in equal measure. In each case, these efforts can also fail, which generally means that relations of relevance are established to entities beyond those intended by the exercise designers. This builds on previous work on the centrality of creating ‘equivalences’ in disaster response exercises (Anderson and Adey, 2011; Adey and Anderson, 2012) and on how comparison is used by disaster preparedness organisations as a justificatory tool (Deville et al., 2015), while focusing down on particular sets of distinct practices.

Relevance-making in disaster preparedness exercises

Exercise participants

The first potential dimension of attempted ‘relevance-making’ incorporates exercise participants themselves. Unlike a play, for which the primary object is usually a witnessing audience – even if Beckett may not have been interested in how they interpret a production, he is interested in assembling them to witness it – what participants ‘make of’ an exercise is, at least in terms of the stated objectives of exercises, crucial for the success of preparedness. Relevance-making, in this respect, is about fitting into their embodied lives in a way that makes sense. There must, in the terms introduced above, be a mutual capture of feeling between participant and exercise. This can involve the cultivation of particular affects and atmospheres (Anderson and Adey, 2011; O’Grady, 2016). In practical terms, a successful mutual capture will involve an exercise that keeps participants engaged, attentive, and focused on the task in hand.

The failure of attempts to enact relations of relevance to participants often lurks at the margins of exercises, in the threat of boredom or other forms of disengagement (see also Anderson, 2004; Adey and Anderson, 2012; Anderson 2015). I would observe this fragility myself many times over the course of my fieldwork in Switzerland, including in the dozens of exercises that form part of either the basic or the ‘refresher’ training for Civil Protection

troops³. It was commonplace to observe affects of various sorts irrupting and, if not fully disrupting the exercise, then at least at times turning it from training alone into something else: a bonding activity, or an opportunity for comedy, or sometimes, more furtively, or in asides to me, a chance to marvel at the apparent farcicalness of the enterprise they were implicated in (more on which later). In such instances, relations of relevance beyond those intended by the exercise designers emerge. Different sets of feelings, in other words, are captured.

Disaster

The second potential dimension of attempted relevance-making is between the exercise and disaster. This equivalent in a play would perhaps be themes to which a play speaks. In a few preparedness exercises, disaster presents itself as fairly immediately relevant via the active presence of the actual threat which participants have to learn to manage – learning to extinguish a fire would be an obvious example (Figure 2). The feeling of a future potential disaster extends into the present and is captured via a controlled reproduction of the danger posed by a specific aspect of a disaster: in this case, the heat and its potential to burn, the smoke and its potential to stifle.

³ The exact combination of exercises troops partake depends on which Civil Protection 'function' they are allocated to. The three main functions are Communications Assistant (*Stabsassistent*), Carer (*Betreuer*), and Pioneer (*Pionier*). The last of these is roughly equivalent to infantry in the army. It is a more physical role, involving extensive training in using heavy machinery. There are other functions, but these are more niche (Material Warden, responsible for equipment maintenance, Shelter Warden, responsible for the bunkers, and Cook).



Figure 2: Training to extinguish a fire (photo by author)

However, often the feeling of disaster is less tangible, less immediately capturable, and has to be brought into the exercise by deploying what I would call ‘relevance-making devices’⁴. These are some of the ‘orchestration of relations’ (Kühn, forthcoming) required for the maintenance of standby.

Examples from my fieldwork, include:

- in training, using presentations and videos featuring recent major disasters that *have* happened in other countries (one prominent example was Fukushima, used on a number of occasions the highlight the continued risk posed by nuclear power stations, of which Switzerland has four);

⁴ The parallel I have in mind is the ‘market device’, as studied within certain quarters of economic sociology (e.g. Muniesa et al., 2007; Law and Ruppert, 2013; McFall, 2014), although the concept of device has been used with reference to various other domains (e.g. Marres and Lezaun, 2011; Verran, 2012; Amooore and Piotukh, 2016).

- in training, using presentations and videos featuring past events in Switzerland (Figures 3a-d);
- in training, using audio-visual dramatisations of past events, in which actors roleplay a sequence of events on screen, intercut with footage from actual events;
- in training, taking troops to the location of a past event (e.g. a flood) and showing them photos of the immediate aftermath of the event (see Figures 4a, 4b);
- in exercises, simulating the physical landscape of post-disaster events (in Switzerland often earthquakes, partly as this enables the repurposing of Cold War era Civil Protection training fields, designed to simulate the landscape following nuclear attack; see Figures 5a, 5b);
- in exercises, having actors play the role of victims, sometimes primed to respond in certain ways, sometimes made up to appear injured (see Figures 5a, 5b) – here there are some direct parallels to theatrical techniques, as analysed in other contexts by Tracy Davis (2007);
- in exercises, simulating some of the psychological pressures that would be experienced in a disaster event by overwhelming staff with messages from different quarters, by introducing surprises, by starting exercises in the early hours, by making troops work long hours (examples of which were to be variously found in two major, national exercises I observed: SEISMO 12 and GNU 13⁵; the former will be explored in more depth shortly).

⁵ Short for *Gesamtnotfallübung 2013* or ‘Complete Emergency Exercise 2013’, which tested the organisational readiness of various agencies in response to a simulated emission of radiation from one of Switzerland’s nuclear power plants.





Figures 3a, 3b, 3c, 3d: Past Swiss events; stills from video used in training (Schadenereignisse in der Schweiz), showing two rail accidents, forest fire, aftermath of storm



Figures 4a, 4b: Contrasting the present and the past: image above shows a bridge destroyed in 2005 floods. This was shown to trainees in situ on a site visit; image below, author's own, showing the reconstructed bridge, seen from the perspective of the trainees



Figures 5a, 5b: Simulating post-earthquake landscapes (photos by author)



Figures 6a, 6b: Actors simulating effects of (a) chemical exposure, (b) concussion (photos by author)

Yet it is quite feasible to organise a disaster preparedness exercise that is engaging and interesting for participants, but in which the spectre of disaster

becomes rather more distant than intended – where ‘relevance-making’ fails to establish a connection to its intended object: disaster – with the *absence* of disaster the object that threatens to take disaster’s place. For example, a classroom exercise in which participants had to roleplay situations of confrontation with members of the public, which my fieldnotes record as ‘perhaps the most fun bit of the day’ but ‘really quite a few steps removed from disaster situations’. Or a traffic direction exercise, in which the simple silliness of cadets being asked to pretend to be cars, crossing a metaphorical junction indicated by sticks on the ground, flashing their ‘indicators’ with white gloved hands while one cadet practiced the relevant traffic directions, led to much mirth among participants and had a similarly tenuous relationship to the dangers of disaster. Or an exercise in which cadets had to build a path across a field (Figures 7a, 7b), ostensibly in order to practice using manual working tools (pickets, shovels etc) and relevant materials (hardcore, concrete, etc.), however in fact primarily aimed at improving a public right of way (more on which shortly). As I recorded in my fieldnotes, the setting did not help:

I reflect, as I stand in the sun in a beautiful meadow, cow bells clinking gently behind me, a valley and mountain vista ahead of me, on the fact that this really is too pleasant a fieldsite. [It’s] particularly peculiar as I am meant to be researching disaster. I don’t think I could feel further from [it].

In these examples, it is not that disaster is wholly absent, but rather that its presence has to be constructed predominantly through discourse – usually by an instructor explaining to participants how the exercise is related to disaster preparedness. This is a form of attempted relevance-making that is often more fragile than when discourse is bolstered by material and affective lures for feeling (Aradau, 2010; Anderson and Adey, 2011).



Figures 7a, 7b: Preparing to build a public footpath (photos by author)

Witnessing audience

There are occasions, however, when efforts at constructing the relevance of disaster preparedness have a wider scope, beyond exercise participants themselves. This is the third potential dimension of attempted relevance-making for disaster preparedness exercises that I want to focus on, in which a witnessing audience is incorporated into the exercise. This mode of attempted relevance-making has a particularly contentious history in Switzerland. In such efforts, there are far more parallels with the structural dynamics of theatre: there is an effort to actively assemble an audience (see above, Figure 6a, for instance), and the objectives of the exercise at least to some degree have reference points external to the participants' embodied activities. It is not that the exercise is no longer concerned with learning or practising skillsets, but that this objective sits in relation to, and at times can become secondary to, 'putting on a show'. The exercise's success as a lure for feeling hinges on the relationship between those witnessing it and the integrity of its performance. Is the exercise narratively coherent? Spectacular? Exciting? Impressive?

There are many reasons for wanting to construct exercises with such questions in mind. Scholars have focused in particular on how public exercises are often aimed at the reinforcement of particular modalities of governance: those that operate according to a 'state of exception' (Adey and Anderson, 2012), logics of security (Anderson, 2010; Samimian-Darash, 2016), or particular visions and narratives of nationhood (Davis, 2007), or logics of pre-emption (De Goede, 2008), or via forms of biopolitical ordering (Zebrowski, 2009). In the case of many of the more public exercises I observed in Switzerland, the objective was often akin to public relations aimed at improving the image of Civil Protection as an organisation – which is not to say that they were not also sometimes interested in bolstering certain logics of governance.

To understand the degree to which this dimension of relevance-making can come to feature in disaster preparedness in Switzerland, it may help to outline key elements of Civil Protection's organisational history. Civil Protection (or Civil Defence, as it might once have been translated – the term '*Zivilschutz*' is polysemic in this respect) as an organisation was formed during the Cold War,

with the original purpose of being responsible for ensuring the continuity of the Swiss nation in the event of a nuclear strike, whether on Switzerland directly or on one of its geopolitically more high profile neighbours (see M. Meier, 2007; Y. Meier, 2007; Berger Ziauddin, 2014, 2017). In this period, however, Civil Protection was faced with an existential challenge: the continued absence of its key object – nuclear war. This was a particular issue given the sheer organisational scale of Swiss Cold War preparedness as compared to many of its neighbours. Civil Protection was a major national endeavour, involving the creation of a conscript-based reserve force that numbered in the hundreds of thousands⁶. Today, the scale of Civil Protection's Cold War ambition is most visible in the remaining network of nuclear bunkers (Berger Ziauddin, 2017; Deville et al., 2014; Deville and Guggenheim, 2018), originally designed to house the entire population of Switzerland in the event of a nuclear strike: recent figures suggest a standing total of around 360,000 smaller private shelters and 1700 public shelters (Bundesamt für Bevölkerungsschutz, 2017); many of the latter double as command centres. The tension between the scale of the preparedness effort in Switzerland and the seeming absence of a viable threat led many Swiss inhabitants to explicitly question the relevance of the organisation, questions which were lent additional force by the campaigns against nuclear proliferation that saw the Swiss civil protection/defence architecture as a reflection of Swiss militarism (Albrecht et al., 1988; M. Meier, 2007). Exercises such as the so-called 'nail seminars' (see Figure 8) – an exercise in which troops learned, and practised, setting up the bunkbeds that would be necessary to accommodate evacuated citizens in the larger shelters – came to be seen as the consummate example of the pointlessness of some of the activities which were used to fill troops' time during their yearly periods of training. Some older members of contemporary Civil Protection, who had lived through these times either as officers or cadets, talked about the charade of making troops repeatedly practice erecting and then breaking down the bunkbeds, to the extent that in some cases the screw holes in the wooden frames had been used so often that

⁶ In 1963 around half a million were called up (Y. Meier, 2007: 93), although the target was never fully met. This number decreased over time, however even after the Cold War, the size of the force was substantial. In 1994, for example, a report expressed the ambition to reduce the size of the force from around 280,000 to 120,000 (M. Meier, 2007: 7).

screws could be pushed in by hand (these would therefore have been a different and earlier incarnation of the metal versions shown in Figure 8, the image being from the late 1980s). The tendency for the press to repeatedly reference this exercise remains something of a sore point for some – in the interview with the aforementioned Regional Civil Protection Commander, for example (see also Fischer, 2007) – although at the same time Civil Protection itself still can be found referencing nail seminars in its public communications, usually as a way of contrasting modern, purportedly state-of-the-art practices to older, archaic predecessors (e.g. Bischof, 2014; Anon, 2016).

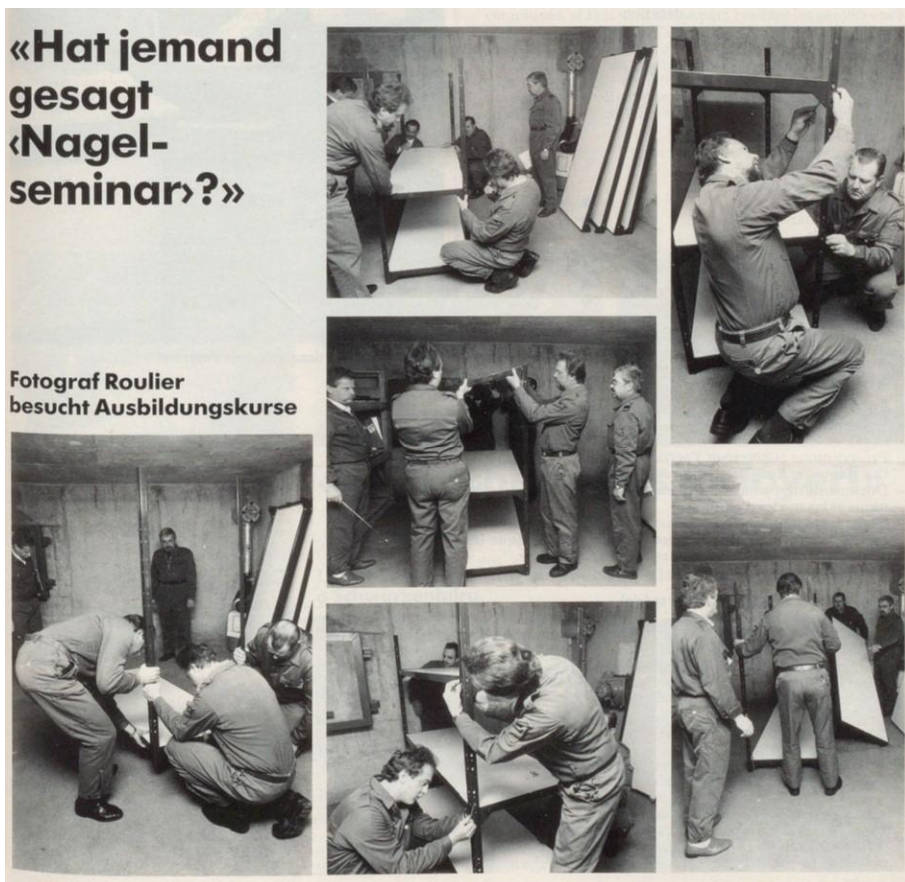


Figure 8: ‘Did someone say “nail seminar”?’

Given this historical context, contemporary exercises conducted in the view of the general public were often seen by the Civil Protection hierarchy as a way of creating relevance, as more or less conventionally understood: as a

process dependent on the subjective judgements of others. Take the pathway building exercise I mentioned above: as well as being a chance for cadets to test / refresh certain skills, it was also, as the commander leading the exercise told me, part of Civil Protection's ongoing efforts to improve community relations. In fact, the local town was partially funding the construction of the path, blurring the line between exercise and public works.⁷

However, the audiences that disaster preparedness exercises assemble frequently extend beyond a notional 'general public'. A number of the exercises I witnessed were organised with inter-organisational politics in mind. In such cases, the audience might, for example, be local or national politicians with the power to fund or defund Civil Protection's work, or members of disaster preparedness forces from other countries, who often visit Switzerland to share expertise and to compare approaches, sometimes becoming involved as both participants and audience (Figures 9a, 9b).

⁷ The exercise was a specific kind of Civil Protection activity: a 'Deployment for the Good of the Community' (*Einsatz des Zivilschutzes zugunsten der Gemeinschaft*). This is a legally circumscribed form of activity, in which certain organisations can apply to have work partially or wholly undertaken by Civil Protection. From the perspective of the upper echelons of Civil Protection, these are seen as something of a win-win: a chance to make the work of Civil Protection more visible and relevant to the population and a chance for recruits to practice their skills. The blurring between exercise and public works is thus governmentally institutionalised (Bundesamt für Bevölkerungsschutz, 2020b).



Figures 9a, 9b: Jordanian and German disaster preparedness delegations visiting a Swiss-organised exercise (photos by author)

Whatever the target of the relevance-making efforts in this third dimension, they of course do not always succeed in the ways that organisers wish. For

example, in the path-building exercise, the commander and I were confronted by a local resident who started complaining to us about the pointlessness of Civil Protection work, echoing some long-standing concerns (I will return to this issue shortly). The public presence of Civil Protection thus had the potential to act as a lure to the very kinds of feelings that the organisational hierarchy are keen to challenge.

In what follows, I will explore the ambivalent potential of attempted acts of public relevance making in more detail, with a focus on one of the larger Swiss disaster preparedness exercises I attended as an observer – SEISMO 12 – while also attending to the construction of relevance operating beyond human perception. Focusing on human perception alone, I argue, misses the diversity of relations with which disaster preparedness can be – sometimes unintentionally – associated.

Just waiting? The endless present of Swiss disaster preparedness

SEISMO 12 was a 2012 exercise designed to simulate the response to the aftermath of a major earthquake, centring on the city of Basel, taking as its starting point the situation fifty-four hours after the earthquake hit. It was a command post exercise (*Stabsrahmenübung*; sometimes also referred to in English as a ‘functional exercise’). This meant that what was being primarily tested were organisational and inter-organisational capabilities in dealing with disaster rather than the associated physical tasks such an event might demand of disaster preparedness troops and emergency responses services operating in the field; there were, in other words, no ‘boots on the ground’. Included in this process was testing the ability of different organisational components to respond to both the unexpected twists and turns of the still unfolding disaster and to flows of information arriving from various sources. The exercise spanned three uninterrupted days and involved Federal Swiss agencies – including the Federal Civil Protection Agency (*Bundesamt für Bevölkerungsschutz*), the army, a Federal media team, and the National Alarm Centre (*Nationale Alarmzentrale*) – Civil Protection personnel from four Swiss cantons, alongside disaster preparedness representatives from neighbouring Germany, on whose border Basel sits, and representatives from various

commercial and non-commercial agencies (e.g. Red Cross, SwissCom, Orange, Swissgas).

The exercise targeted each of the dimensions of relevance-making outlined above. It constructed its relevance to participants (dimension 1) in numerous ways. The uninterrupted span of the exercise, the ceaseless sets of tasks that participants had to perform, the sheer scale and complexity of the exercise: these and many other elements besides tested their stamina and their ability to put into practice a variety of processes and procedures in a high intensity environment. The relevance of disaster (dimension 2) was constructed most centrally via the challenge of participants having to manage complex inflows and outflows of information, while also – where necessary – deciding on appropriate courses of action. This information included regular casualty number updates and the continued intrusion of dozens of so-called ‘injects’ into the exercises, targeted at particular teams, arriving via different communicative channels, to which participants had to respond, with particular local stakeholders in mind – the media, central government, etc. By way of just a handful of examples:

- Frightened tourists try to leave the disaster zone by any means possible. They don’t hesitate to offer large sums of money to gain access to cars and drivers!
- Drinking water pollution in the drinking water network in the [...] region, the population must be informed immediately. [Stakeholder] asks for a coordination report for the information of all water users. Emergency care must also be established as quickly as possible.
- In the [local] hospital, dozens of further admissions have been recorded in the last 24 hours. Because of the reduced number of hospital staff due to the earthquake, it is unable to treat the many patients it is receiving. At present it is caring for 113 seriously injured patients, 268 slightly to moderately seriously injured patients, and 45 patients who had been hospitalized before the earthquake.

It is, however, the third dimension of relevance-making that I want to focus on: the assembly of a witnessing audience. SEISMO 12 assembled quite

distinct audiences around its work. The first was the Federal government – as noted, their support is vital for the continued existence of Civil Protection as an organisation. A key moment in the exercise was the arrival of a group of high-ranking figures from the Swiss government and various other Federal agencies (Figure 10). The second audience was the press: another important moment was the arrival of journalists from local and national media organisations (Figures 10 and 11), who were also invited to ask questions about the exercise at a press conference. They in turn invoked a third and more remote audience: the wider Swiss population who could in due course learn about the exercise via TV and newspaper reports (e.g. Hermann, 2012; Mahro, 2012; Ballmer, 2013).



Figure 10: Delegates from Federal agencies touring SEISMO 12 (photos by author)⁸

⁸ As is suggested by these images, the constituency of disaster preparedness and disaster preparedness events is heavily gender-skewed. One significant reason for this is that the disaster preparedness system in Switzerland is to a large extent dependent on Civil Protection and the Swiss Army. Both of these organisations



Figure 11: National media interviewing SEISMO 12 personnel (photos by author)

Alongside its practical utility for the agencies involved, those behind SEISMO 12 clearly hoped that the exercise would demonstrate the effectiveness of Swiss disaster preparedness procedures to each of these three groups. The message being projected externally is that the particular form of standby that disaster preparedness in Switzerland institutionalises should be judged as relevant – relevant to the work of government, relevant to the production of mediatised narratives, and relevant to the lives of the Swiss population⁹.

However, relevance-making should be understood as extending beyond practices of subjective judgement. Surrounding disaster preparedness are a range of lures for feeling, some of which are deliberately drawn into its work

draw their members predominantly from young male conscripts, although women are permitted to volunteer for either.

⁹ Such processes have long been the focus of institutional theory in the analysis of how organizational legitimacy is achieved and the role within this of particular social and cultural contexts (e.g. Powell and DiMaggio, 1991). The focus of this work on large scale structuration dynamics is, however, somewhat distant from the approach being adopted here.

by preparedness organisations, some of which act as lures that generate unintended outcomes. As I have already shown, relevance-making in disaster preparedness frequently involved drawing relations between actual events and the exercise in question. In SEISMO 12, particularly important was securing a relation to the 1356 earthquake described earlier. Both the exercise's location – Basel – and its precise magnitude – between 6.5 and 7 on the Richter scale – mirrored this historical antecedent. The relationship between this historical earthquake and SEISMO 12 featured prominently in government press releases (Eidgenössisches Departement für Verteidigung, Bevölkerungsschutz und Sport, 2012a, 2012b). In exercise documents – one of which featured the woodcut shown towards the start of this paper (Figure 1)¹⁰ – the organisers imagined that a similar earthquake occurring in the present would be perhaps even more catastrophic, killing between 1,000 and 6,000 individuals, seriously injuring 60,000, and causing damage to property worth between USD \$54billion and \$107billion¹¹.

The 1356 Basel earthquake occurred in a period in which the Swiss nation as it is today was still emerging. If standby, as a particular modality of waiting, involves being ready to respond 'at any moment', this degree of temporal elongation poses a huge organisational challenge. The rhythms of earthquakes and the folding and buckling of the earth's crust operate at a vastly different temporal scale to human and organisational life. Efforts were, of course, made to manage this problem. For instance, the exercise 'Factsheet' describes how 'Switzerland should expect to experience an earthquake of magnitude 6 [on the Richter scale] every 100 years, and an earthquake with a magnitude between 6 and 7 every 1000 years' (Bundesamt für Bevölkerungsschutz, 2012: 2). It continues: 'Especially in the Basel area, in which the biggest earthquake Europe has ever seen took place in 1356, the possibility of damage from earthquakes, and thus earthquake risk, is very high' (*ibid.*). The language of risk calculation and predictions about the human and financial costs such an event would inflict, as well as the reference again to the 1356 event, are attempts to capture the lures for feeling that the past

¹⁰ The 'concept' document (Nationale Alarmzentrale et al., 2004: vii) used as a reference point by organisers of the exercise.

¹¹ CHF 50 billion to CHF 100 billion. Conversion based on an exchange rate dated 9th May 2012.

offers up to the present. However, they inevitably struggle in the face of the span of geological time. The unacknowledged problem for disaster preparedness in Switzerland, is that it has become unavoidably tied to – that is, relations of relevance have become established with – such mind-boggling temporalities. These act to destabilise attempts to establish relations of relevance with human life, given the latter's vastly more rapid temporality.

Many interviewees identified the perceptible absence of disaster – earthquake or otherwise – as a specific organisational problem for Swiss Civil Protection. I chatted to a cadet during lunch at SEISMO 12 about the issue: 'I think that the threat [of disaster] has long not been that present', he told me. For many in wider population, he suggested, disaster was seen as something approaching a 'phantom' or a 'fantasy' of Civil Protection. But sometimes, he continued,

when things aren't real [...] they grow stronger, they can become real. [...] Sometimes, the less the threat, the more important it becomes, because it is [people's] job, their profession.

From his perspective, Civil Protection appears caught in a cycle in which the longer disaster remains absent, the harder those within the organisation have to work to bolster disaster's relevance to both their own and Civil Protection's identity.

In an interview conducted some months after the SEISMO 12 exercise, a senior colleague – an Operations Manager at a regional Civil Protection training centre – reflected on the impact that the continued absence of disaster was having on the motivation of troops like the above cadet, in a discussion we were having about a training course he had just delivered to potential officers:

It is frustrating. It is certainly a motivation problem. Maybe you heard, at the end of the course, for the last three years, I have said to the participants in the officer course, I wish you all the best. And I also wish you, hopefully, an emergency deployment sometime so that you really experience serving in a disaster. Even if [a disaster] has many negatives – people injured, perhaps killed, a lot of damage, financial damage – for anyone who is taking a course it's also good at some point to experience a disaster. Simply to be in action and stand one to one [with each other]. I personally don't have this problem – I have been in action a lot in the fire brigade. I don't just train for the sake of training.

I witnessed the event he describes: telling his charges he wished them a disaster so they could experience the cut and thrust of a real event. In this extract he goes further, explicitly distancing himself from Civil Protection's apparent organisational problem. He was also a volunteer in the local fire brigade. There, he suggested, he doesn't just 'train for the sake of training'. *There* training has an object, other than its own repetition. The danger that lurks behind his observation is that disaster's relevance to the daily practice of Civil Protection becomes so tenuous to its troops as to be undetectable. This is what standby dissolving into just waiting would feel like: an endless present, with the anticipated future continually deferred.

Conclusion

If the ways things and people become relevant to one another – or, to put it another way, if the way feelings are taken and become takeable – are, as Savransky argues, specific and situated achievements (Savransky, 2016: 154), then this paper has shown how waiting on standby for a disaster actually involves a constant refreshing and revitalisation of past events and future possibilities in relation to each new problem that disaster preparedness both poses and is posed. These problems include those posed both by its exercises and by the past, present and future disasters to which exercises attempt to secure a relation.

The paper has also opened up standby as a particular modality of waiting characterised by forms of active inactivity oriented towards a different and more active set of practices that it is expected, or at least imagined, will be unfolded at some future moment. As part of this, I have examined how, in the case of disaster preparedness in Switzerland, standby at times threatens to transform into a different waiting modality: 'just waiting', which features presents that are less goal-directed. Standby is a waiting modality that is a challenge for all organisations whose claims to existence depend on infrequently actualising possibilities coming to pass. What makes Swiss Civil Protection distinctive is how standby has become related to both the absence of promised events and to its own historical inability to convincingly deal with such absences. In this waiting for future disasters that seem, almost frustratingly, never to come to pass, the pasts, the presents, and the possible

futures of Swiss disaster preparedness and its unique version of standby, are constantly being remade. In tracking this across some of the history of disaster preparedness in Switzerland, I have shown how diverse lures for feeling, including unfolding pasts and presents, come to be relevant to Civil Protection's work and to its ongoing processes of recomposition. From an organisational perspective, this can be an uncomfortable experience, as strategic attempts at relevance-making aimed at influencing the judgements that are made by different audiences become entangled with, and at times destabilised by, wider dimensions of relevance-making.

Relevance-making is a necessarily incomplete process. I write this in August 2020, as the world lies in the grip of the COVID-19 pandemic. A feature of disaster – which I would argue the pandemic qualifies as, although such designations are inevitably challenging to achieve agreement upon – is its rapid transformation of the status quo. However, it is important not to assume that the sudden presence of a disaster instantly solves the challenges of relevance for disaster preparedness organisations. As part of their response to the COVID-19 pandemic, Civil Protection Aargau, one of the largest regional Civil Protection forces in Switzerland, created a slick promotional video which featured as a news story on their homepage (Aargauischer Zivilschutzverband, 2020), as well as prominently on the national Civil Protection website in a section about the response to the pandemic (Bundesamt für Bevölkerungsschutz, 2020a). The video shows Civil Protection forces – often in slow motion and over a stirring classical score – ‘in deployment’ (*im Einsatz*) in hospitals and care homes, alongside hospital and care home managers testifying to the value of the support provided and Civil Protection commanders and other senior Civil Protection officials variously making a case for the readiness and effectiveness of their troops. The target audience of this video is unclear. Is it ‘the public’? Government officials? Other regional Civil Protection forces? Civil Protection troops themselves? It is likely a mixture of some or all of these. As for many organisations, the pandemic is an opportunity for Civil Protection in Switzerland to capture COVID-19, even as Civil Protection is captured by it. This is not, however, the simple substitution of irrelevance for relevance, but a *redistribution* of relations of relevance.

The COVID-19 pandemic offers a further reminder: that in these ongoing redistributions of relevance Civil Protection depends on latent non-human potentialities – in this case, on a particular human-non-human encounter causing a virus to leap species before quickly spreading globally with the help of our modern mobility systems, offering a range of unpleasant surprises (see Pierides and Woodman, 2012) to the organisations seeking to manage it. Most of the exercises I witnessed had much larger scale non-human potentialities in mind – floods or droughts or chemical explosions or – as in the SEISMO 12 exercise – earthquakes. What was being waited for in Swiss disaster preparedness is the unfolding of geological forces, as the planet continues its ceaseless yet often unnoticed processes of realignment. The pasts, presents, and futures of Swiss Civil Protection include within them a particular organisational legacy, a particular relationship to apparatuses of prediction (see Deville and Guggenheim, 2018), a particular history of disastrous events, a diversity of possibilities never grasped – and they also include within them, as SEISMO 12 sought to demonstrate, the material uncertainties of the dependence of our species upon an inherently unstable planet. Perhaps COVID-19 will be the disaster that was, perhaps guiltily, hoped for by some in Civil Protection. It contains within it the potential – even amidst all the destruction the virus is wreaking – that it might be enough to cement Civil Protection’s relevance in the eyes of their different observers. However, to see how exactly this disaster and other future and past disasters become relevant to Civil Protection, we must just wait.

references

- Aargauischer Zivilschutzverband (2020) *Der Zivilschutz im COVID-19 Einsatz*. [<https://youtu.be/m4vaUDji3Yc>]
- Adey, P. and B. Anderson (2012) ‘Anticipating emergencies: Technologies of preparedness and the matter of security’, *Security Dialogue*, 43(2): 99-117.
- Albrecht, P., A. Gross, A.E. Hohler, P. Hug, W. Lauterburg, T. Schnyder, M. Stocker-Meier, J. Stöcklin, J. Suchomski and J. Tanner (1988) *Schutzraum Schweiz: mit dem Zivilschutz zur Notstandsgesellschaft*. Gümligen: Bonn: Zytglogge.

- Amoore, L. and V. Piotukh (eds.) (2016) *Calculative devices in a digital age*. Abingdon & New York: Routledge.
- Anderson, B. (2004) 'Time-stilled space-slowed: How boredom matters', *Geoforum*, 35(6): 739-754.
- Anderson, B. (2010) 'Security and the future: Anticipating the event of terror', *Geoforum*, 41(2): 227-235.
- Anderson, B. (2015) *Encountering affect: Capacities, apparatuses, conditions*. Farnham: Ashgate.
- Anderson, B. and P. Adey (2011) 'Affect and security: Exercising emergency in UK civil contingencies', *Environment and Planning A*, 29(6): 1092-1109.
- Anon (2016) 'Der Zivilschutz von heute', *Gemeinde Gossau*: 45.
- Aradau, C. (2010) 'Security that matters: Critical infrastructure and objects of protection', *Security Dialogue*, 41(5): 491-514.
- Aschwanden, E. (2015) 'Schweizer Hochwasser 2005: Erst kam das Wasser, dann der Berg', *Neue Zürcher Zeitung*, 17 August. [<https://www.nzz.ch/schweiz/erst-kam-das-wasser-dann-der-berg-1.18596963>]
- Ballmer, D. (2013) 'Krise bewältigt, Verletzte vergessen', *Basler Zeitung*, 9 November. [<https://www.bazonline.ch/basel/land/krise-bewaeltigt-verletzte-vergessen/story/27891374>]
- Berger Ziauddin, S. (2014) 'Überlebensinsel und Bordell. Zur Ambivalenz des Bunkers im atomaren Zeitalter', in D. Eugster and S. Marti (eds.) *Kultur des Kalten Krieges in Europa*. Essen: Klartext.
- Berger Ziauddin, S. (2017) 'Superpower underground: Switzerland's rise to global bunker expertise in the atomic age', *Technology and Culture*, 58(4): 921-954.
- Bischof, J. (2014) *Zivilschutz kämpft für besseres Image* [http://www.infowilplus.ch/_iu_write/artikel/2014/KW_12/Uzwil/Artikel_2_0461].
- Bissell, D. (2007) 'Animating suspension: Waiting for mobilities', *Mobilities*, 2(2): 277-298.

- Bundesamt für Bevölkerungsschutz (2012) *Factsheet zur Lageverbund- und Stabsrahmenübung vom 8. - 10. Mai 2012*. Bern: Bundesamt für Bevölkerungsschutz: 2.
- Bundesamt für Bevölkerungsschutz (2017) *Schutzbauten*. [<http://www.babs.admin.ch/de/aufgabenbabs/schutzbauten.html>]
- Bundesamt für Bevölkerungsschutz (2020a) *Coronavirus: der Zivilschutz im Einsatz*. [<https://www.babs.admin.ch/de/zs/einsatz/coronavirus.html>]
- Bundesamt für Bevölkerungsschutz (2020b) *Einsätze zugunsten der Gemeinschaft*. [<https://www.babs.admin.ch/de/zs/einsatz/ezg.html>]
- Das Schweizer Parlament (2018) *Personalbestand beim Zivilschutz sichern*. [<https://www.parlament.ch/de/ratsbetrieb/suche-curia-vista/geschaeft?AffairId=20183142>]
- Davis, T.C. (2007) *Stages of emergency. Cold War nuclear civil defence*. Durham, NC: Duke University Press.
- De Goede, M. (2008) 'Beyond risk: Premediation and the post-9/11 security imagination', *Security Dialogue*, 39(2-3): 155.
- Debaise, D. (2017) *Nature as event: The lure of the possible*. Durham, NC & London: Duke University Press.
- Deville, J. (2015) *Lived economies of default: Consumer credit, debt collection and the capture of affect*. London & New York: Routledge.
- Deville, J. and M. Guggenheim (2018) 'From preparedness to risk: From the singular risk of nuclear war to the plurality of all hazards', *British Journal of Sociology*, 69(3): 799-824.
- Deville, J., M. Guggenheim and Z. Hrdličková (2014) 'Concrete governmentality: Shelters and the transformations of preparedness', *Sociological Review*, 62(S1): 183-210.
- Deville, J., M. Guggenheim and Z. Hrdličková (2015) 'Same, same but different: Provoking relations, assembling the comparator', in J. Deville, M. Guggenheim and Z. Hrdličková (eds.) *Practising comparison. Logics, collaborations, relations*. Manchester: Mattering Press.
- Duckworth, C. (1966) 'Introduction to Samuel Beckett', in C. Duckworth (ed.) *Samuel Beckett: En attendant Godot*. London: Harrap.

- Eidgenössisches Departement für Verteidigung, Bevölkerungsschutz und Sport (2012a) *Erdbebenübung SEISMO 12: Erfolgreiche Durchführung und wichtige Erkenntnisse*.
[<https://www.admin.ch/gov/de/start/dokumentation/medienmitteilungen.msg-id-44535.html>]
- Eidgenössisches Departement für Verteidigung, Bevölkerungsschutz und Sport (2012b) *Internationale Erdbebenübung SEISMO 12: Harte Arbeit für Führungsstäbe*.
[<https://www.admin.ch/gov/de/start/dokumentation/medienmitteilungen.msg-id-44499.html>]
- Fäh, D., M. Gisler, B. Jaggi, P. Kästli, T. Lutz, V. Mascidri, C. Matt, D. Meyer-Rosa, D. Rippmann, G. Schwarz-Zanetti, J. Tauber, T. Wenk (2009) 'The 1356 Basel earthquake: An interdisciplinary revision', *Geophysical Journal International*, 178(1): 351-374.
- Fischer, W. (2007) *Stellungnahme des Kommandanten, ZSO Pilatus*.
[<http://www.zsopilatus.ch/news/detail/?nid=118>]
- Foster, R. (2019) "Doing the wait": An exploration into the waiting experiences of prisoners' families', *Time & Society*, 28(2): 459-477.
- Hermann, R.M. (2012) 'Vorsorge für den Fall einer Erdbebenkatastrophe', *swissinfo.ch*, 22 May.
[https://www.swissinfo.ch/ger/gesellschaft/erdbeben_vorsorge-fuer-den-fall-einer-erdbebenkatastrophe/32720876]
- Hetherington, K. (2004) 'Secondhandedness: Consumption, disposal, and absent presence', *Environment and Planning D*, 22(1): 157-173.
- Hoffmann, R. (2014) *An environmental history of Medieval Europe*. Cambridge: Cambridge University Press.
- Jeffrey, C. (2008) 'Waiting', *Environment and Planning D*, 26(6): 954-958.
- Jeffrey, C. (2010) *Timepass: Youth, class, and the politics of waiting in India*. Stanford, CA: Stanford University Press.
- Johnsen, R., C.B. Johansen and S. Toyoki (2018) 'Serving time: Organization and the affective dimension of time', *Organization*, 26(1): 3-19.
- Joronen, M. (2017) 'Spaces of waiting: Politics of precarious recognition in the occupied West Bank', *Environment and Planning D*, 35(6): 994-1011.

- Kemmer, L., A. Kühn, B. Otto and V. Weber (2021) 'Standby: Organizing modes of in/activity', *ephemera* 21(1).
- Kühn, A. (forthcoming), 'Infrastructural standby', *ephemera* 21(2).
- Law, J. and E. Ruppert (2013) 'The social life of methods: Devices', *Journal of Cultural Economy*, 6(3): 229-240.
- Mahro, A. (2012) 'Wie das Dreiland für ein neues Jahrtausendbeben probt', *Badische Zeitung*, 9 May. [<http://www.badische-zeitung.de/wie-das-dreiland-fuer-ein-neues-jahrtausendbeben-probt>]
- Marres, N. and J. Lezaun (2011) 'Materials and devices of the public: An introduction', *Economy and Society*, 40(4): 489-509.
- McFall, L. (2014) *Devising consumption: Cultural economies of insurance, credit and spending*. London & New York: Routledge.
- Meier, M. (2007) *Von der Konzeption 71 zum Zivilschutz 95. Der Schweizer Zivilschutz zwischen Sein und Schein*, PhD thesis, Universität Freiburg.
- Meier, Y. (2007) *Die gesellschaftliche und institutionelle Verankerung des schweizerischen Zivilschutzes in den 1950er und 1960er Jahren. Der Zivilschutz als Ausdruck des ambivalenten schweizerischen Selbstverständnisses im Kalten Krieg*, PhD thesis, Universität Freiburg.
- Muniesa, F., Y. Millo and M. Callon (2007) 'An introduction to market devices', *Sociological Review*, 55(s2): 1-12.
- Nationale Alarmzentrale, Bundesamt für Bevölkerungsschutz, Bundesamt für Wasser und Geologie, Schweizerischer Erdbebendienst (2004) *Einsatzkonzept für den Fall eines Erdbebens in der Schweiz*. Bern: Nationale Alarmzentrale.
- O'Grady, N. (2016) 'Protocol and the post-human performativity of security techniques', *Cultural Geographies*, 23(3): 495-510.
- Orlikowski, W.J. and J. Yates (2002) 'It's about time: Temporal structuring in organizations', *Organization Science*, 13(6): 684-700.
- Pierides, D. and D. Woodman (2012) 'Object-oriented sociology and organizing in the face of emergency: Bruno Latour, Graham Harman and the material turn', *The British Journal of Sociology*, 63(4): 662-679.

- Powell, W.W. and P.J. DiMaggio (eds.) (1991) *The new institutionalism in organizational analysis*. Chicago: University of Chicago Press.
- Reinecke, J. and S. Ansari (2017) 'Time, temporality and process studies', in A. Langley and H. Tsoukas (eds.) *The SAGE Handbook of Process Organization Studies*. London: Sage.
- Rotter, R. (2016) 'Waiting in the asylum determination process: Just an empty interlude?', *Time & Society*, 25(1): 80-101.
- Samimian-Darash, L. (2016) 'Practicing uncertainty: Scenario-based preparedness exercises in Israel', *Cultural Anthropology*, 31(3): 359-386.
- Savransky, M. (2016) *Adventure of relevance: An ethics of social inquiry*. London: Palgrave MacMillan.
- Schweizer, H. (2008) *On waiting*. Abingdon & New York: Routledge.
- Verran, H. (2012) 'Number as generative device: Ordering and valuing our relations with nature', in C. Lury and N. Wakeford (eds.) *Inventive methods: The happening of the social*. London: Routledge.
- Wurstisen, C. (1580) *Bassler Chronick*. Basel: Sebastian Henricpetri.
- Zebrowski, C. (2009) 'Governing the network society: A biopolitical critique of resilience', *Political Perspectives*, 3(1), 1-38.
- Zeller, R. (2014) 'Blick zurück: Der wütende Lothar', *Neue Zürcher Zeitung*, 29 December. [<https://www.nzz.ch/schweiz/schweizer-geschichte/der-wuetende-lothar-1.18451978>]

acknowledgements

I am grateful to Laura Kemmer, Annika Kühn, Birke Otto and Vanessa Weber, as well as to David Knights, colleagues in the Department of Organisation Work and Technology, Lancaster University, and the three anonymous reviewers, for their extremely helpful comments on previous drafts of this paper, and similarly to the participants and audiences at the 'Standby infrastructures' panel at the American Association of Geographers 2017 Annual Meeting in Boston and at the 'Repeat! The logics of exercises, trainings, tests and rehearsals' at Goldsmiths, University of London in 2014. Many thanks also to those working Swiss Civil Protection for their generosity in supporting my fieldwork, and to Michael Guggenheim and Zuzana Hrdličková for their insights as part of the 'Organising disaster' project on which this

article draws. Finally, thanks to the team at ephemera for their commitment to open access and all the donated labour this involves.

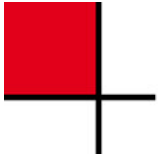
funding statement

This article draws on research funded by the European Research Council, as part of the ‘Organising disaster: Civil protection and the population’ project (number: 263731).

the author

Joe Deville is a Senior Lecturer at Lancaster University, based jointly in the Department of Organisation, Work and Technology and the Department of Sociology. He is the Director of the Centre for Science Studies, and a co-founder and editor of the STS-focused open access book publisher Mattering Press. His research interests include the everyday life of debt, methods of algorithmic prediction, infrastructures of scholarly knowledge dissemination, ontologies of food and eating, and disaster preparedness and the production of risk.

Email: j.deville@lancaster.ac.uk



Standby urbanization: Dwelling and organized crime in Rio de Janeiro

Frank Müller

abstract

This paper conceptualizes dwelling as an analytical lens to study the effects of combined human-made and environmental threats on the governing of peripheral urbanization. I call this grounded and phenomenological-analytical approach to dwelling *dwelling in limbo* to highlight the improvised and always uncertain nature of low-income populations' forms of residence. As such, dwelling will be explored as a temporal, political, and more-than-human process: as residents' exposure to, endurance while, and ways of navigating towards urbanization. Combining three data sources – semi-structured interviews with residents, politicians, state attorneys; own observations/ fieldwork notes, and local media reports – the paper situates this approach in the northern periphery of Rio de Janeiro. I present cases of once promised, yet suspended resettlement and highlight the role of organized criminal actors in the partial implementation of the Project Iguaçu – a disaster prevention program financed by Brazil's Federal Growth Acceleration Programme (PAC). The paper identifies such dwelling in limbo, that is, residents' exposure to criminal actors' dominion, enduring (non)resettlement, and navigating amidst uncertainty, to illustrate the effects of standby urbanization. Standby urbanization, I argue, is characterized by an active passivity of marginalized residents: To secure future dwelling, low-income populations are forced into supporting structures that perpetuate their marginality. In other words, dwelling in limbo is not an accidental side-effect of urbanization, but a form of political violence inherent to the governing of urban peripheries.

Introduction: Situated dwelling

I meet A. and her friend M. in front of A.'s house. A. chose this meeting point for good reason, knowing of my interest in the community's physical and political development. She points to the foundations of her house, which sits about a meter below the level of the surrounding neighbors' houses. These, A. explains, have all piled up their parcels with rubble and sand, gradually and over the years, in order to avoid damage from flooding during rainy season, when the two adjacent rivers overflow their banks. Having been promised resettlement away from this 'risk area' (Vissirini et al., 2016), and to an apartment in the nearby state-financed social housing condominium in 2011, A. and her family abstained from making further adjustments to their house, thereby aggravating its proneness to floods. Instead of costly construction provisions, they invested in a new car, hoping for a new source of income from offering ridesharing services. For more than eight years, A. has been waiting for the delivery of her apartment. Meanwhile, people from other communities, in similar need of protection against rain-induced floods, have been resettled into the apartments originally foreseen for 900 families from her neighborhood.

Together with A. and M., I walk along the dam that separates the adjacent river Iguaçu from a drainage system, a system of canals and polders. These basins are no longer sufficient to keep the water away, M. explains, due to ongoing construction works further down the river. What threatens families like A.'s and M.'s, however, is not simply rainfall, or the decision over whose waiting ends and whose hope lingers on. Rather, it is the irresponsible sealing of polders, as well as the involvement of criminal actors in local housing markets that aggravate the negative effects of 'nature' on residents' livelihoods. To make these processes visible to the public, A. and M. have allied with local social workers, demanding investment and action from local politicians (based on fieldwork notes, March 2019).

This anecdote is based on fieldwork notes which I took during one of my first visits to the community of São Bento, Duque de Caxias, in the northern periphery of Rio de Janeiro in March 2019.¹ In interviews with residents, I avoided addressing militia and illegal or criminal activities. It was my intention to not endanger respondents by raising such sensitive issues. Nevertheless, sooner or later in our conversation most respondents themselves raised the topic of militia activity, usually when the interview focused on topics of local urban development, resettlement and the

¹ I am thankful for the time and willingness of residents of São Bento to respond to my questions during six months of research in 2019. Except for identifiable, public figures, and with their consent, respondents have been anonymized.

difficulties that residents had been confronting in the past when trying to improve dwelling or organizing community activities. Usually respondents avoided to name individuals and spoke in rather vague and abstract terms. In some particular cases however, crime-related topics became the main focus of our conversation. These conversations also triggered personal affinities that facilitated my presence as researcher in the locality, motivated by the willingness of respondents to publicize the illegal activities of criminal actors and the connections of public officials with these.

A.'s story has crucially informed and shaped my case study. In the way in that she shared her experience with me, A.'s main focus was on expressing the constant improvisation and necessity for her and family as well as neighbors to adapt to environmental degradation and changing local power structures. The illegal agency was only one, however effective, additional character of threats that A.'s story revealed. My case study suggests to understand (human) dwelling in Rio's expanding urban periphery – and beyond – as a socio-material, eco-political process, involving floods, houses, residents' alliances, and urban governance. Understanding dwelling this way, following Tim Ingold, blurs the conceptual boundary between 'nature' and 'society' (Ingold, 2005). In this line, from a phenomenological perspective, dwelling can be seen as active and aware engagement of humans with non-human species, objects, and the (built) environment (*ibid.*).

This perspective allows for revealing the violent inequality inherent to the governing of peripheral urbanization. For in the case of the community of São Bento, the expansion of human, so-called 'informal' settlements without official registration is threatened both by ('natural') floods and ('societal') imbrications of legal and illegal urbanization agencies, including the construction of a publicly financed logistic hub on the same 'nature preservation area'. Confining (informal) spaces of habitation and protecting nature preservation areas is in itself a discursive practice of urban governance, deployed for the benefit of particular interests and elites (Müller, 2017). Therefore, dwelling occupies a critical place within the matrix of power: While dwelling on the urban periphery means to perpetually align, reuse and gather housing materials and therefore suggests to conceive of the 'city as assemblage' (McFarlane, 2011: 649), the discursive reconstitution of the boundary between nature and society plays a crucial role in publicly

legitimizing state officials' encroachment in or abandonment of urbanizing peripheries.

Adding to the complex state-non-state, human-non-human assemblage is criminal actors' involvement in (the suspension of) resettlement. A. and her family were promised, and ready to move to, an apartment in the near-by social housing complex, when hope was drowned and local militias continued parceling land for construction in the old community. Interfering into the resettlement process, they decided over who was going to be resettled. These threats, I argue, are not external to dwelling, but dwelling is always already imbued with an alertness to threats as well as strategies to mitigate these, thus pushing residents to take an active role in 'urban resilience' (Koonings and Kruijt, 2015: 16ff.). Marginalized populations' year-long, sometimes life-long search for a safe place to live, thus requires that we understand dwelling as an open, both passive and active process, by and through which residents confront multiple, interconnected threats. Families like A.'s, while being exposed to the threats of river waters and criminal threats alike, endure within a liminal space, at the same time defending the own place and demanding another, better one. *Dwelling in limbo*, then, characterizes as temporal mode of habitation, 'located somewhere between given and new social positions and roles, and between the conditions of the past and the promise of the future' (Povinelli, 2011: 78). A.'s position in a damaged, substandard house locates her on the cusp between her old existence as part of lower-income communities and a new social position associated with the social housing complex. On standby for an effective change of social positions, A. organizes her life in limbo in anticipation of what promises to be a change of social position.

This paper develops the concept of dwelling in limbo as a way to understand dwelling as a mode of 'standby urbanization'. To characterize what it means to dwell in limbo from the perspective of affected populations, I will first provide further background to the case illustrated above, which I will situate within existing literatures on urban peripheries in Latin America. Here, I give specific focus to dwelling in violent contexts, thus specifying dwelling as a conceptual vehicle to understand the governing of 'peripheral urbanization' (Caldeira, 2017). Second, I will introduce three analytic dimensions of dwelling in limbo: endurance (continuously surviving amidst multiple

uncertainties), exposure (being forced into increased vulnerability) and navigation (strategically mitigating the threatening outcomes of contested governance) to account for human-non-human urbanization. Third, I cite from local media to highlight the discursive interlinkage of environmental threats and threats of crime/violence that underlie urbanization and, in particular, the way in which the exposure to these threats relates to increased alertness for illegal activities within urbanization. Drawing, additionally, from own interviews with residents, politicians and a state attorney in Duque de Caxias, I conclude by delineating standby urbanization as a mode of social organization that enables low-income populations to support the very political-material structures that perpetuate marginalization.

Dwelling and governing the periphery

Urban peripheries are not only physical locations, or outer limits, but socio-political spaces, and as such, territories that are prone to (criminal) actors' attempts to expand their dominion (Arias, 2006; Doyle, 2016; Moncada, 2017; Perlman, 2009; Wolff, 2015). Due to these spatial dynamics, the urban periphery has been accounted for as a space which is 'imbued with a sense of insufficiency and incompleteness' (Simone, 2007: 462). Underlying the everyday experience of insufficiency and incompleteness, are 'violently plural' (Arias and Goldstein, 2010: 1) modes of governance. Such relational dynamic of peripheral urbanization and a normative center is constitutive of how urban expansion is governed, both formally and informally. As Brazilian anthropologist Teresa Caldeira has pointed out, peripheral urbanization in the global South is to be conceived through the

instability of formations of legality and regulation and a significant amount of improvisation, experimentation, and contestation shaping the relationships among all involved, from residents to agents of the state. (Caldeira, 2017: 16)

Peripheral urbanization also enmeshes (personal) political and economic interests within complex structures of state-non-state actors. As part of these structures, urban militia, that is, former armed self-defense groups that act in a perceived absence of state security actors on the city's periphery, have intensified their dominion and broadened activities and sources for income in many Latin American cities (Gledhill, 2018; Paiva et al., 2019). Both militias,

seemingly law-and-order groups, and the often antagonistic drug trafficking gangs (Pierobon, 2021) can pose existential threats to livelihood in peripheral spaces, or offer unreliable forms of protection (Davis and Willis, 2021). Against this background, the home plays a crucial role in peripheral urbanization, as both a defensive place to protect oneself and one's belongings, and as a political place from which to engage in state-non-state governance arrangements (Müller, 2019). Dwelling is that process by which home comes to matter within the competing public authorities and criminalized governance arrangements.

The modes of organizing dwelling in the urban periphery of Rio de Janeiro are characterized by contested authority, violence and crime which together shape processes of expanding and densifying urbanization. In Rio's Baixada Fluminense, the northern periphery in which A's community is located and that expands from the border of the municipality of Rio de Janeiro towards the mountains of the Tinguá and the Órgãos nature reserves, and in the western peripheries of Campo Grande and Santa Cruz, militias are effectively influencing the organization of electoral campaigns (Nassif, 2018). Their political influence derives directly from their economic control over urban and infrastructural as well as real estate 'services', managing the ways in which low-income populations acquire land and houses; and thereby of all conditions that underlie dwelling. Through this urban control over residents' lives, militias establish territorial strongholds by which they can decide whose politicians' electoral campaign they support, according to sociologist Ignacio Cano (JDB, 2018).

The periphery is a space that is imbued with endangering processes, unstable physical and political structures that taken together are dominant in shaping its expansion. As a broad literature demonstrates, peripheral urbanization is coterminous with violence and crime, particularly in Latin America, which is accounted for as the most violent region of the world (Vilalta et al., 2016). According to the Homicide Monitor (Igarapé), 104 of the 121 cities with the highest homicide rates in the world are located in Latin America. Here, scholars have long attempted to understand the complex correlation of criminal violence, inequality, corruption and the weak rule of law (Davis, 2010), where police and military are at the same time aggressors and authors of (state) violence as well as addressees of citizens' demands for greater safety

(Auyero, 2015). As Feltran (2010) shows for the metropolitan area of São Paulo, normative orders coexist in which the written law is not the most decisive orientation for legitimate (police) action. Instead, the use or threat of force, that is, 'violence' (Feltran, 2010: 112) accompanies state and organized criminal actors' practices that extend from 'strictly legal to the frankly illegal' (*ibid.*).

Such contested authority also shapes modes of urban organization. Witnessing an expanding territorial influence of 'criminal enterprises' (Arias, 2017), sociologists and political scientists aim at grasping these enmeshed processes of organizing space – the legal and illegal, formal and informal, social and natural – by novel concepts. Counting in prevalent police corruption, governing can no longer be neatly distinguished into formal/state and informal/non-state modes, but instead we need to understand the co-production of sovereignty (Denyer Willis, 2015; Navaro-Yashim, 2010) between drug trafficking gangs, police and residents (Richmond, 2019). These conflictive cases of 'hybrid governance' (Colona and Jaffe, 2016) demonstrate how 'violently plural' (Arias and Goldstein, 2010) a contested authority beyond a state-centered monopoly of violence shapes populations' livelihoods. To capture matters in a nutshell, understanding power structures across the formal-informal divide in the urban peripheries of Latin America locates these spaces' criminalization within instances of 'governance with, by, and through crime (and violence)' (Müller, 2018: 171).

While scholars recognize the necessity to rethink sovereignty, that is, the state's limited capacity or will to overcome criminal territorial influence as well as to fight police corruption, the mutual relationship of the material conditions of dwelling, peripheral urbanization and contested authority has received little academic attention. This is surprising, since criminal actors are increasingly relying on the benefits that urbanization – the parceling and selling of land, the construction, renting and selling of apartments – adds to sustain their illegal businesses. These benefits do not only potentially aggravate and add to the natural threats that are endangering peripheral populations' livelihoods. Criminal actors have also developed strategies to take advantage of environmental threats and aggravated their effects on affected populations' livelihoods. This mode of social organization is maintaining residents 'in limbo', urging them to align to (criminally

exacerbated) uncertainties regarding future urban development, property and life-endangering hardships.

Environmental threats add to the uncertainties of dwelling on the urban periphery. Rio de Janeiro's Baía da Guanabara (Guanabara Bay) was once the inspiration for the city's name when the arriving Portuguese sailors in January 1502 thought that they had entered a river, flowing into the Atlantic Ocean between today's famous Sugarloaf and Niteroi on the other bay side. Sparsely populated over centuries, and sharply growing with the arrival of Portugal's royal family in early 19th century, Rio de Janeiro saw its biggest growth with the industrialization around Guanabara Bay around the 1930s to 1950s. This wave of industrialization also brought with it strong population growth between the 1950s and 1980s, particularly in informal working class areas, the favelas, many of them located on the shores of Guanabara Bay. This form of industrialization-urbanization was paralleled by an increase in domestic and industrial wastewater, one-third of which continues to be discharged without treatment into the bay waters (FIRJAN, 2017).

Despite a major investment of US\$ 1.2 billion that had been allocated to clean up the bay by the Olympic sailing contest in 2016 via the Guanabara Bay Pollution Clean-Up Program, it remains contaminated. The promise was officially revoked in 2014 by the then-governor of the state of Rio de Janeiro, Luis Fernando Pezão (PMDB), thereby implicitly acknowledging political incapacity to confront the area's environmental hazards (Alencar, 2016). On the contrary, the region seems to be economically dependent on one of its major polluters, the petroleum industry. According to recent estimations, the oil platform and the refinery REDUC are the essential motor for 76% of Baixada Fluminense's industrial production (Raulino, 2013: 170).

The dynamic of a lack of political regulation of wastewaters, growing industries, and subsequent population growth and 'informal' peripheral expansion together, provide a scenario that is characterized by various politico-ecological threats. Water and its flows have remained a crucial factor in the coastal urbanization (Maciel Costa, 2015). In this particular periphery, close to the bay and on the northern outskirts of the metropolitan zone, the expanding city soon reached its limits, growing out of them with the so-called '*aterros*': starting in the southern area of Rio, the Aterro do Flamengo, via

central areas, and towards the north, whole islands and neighborhoods today stretch on reclaimed land. Among these are parts of the so-called Maré, a compound of various favelas and home to more than 100,000 residents and, further north, large parts of the municipality of Duque de Caxias in which the cases of (neglected) resettlement discussed above and below are located.

In the face of ubiquitous violent criminalization, toxic environments and disaster particularly in, but not restricted to, the urban areas of the Global South, '[q]uestions about what is inhabitable or not have long defined the nature and governance of urban life' (Simone, 2016: 136). This paper traces this question along moments that are critical to low-income populations' dwelling on the urban periphery: the waiting for resettlement from a provisional form of dwelling to a social housing compound. The following reflections on dwelling in limbo, thus, account for the improvisation that underlies these populations' modes of living. Their attempts to adjust their life rhythms to uncertain and unpredictable challenges, while at the same time, struggling to rebuild and strengthen their own place, is a durable attempt to stabilize their own livelihoods: dwelling constantly conditions their own being-in-the-world.

Dwelling in limbo: A situated approach to peripheral urbanization

Dwelling, as a process, is continuously constructing and sustaining the conditions of inhabiting a space, to make it *one's own* place in the world. Yet, dwelling is, in today's late liberalism, also a particular 'governing technique' (Foucault, 1987) and therefore links techniques of governing the self to those of political domination. In their combination, endangerment, politics, and procedural dwelling add to what Zeiderman has termed spaces of uncertainty (Zeiderman, 2015). An anthropological 'dwelling perspective' (Ingold, 2005: 503) on this politicized uncertainty, starts from the temporality and situatedness of dwelling:

Hence the creation and construction of the dwellings is a lifetime project of change and improvement that is highly responsive to changing domestic circumstances, budgets and opportunities. (Kellet, 2015: 226)

Dwelling is not only a mode of producing one's own material conditions, authored by the people themselves (Ingold, 2005: 504), but subject to political structures and socio-ecological dynamics, and as such both defensive and creative. Dwelling is a defensive act, when the conditions are prescribed by a more powerful political entity, such as the state and/or criminal actors: As the introductory vignette illustrates, A. and her husband, due to their excellent social ties within the community, were 'invited' to become president and vice-president, respectively, of the local neighborhood association; yet, they refused those honorary positions since this association is known for being intimately tied to the local militia – even corporal threats could not 'convince' A's husband to change his mind. Dwelling is creative, when it facilitates people's involvement in the political and economic processes that condition housing: a matter of ad hoc alliances, a social space of exchanging skills and knowledges.

Thus, dwelling cannot be reduced to a harmonic being-in-the world, since 'human lives are lived collectively within fields of power' (Ingold, 2005: 503). Dwelling on the city's periphery encompasses threats that are endangering vulnerable populations the most while turning risk into a principle to manage settlement processes (Zeiderman, 2013). Dwelling is thus an active and passive mode of standing-by-urbanization.

How can this perspective on dwelling be made fruitful for an analysis of peripheral urbanization? I suggest characterizing Ingold's 'dwelling perspective' as a three-fold process and therefore define three concepts to guide the following analysis of dwelling: exposure, endurance, and navigation. I argue, further on in this paper, that suspension of some populations' benefits is not an aleatory side-effect of urbanization, but rather a contested mode of social organization that perpetuates the exclusionary structures of urban peripheries.

Environmental or crime related threats are constitutive of dwelling's active and defensive nature: To dwell safely means to shape a place in which threats to one's livelihood can be overlooked and confined. Residents' affective search for safety affirms their *exposure* to perceived threats as a constitutive element of dwelling. Addressing dwelling's dimension of exposure requires a re-examination of history and aims at an understanding of residents' present

situation as a result of negotiations, struggles and human-non-human interactions that have been initiated in the past. As analytical category, exposure thus looks at dwelling's situatedness as a life 'endangering' process, as one that submerges residents in processes that they can never fully, but nevertheless continuously attempt to, control.

The second category that derives from my characterization of dwelling in limbo underlines the durability of exposure. While being exposed to processes of endangerment, residents are also active and inventive in coping with their life situation. As people *endure*, they perform acts of temporal resistance to threats, and by enduring, align everyday protective routines to respond to the challenges of dwelling. Following Elizabeth Povinelli's conceptualization of endurance, this category provides a lens for examining how people 'suffer, and yet persist' (Povinelli, 2011: 32) over time. Dwelling is furthermore an 'eventful' process, and it is this eventfulness through which we can qualify residents' persistence as their ability to cope with their suffering. Threats, such as heavy rainfalls or the presence of armed actors close to one's home can be accounted for as unforeseeable 'events' that increase residents' alertness. As an affective mode, alertness urges them to re-align by developing new collective or individual strategies of protection. Urban residents' modes of endurance can thus be located along a continuum of coping and alertness. Coping, here, means to endure a harmful situation through pre-reflective automatisms, that is, through acting as if perfectly aligned with the conditioning environment. Alertness, in turn, indicates residents' conscious openness to be affected by threats as they appear as factors that can (and should) be acted upon or against. In alertness, the ordinarily functional and unconsciously absorbed alignment of humans, other animals and objects becomes disturbed, calling upon one's abilities to act.

Lastly, I recall Henrik Vigh's strong metaphor of 'social navigation' (2009: 420) as a potentially powerful category against the context of this paper's unstable, liquid, sandy terrain. Through this metaphor, Vigh aims at understanding how we 'act, adjust and attune our strategies and tactics in relation to the way we experience and imagine and anticipate the movement and influence of social forces' (*ibid.*). This allows us to understand dwelling as a simultaneously affective and projective process. And yet, the navigation through the unstable grounds on which houses are built always needs to

account for the social and political forces that try to command its future direction. An analysis of social navigation alludes to the socio-material connections between people and their dwellings, as they forge alliances in search for the right, successful, or at least, alleviating course of stabilizing their socio-political environment.

In short, dwelling in limbo unfolds into and encompasses three dimensions: exposure as a situation of being forced into increased vulnerability, endurance as the state of continuously surviving within uncertainties, and navigation, as a set of routinized acts to strategically mitigate the various threatening outcomes of contested governance. Dwelling in limbo thus adds an ethnographic perspective to alarming analyses of increased violence and the necessity, yet also, ability to develop resilient urban responses (Koonings and Kruijt, 2015). To be sure, these three categories are *analytical*, not phenomenological ones. In the lived experience, residents always dwell in and through all three dimensions. To distinguish the dynamics of dwelling by these three interrelated analytical angles, however, enables us to highlight the extended temporality and durability as well as the affective quality of human-non-human urbanization.

Rio's criminalized peripheral urbanization

This section summarizes the recent shift in attention that militia activity in Rio de Janeiro has gained, particularly in the aftermath of 2018's state and federal elections and the subsequent ascendance of the extreme right. Adding insights from an analysis of major newspaper reports to existing literature on the phenomenon of militias in Brazil, it details on how environmental and security discourse have enmeshed within the criminalization of the city's urban peripheries. My selective focus is guided by the premise that (coastal-) peripheral urbanization is heavily imbued by the activities of organized crime. To exemplify this, I zoom into the community development of São Bento, the case mentioned in the introductory vignette.

The criminalization of peripheral urbanization is strongly framing the way in which dwelling is organized. In recent years, public media discourse contributed to criminalize peripheral urbanization, and with it: dwelling, by

projecting Rio's periphery as outlaw territory in which militia has taken over all kinds of 'urban services' (Araujo, 2019; Pierobon, 2018). This adds a material perspective to existing literatures on criminal organizations' involvement in urban governance (Denyer Willis, 2009) by detailing on how the provision of urban services opens novel ways for expanding territorial dominion. To support this claim, I review local media production and highlight changes and emergences of (new) linkages between broader narrative assemblages. The broader narrative assemblages of interest in this paper regard, on the one side, the criminalization of peripheral urbanization and, on the other, environmental issues, i.e. pollution and flooding. By doing so I sketch the wider socio-political frame in which the practical dimensions of dwelling – exposure, endurance and navigation – take place. I encapsulate this process of constituting an uncertain reality as process of 'criminalization' in order to emphasize that organized crime is not an institution acting apart from local political elites, neighborhood associations, construction firms and residents. Rather, I call for recognition that the redundant academic and media production on non-state actors' involvement in urbanization also takes part in discursively producing those criminalized peripheries. Urbanization in standby is thus a form of organization which is strongly conditioned by the way we, as writers, make sense of social reality.

Thus, a closer examination of parameters such as legal-illegal imbrications and diverse aspects of threats (security and environmental) illustrates the vagueness in public understandings of the criminalization of peripheries and state responsibility. 'As the Brazilian state refuses to order its urban territory, a parallel power has installed itself and developed', a commentator summarizes the question of militia activity at the end of 2018 (Fajardo, 2018, translation by author). The author refers to militia practices in Rio de Janeiro's western and northern periphery. Militia exercise territorial control via the selling of gas, electricity, 'public' transport and internet services (Garcia, 2019). They have furthermore managed to take control of social housing condominiums, often in violent conflict with the city's two largest drug trafficking organizations (Rio On Watch, 2019; Extra, 2015; Queiroz, 2015). Here, militias are involved in the local real estate market, having invaded and taken over empty apartments in social housing compounds (Estadão, 2015; O Globo, 2015; O Globo, 2014). In addition, militias are producing space for

urban growth, clearing rainforest and filling in swamps and riverbeds (*aterrar*, in Portuguese) (O Globo, 2018). According to Ignacio Cano, two million of Rio de Janeiro's 13 million inhabitants in the Metropolitan Area of Rio de Janeiro live in areas that are predominantly controlled by militia groups (Grandin, 2018).

The expression 'parallel power', referring to the way that criminal activity is being functionally related to the state's claim on the monopoly of violence, is, however, contested. For sociologist Jose Claudio Alves militias are, *de facto*, coterminous with the state:

They are the state. So, don't tell me that the state is absent. It is the state that determines who operates the militarized control and security in those areas. (Simões, 2019)

Implicitly applauding such collaborative form of authority, newly elected president Jair Bolsonaro's has shown support for militia activity, stating, in early 2018, that

[s]ome are in favor of the militia seeing them as a possibility to live free of violence. Where a militia is present and paid off, there is no violence. (Betim, 2018)

Media reports link security provision, through the co-activity of police and militia, to militia involvement in the production of housing in those areas, maintaining the areas under their control free of drug trafficking gangs. In particular, reports on two cases of intense militia activity, in the community Rio das Pedras and Muzema where 24 persons died when an 'illegal construction' of militia origin collapsed (O Globo, 2019), highlight this active involvement of public officials. In addition, with Muzema, the discursive shift towards militia involvement in construction and real estate market has come to be more widely acknowledged.

Zooming into the (coastal-) peripheral development, the dwelling-related activities are reported particularly by correlating security and environmental threats. Among the dwelling-related militia activities, the provision and parceling of land, and the invasion and selling of pieces and apartments in social housing condominiums as well as the 'hazard-induced' resettlement of whole populations serve to establish this discursive link. The organization of

entirely self-sustaining chains characterize the state-non-state modes of urbanization. Militia fill in swamps and riverbeds; to do so, they carry the necessary sand (from their own sand mines) and rubble (from torn down buildings) (Ministerio Público Federal, 2019), sell the parcels at very low prices and build up a clientele of voters which they can either ‘offer’ to local politicians or mobilize to support their own candidates (UOL, n.d.) (Figure 1 and 2).



Figure 1: Illegal sand mine in Xerem, municipality in the Baixada Fluminense. Taken by author, 2019.



Figure 2: Delivery of sand, Guedes, São Bento. Used with permission. © Archive São Bento, 2019.

Summing up, the media is frequently reporting on the diversified political economy of militias, highlighting a rather entangled than parallel relationship with public officials. The criminalization of peripheral urbanization is, in addition, based on two argumentative patterns of producing threats: threat, on the one side, is an environmental complex in which the rain forest falls victim to illegal clearance and sand is illegally extracted from areas of environmental protection. Within the same politico-economic chain, on the other side, militia exercise strong influence in resettlement, controlling who is allowed to move into a social housing condominium. To secure this business, militia are also heavily invested in the

renting and re-selling of empty (or violently ‘emptied-out’) apartments. Thus, in peripheral urbanization dwelling is imbued with illegal activities. Within such dwelling as being framed, primarily, through illegal, and uncontrollable forces, residents are forced to develop strategies of coping and re-appropriation. The next section will explain these strategies in detail and look at dwelling from the perspective of affected residents. By zooming into cases of resettlement within the mentioned two communities I will characterize dwelling as a mode of standing by criminalized urbanization.

Dwelling: Exposure to, endurance while, navigation towards urbanization

This section zooms further into a few cases of claimed resettlement which have marked the conflictive episode of the above introduced communities that belong to São Bento, Duque de Caxias. It demonstrates how residents of these communities are affected by the criminalized peripheral urbanization as outlined in the previous section. It will look at how terrain/soil signifiers are deployed in interviews with residents of those communities that had been promised resettlement. To make my argument, I rely on my interviews with residents of São Bento, but include also observations and crucial text passages from either my own or the official protocols of formal meetings, in particular public hearings in the municipal chamber and activists’ meetings with the state attorney.

Exposure: ‘Shadow theater’

Residents of various communities within São Bento have been awaiting resettlement as part of a region-wide infrastructural project, called ‘Project Iguaçu’ (Iguaçu is the name of one of the two rivers that frame São Bento’s northern and southern limits). Project Iguaçu, initiated in 2007 by the State Institute of Natural Environment (INEA) and financed via Brazil’s federal infrastructure development program PAC (Programa de Aceleração de Crecimento), foresaw the resettlement of populations inhabiting the risk areas on river banks and swamps - needed to store rain water during rainy season – and the cleaning of rivers and dugouts, as well as the construction of sustainable housing. Two condominiums within the federal social housing program Minha Casa Minha Vida, financed by the credit company Caixa and

INEA and built by a private developer, were built to provide housing for 900 to-be-resettled families. As said above, and contrary to the initially communicated plan, not the families of Vila Alzira and Guedes, being directly affected by future inundations, but those of other communities along the river Sarapui received apartments in the condominium in 2012 (Figure 3).



Figure 3: House on the riverbank of Iguaçu, community Vila Alzira, São Bento. Taken by author, 2019.

Since then, residents of Vila Alzira and Guedes are reclaiming their right to resettlement. In addition, the urbanization, electrification, parceling and construction, organized by the local militia together with the neighborhood association along the riverbanks of these communities continues (Interviews

with federal state attorney Araujo, May 2019 and Marlucia, director of the community museum of São Bento, April, 2019; own observation).

The mutually reinforcing connection of crime- and natural disaster related threats exposes residents to particular hardships: In a public meeting to which the Public Attorney Office of the State of Rio de Janeiro had invited the municipal government, the State Institute of Environment (INEA), the Council of Environment (including citizens and representatives of the Ministry of Environment) and the general public, on June 26, 2019, the protection of river Iguaçu's dikes was directly related to that of illegal construction and criminal activity. The counselor affirms that a militia with early knowledge, around 2010, of the planned condominium, continued to parcel land along the river banks into lots. This practice of creating the livelihoods at risk in the first place and under their authority had improved the political position of militias in the negotiation of resettlement; both towards the residents to which they could sell at-risk lots together with the promise of resettlement to an apartment in the condominium in exchange for abandoning the newly acquired lot, and in terms of the ability to overlook and organize the resettlement process due to their close links to those residents as a promise towards public officials that explains and constitutes local militia power.

Despite holding authorship of Project Iguaçu, the INEA has frequently denied responsibility for the (promised) resettlement (protocol meeting MPF, 26 June 2019). According to the representative during a meeting in late June, they do have knowledge of further community expansions and illegal urbanization activities. Yet, INEA claims that effectively inhibiting these activities was in the responsibility of the local government. This however denies any responsibility in the process; in addition, the government representative accused the INEA for publicly announcing Project Iguaçu since that

promise, and that of a new polder and new housing units caused increased expectations among the population which subsequently initiated new construction. (Own transcription, meeting at MPF 26 June, 2019)

From the announcement, the government representative implies, the militia sensed business opportunities. As for each inhabited parcel, one apartment in the condominium was promised, they intensified construction in order to

either sell a 'resettlement option', or receive an apartment as a strawman resident, one who never actually inhabits a newly constructed house in the risk area, but only pretends to do so (Interview Marlucia, May 14; Interview F., social worker at the community museum of São Bento, May 14).

In interview, residents and activists of Guedes affirmed that daily, and especially during night hours, trucks enter the community leaving loads full of rubble and sand, first on piles along the river banks; then, days later, bulldozers flatten the piles preparing fresh parcels for construction (Figure 4).



Figure 4: Preparing parcel for construction, Guedes, São Bento. Taken by author, 2019.

During said meeting, the government representative asserted that they had, via the Civil and Military Police, attempted to prevent the entrance of those deliveries of construction materials, yet due to the size of the area and vis-à-vis the presence of a 'parallel state in certain locales' (own transcription, meeting 26 June, MPF), that control was impossible and the municipality's executive had therefore capitulated.

In the criminalization of peripheral urbanization, the involved actors represented during this meeting accuse an invisible and absent Other: The

illegal powers. One representative of the local activist group that represents citizenry calls the event a 'teatro de sombra' in an informal conversation:

This is a theater of shadows. Everybody knows who acts behind the scenes, but they never show up. So they cannot be named, nor be made responsible (informal conversation with M., June, 26, 2019).

Thus, what further characterizes the dimension of dwelling in limbo is not only residents' passive exposure to processes which reach back to past settlement processes when dealing with illegal authorities whom they trusted when buying parcels; different public entities are passing the buck back and forth as to whose responsibility the prevention of illegal urbanization and the assurance of residents' life improvement are. A closer look at residents' exposure is thus adding the principle of uncertainty to our concept of standby urbanization. The criminalization of peripheral urbanization is thus, first and foremost, a performative act of covering over responsibilities, while at the same time, blaming an unaccountable Other, beyond one's (state's) control.

Endurance: 'Fight or leave'

Yet, this Other is not absent, but very physically permeating the conditions of governing. Looking at dwelling in its temporal duration, memories of past events that shaped community development become important. In interview, residents of São Bento frequently alluded to the early days of buying and developing the soil of their livelihoods (Figures 5 and 6) from the 'administrators of these lands' (Interview with G., April 8, 2019). G was 11 years old when her parents bought their parcel of eight by eight meters on the artificial dam along the Iguaçu river, in the year 1995, knowing that the transaction and prior soil preparation were illegal.

But what could we do? The soil was fertile, clean water was nearby, and we were forcefully evicted from our squatted land a few hundred meters from here, where I was born (*ibid.*).



Figure 5: ‘Parcels for sale in this area.’ Courtesy of archive Museum of São Bento, 2012.



Figure 6: ‘Landholdings for sale at this place. Direct deals with Mrs. Genedir, Mr. Ildefonso, Dr. Dalkir.’ Courtesy of archive Museum of São Bento, 2000.

In a focus group, residents remember the weeks preceding their resettlement from the ‘invasão’ – the collectively occupied community many of today’s residents of Guedes and Vila Alzira inhabited until the 1990s. In articulating

these memories, residents sketch their astonishment as to how fast the area became somehow inhabitable as it was lifted from swamp to more or less stable ground. The stability of the soil, however, soon became a major point of disappointment and conflict as when the Iguaçu river rose and land slid down. Despite the continuing presence of those who had sold the parcels, there was no one to be held accountable:

Instead of claiming what we thought we had paid for, we bought materials from the same group of grileiros [those who practice grilagem: land grabbing through clearing forest and/or piling up sand, the author]. They are the same guys until today. (Focus group, April 28 2019)

Not surprisingly, the lack of accountability observed regarding public officials above, counts for the land grabbers, and sellers as well. The reference to 'soil' as an unstable ground for urbanization becomes a metaphor of uncertain futures within an unstable governing structure. As residents endured, back in 1995, a second round of invasion, they became rather individual clients negotiating their parcels per family with local strongmen. Before, and along Avenida Kennedy, they had invaded their land collectively, and without intermediaries. Yet, it was only in the last round of resettlement, starting with the above described promise of an apartment in the social housing condominium and incomplete as of today, that this illegality, and the violence that permeated the grabbing, selling, and subsequent flooding of soil, became a matter about which residents are alert. What public planning today considers to be a risk area, back then was still a viable, and available, matter of hope. Although even in the late 1990s the grabbers and traders were not seen as being part of the community, but business people, they were not referred to as 'militia', residents remember (focus group, 28 April, 2019). The sale of parcels used to be an openly announced enterprise whereas today one needs local knowledge regarding whom to ask.

Such change in referring to the authors of illegal urbanization marks the continuum of coping and alertness. Back then, dwelling on unstable ground was rather a strategy of coping when individual families aligned their lives to the hardships that came with flooding and unaccountable power structures. Today, however, and with growing media, academic and public politics' attention to the illegal businesses of militias, land grabbing has turned into a matter of 'alertness'. The actors that interviewees, in a somehow generalizing

way, refer to as militias, have become the source of alertness precisely when their interference in resettlement sided with their continuous destabilization of the community's soil. Waiting for years for the promise of resettlement to the condominium to come true, collecting paperwork, registering and finally signing a resettlement option has raised both hopes and distrust, two faces of alertness, characterized by a readiness to expect that anything happens. Dwelling in limbo reveals an affective domain in which the feeling of losing ground is more than metaphoric, as Marlucia, director of São Bento's museum and co-organizer of the communities' struggles, pointed out in a public hearing with representatives of all 'legal' actors involved in Project Iguacu:

Can you imagine what it means when everybody [who had been promised an apartment in the MCMV] dreams? Five, six years of meetings, all questions solved, and suddenly you see your dream shattered? Seeing that you will remain in the water, inundated, with only God knowing for how long? (Commission in defense of the environment, 2018)

The affective openness to threats, either from water, or from the militia, pressing residents to pay for the proof of residence needed for receiving an apartment in exchange (interview R., resident of Guedes, May 6, 2019), are conceived as combining factors that can (and should) be acted against. As Marlucia summed up: 'Either you fight, or you leave' (Interview, May 15, 2019). Rather than a silent coping with the endangering process of peripheral urbanization, residents thus stand by, or stand up, alerted by the fact that urbanization itself, and inherent flooding, will render their dwellings uninhabitable if they continue to simply cope. From looking at how residents endure through combined threats, the concept of standby urbanization thus gains a layer of continuous alertness, which at times recedes into quiet coping. In order to illustrate how this alertness is being performed over years, the next section turns to residents' strategies of navigation.

Navigation: 'Know where to step'

São Bento is built on fluid terrain and, since forming part of the Baixada Fluminense, a territory whose history is marked by inundations. Attempts to mitigate the flow of waters from the surrounding mountains and towards the bay, a 'hidrocracy' (Britto et al., 2019), have had limited success. Continuous flooding of the areas which are protected by auto-constructed, and partially

natural dams and polders, drives the constant acquisition of rubble and sand. Providers of these are the same groups that grab, parcel and sell land: the local militia. As these also expand their parceling activities further towards the bay and within the polder-protected areas, the basins shrink as a response. In residents' narration, during the extreme rainfalls of 2009 and 2011 respectively, the whole community was flooded for weeks. The probability that rainfall and with it, the Iguaçu river, drowns the community again in the near future increases (Britto et al., 2018).

When said group of residents formed a group of activists, they engaged in a process of legal research, albeit self-organized and improvised along the own practical needs. The main vehicle of navigation has remained the demand to reactivate the above mentioned bay-depollution program, after its suspension in 2012. The activists' group legal knowledge has evolved along their work and regular meetings with several consecutive state attorneys who have supported the case since 2013. However, until today, the program remains on standby, and activities to fight future flooding are insufficient. Navigating dwelling in a sea full of pirates and sharks drives them to acquire practical knowledge of, to paraphrase Vigh, the social and political forces that shape future urbanization. On such fluid terrain, consisting of water, mud, rubble and sand, dwelling means to recognize the necessity of a constant balancing of where to step.

First and foremost, and due to the violent presence of militia, the topic underlying the group's activities are not primarily the illegal practices in themselves as described so far, but the threats of urban development on the natural environment, that is, the further sealing of polders and the pollution of rivers, canals and the bay; and – as stated above – the negative effect for their dwellings, combined with the unfulfilled promise to be resettled to a social housing compound. Marlucia explains the need for such carefully navigated ways of articulating criminal behavior and public officials' neglect or even conspiracy, also within public institutions. When the militia activity of *aterramentos* is addressed in the meetings of the Conselho de Meio Ambiente (the Environment Council, a participatory space in which representatives of the Secretary of Environment and the citizenry of Duque de Caxias), the term 'militia' is avoided. This observation, which I made during assistance at Council meetings on March 28 and May 4, 2019, was also

confirmed by my informants' insistent recommendation not to use the term myself in communications with public officials, nor with residents. While the militia is thus, as argued above, a discursively established author of illegal urbanization, the explicit reference to them seems to endure below the surface of the sayable, at least, in many public events.

Instead of naming the actors, or delving further into the illegal governance structures permeating the development of their neighborhood, participants remained focused on naming the mere fact that parceling of land continued, and the current numbers of newly built houses of the course of the last 12 months – 48, all within the area of the (former) basin. Marlucia and R., a second citizen-counselor, explained their reasons to me afterwards. The secretary himself, absent in this meeting yet represented by his deputy, is known (to them) as being enmeshed with militia activity. As such, he is a political friend of the area's city counselor who has demonstrably been involved in militia activity for illegally selling land in São Bento (Antunes, 2017). In order to positively shape the future politics that affect their dwellings, residents thus need to navigate through, without directly naming it, a political structure of hidings: As Marlucia, director of the local museum stated metaphorically, 'You must know where to step, otherwise you will get buried'.

Furthermore, and despite their illegal status, and violent practices, lacking accountability and working against federal development programs, militias have become actors recognized as partners in urban development by public officials. In an interview, the Secretary of Infrastructure stated (May 10, 2019) that in order to organize the resettlement of those communities that are in the way of the last section of the planned connection between Avenida Kennedy and Washington Luiz, he engaged with the bosses of the local militia. Asked how he politically valued the negotiations with illegitimate authorities, he answered that this was precisely his strength and what brought him into his position as secretary: the knowledge of and the political standing within local power structures that facilitated the relatively rapid organization of community resettlement. These militias, he added, have to be recognized as partners in negotiating resettlement and urban development projects, just as much as the local drug trafficking groups (Interview with Secretary of Infrastructure, May 10, 2019). Notwithstanding the secretary's negotiations

with illegal actors and the negative outcome these have had for the residents of Vila Alzira and Guedes, that alliance of residents and social workers of São Bento's museum maintain a dialogue with the Secretary about community development issues, in particular, demanding investment into the improvement of the drainage system and the paving and lighting of streets.

Navigation in such unstable, and dangerous terrain, is thus, both a practice of avoidance to explicitly claim legitimacy of all actors involved and at the same time the attempt to hold actors accountable. At times, the attempt to navigate through and actively shape the conditions of future urbanization drives residents to align their actions to governance arrangements between militias and public officials that further endanger their livelihoods. Standby urbanization therefore pushes residents to acquire the practical skills of navigating within 'submergent' (Zeiderman, 2018), that is, partially opaque and harmful, but nevertheless indispensable structures of peripheral urbanization.

Conclusion: Dwelling in limbo as standing-by urbanization

This paper has drawn from media reports on militia activity, interviews, and protocols of public hearings and meetings to outline a theory of standby urbanization in Rio de Janeiro. I find that the urban periphery is built on a contested territorial authority providing political and economic benefits for mostly unaccountable and illegal actors. The organizing principle of militias seems to be their attempt to benefit from the solutions they provide to hardships which they, at least, aggravate: The sealing of soil by illegally piling up sand and rubble and parceling of polders which then intensifies the negative effect of heavy rainfall. Exposed to such both self-perpetuating, yet still and all the more uncertain, criminalized urbanization are those residents who are pushed to align their livelihoods to the dominion of organized crime. The uncertainties of peripheral urbanization give continuity to both residents' strategies of coping with a harmful situation, and the necessity to stay alert.

I then zoomed into the community development in the fluid terrain of Duque de Caxias, close to the rivers Sarapui and Iguaçu, and the Guanabara Bay. The

negative effects of illegal governance structures are keeping people on standby as they are waiting for the promised benefits of an urbanization, in relation to which they perceive themselves as rather passive. Such dwelling in limbo, a more-than-human, temporal relation, I presented as a threefold process, encompassing a passive exposure to criminal and environmental (and combined) threats, in the face of which residents endure, at times implicitly coping, and in at times actively alerted ways. To develop strategies of social navigation, residents act between cognitive learning and affective coping, forming alliances with neighbors, social workers and public officials. Recalling Povinelli's understanding of 'limbo' cited earlier in this paper, dwelling in limbo means to negotiate social and political positions anew; a negotiation which underlines residents' ability to condition their own future. As they partake in criminalized urbanization, buying parcels from known militia, or by purchasing electricity and gas or construction materials, they become forcefully complicit of a mode of urbanization that bears profound uncertainties for their own livelihoods. As illegal actors, due to an inherent non-accountability, benefit from territorial control and the terrain's unstable ground, their mode of governance aggravates the effects of technically insufficient forms of land grabbing, and puts the already existing dwellings on even higher risk levels of being flooded. The vicious circle of being urged into situations of support for illegal governance arrangements characterizes standby urbanization as structurally perpetuating violence.

Lastly, this paper hopes to make a conceptual contribution to this special issue's debate. Dwelling in limbo is an example of standby as mode of social organization: In the active presence of militias, resettlement becomes a political space that is organized as to cater to the economic and political benefit of a few, and certainly least to those who cannot afford to leave the urban periphery: the low-income populations that have a constitutionally guaranteed right to adequate housing. The mode of organization that emerges on this unstable ground is maintaining the status quo of unaccountable political structures. Adding to the direct threat that armed actors can exercise on livelihoods, unfashionably suspended resettlement to a social housing development adds to the political violence already permeating state-society relations in Brazil (Alves, 2015). Public institutions negate political responsibility for those life-improving infrastructure projects and thus are

themselves complicit in an urbanization that is keeping residents on hold and at a distance from controlling their own futures. Even if resettlement to social housing condominiums occurs, the uncertainty as to who governs remains a crucial factor of marginalization in peripheral urbanization (Fernández, 2016: 77).

Dwelling in limbo thus means to aptly and swiftly move and organize strategies to confront or at least cope with uncertainty. This adds to Holston's work on residents' strategic attempts to consolidate their dwellings, both physically and legally, on the urban peripheries (Holston, 2008). Residents in the peripheries develop competences to manage multiple threats. These limit urbanization's potential to provide egalitarian citizenship because urbanization's material conditions facilitate the violent exploitation of citizens' attempts to live a stable life. Entanglements of new forms of citizenship and forms of violence, as Holston writes, provide the conflictive ground upon which the in-limbo metaphor materializes: rather than just a volatile space, the periphery is that space from where we can learn how people model ways to endure amidst multiple threats. Standby urbanization is thus characterized by a cruel paradox: To secure their dwellings within diverse uncertainties, residents are forced into actively supporting structures that in turn perpetuate their passive marginalization.

I propose standby urbanization as a conceptual frame to understand dwelling within institutionalized, crime-affected environmental threats. These destabilize urban life. Standby urbanization allows us to conceive of the governing of uncertainties as form of political violence: as a material and temporal process that perpetuates poor residents' endurance. Standby urbanization highlights the active role of residents within what is conceived as calculative and imaginative anticipations of urban futures in Latin America and beyond (Gherthner et al. 2020; Huq and Miraftab, 2020; Samimian-Darash and Rabinow, 2015). Debates on urban resilience, precaution and preparedness should look at residents' dwelling in limbo as forcefully being exposed to, enduring, and navigating amidst combined threats that reinforce the political violence that permeates future urbanization.

references

- Alencar, E. (2016) *Guanabara Bay: Neglect and resistance*. Rio de Janeiro: Fundação Heinrich Böll.
- Alves, J. (2015) “‘Blood in reasoning’: State violence, contested territories and black criminal agency in urban Brazil’, *Journal of Latin American Studies*, 48: 61-87.
- Antunes, T. (2017) ‘Informe: vereador considerado foragido da Justiça dá expediente na Câmara’, *O Dia*, 3 November [https://odia.ig.com.br/rio-de-janeiro/2017-11-03/informe-vereador-considerado-foragido-da-justica-da-expediente-na-camara.html]
- Araujo, M. (2019) ‘Urban public works, drug trafficking and militias: What are the consequences of the interactions between community work and illicit markets?’ *Working Paper, London School of Economics and Political Science*, [http://eprints.lse.ac.uk/101076/].
- Auyero, J. (2015) ‘The politics of interpersonal violence in the urban periphery’, *Current Anthropology*, 56(11): 156-166.
- Betím, F. (2018) ‘Planos de Bolsonaro elevam risco de expansão de milícias e grupos de extermínio’, comment posted 13-11-2018 at 18:09 to El País Brasil [https://brasil.elpais.com/brasil/2018/11/07/politica/1541621514_210694.html].
- Britto, A.L., S., M.d. Silva Pereira (2019) ‘Baixada Fluminense: Fluvial and social dynamics in the constitution of a territory’, *Revista Brasileira de História*, 39(81): 1-24.
- Colona, F. and R. Jaffe (2016) ‘Hybrid governance arrangements’, *European Review of Latin American and Caribbean Studies* 28(2): 175-183.
- Commission in defense of the environment (2018) ‘Protocol of the first session of the Commission in defense of the environment’, Legislative Assembly of Rio de Janeiro, May 15. Rio de Janeiro: ALERJ.
- Davis, D. and G. Deyner Willis (2021) ‘Urban sovereignty in the age of pandemics: Illicit actors and the crisis of governance’, blog series in Emergent Conversations 12, PoLAR: Political and Legal Anthropology Review [https://polarjournal.org/].

- Davis, D. (2010) 'Irregular armed forces, shifting patterns of commitment, and fragmented sovereignty in the developing world', *Theory and Society*, 39(3): 97-413.
- Denyer Willis, G. (2015) *The killing consensus. Police, organized crime, and the regulation of life and death in urban Brazil*. Oakland: University of California Press.
- Denyer Willis, G. (2009) 'Deadly symbiosis? The PCC, the state and the institutionalization of violence in São Paulo', in G. Jones and D. Rodgers (eds.) *Youth violence in Latin America: Gangs and juvenile justice in perspective*. New York: Palgrave-Macmillan.
- Desmond Arias, E. (2006) *Drugs and democracy in Rio de Janeiro: Trafficking, social networks, and public security*. Chapel Hill: University of North Carolina Press.
- Desmond Arias, E. (2017) *Criminal enterprises and governance in Latin America and the Caribbean*. New York: Cambridge University Press.
- Desmond Arias, E. and D. Goldstein (2010) *Violent democracies in Latin America*. Durham and London: Duke University Press.
- Dovey, K. (2010) *Becoming places: Urbanism/architecture/identity/power*. New: Routledge.
- Doyle, C. (2016) 'Explaining patterns of urban violence in Medellín, Colombia', *Laws*, 5(3): 1-17.
- Estadão (2015) 'Minha Casa Minha Vida tem denúncia de tráfico, milícia e invasão', 4th January.
- Exame (2018) 'Milícia tem mais poder que tráfico no RJ, diz professor', interview with José Claudio Souza Alves posted on 23-04-2018 at 14:34 [<https://exame.com/brasil/alves-da-ufrj-milicia-tem-poder-maior-que-o-trafico-no-rj/> on].
- Extra (2015) 'Moradores de conjuntos do 'Minha casa, minha vida' em Senador Camará sofrem com ação simultânea do tráfico e da milícia', *Extra*, March 27. [<https://extra.globo.com/casos-de-policia/moradores-de-conjuntos-do-minha-casa-minha-vida-em-senador-camara-sofrem-com-acao-simultanea-do-trafico-da-milicia-15712204.html>].
- Fajardo, W. (2018a) 'Milícia Urbanização S.A.', *O Globo*, December 16 [<https://oglobo.globo.com/rio/milicia-urbanizacao-sa-23307811>].

- Feltran, G. (2010) 'The management of violence on the São Paulo periphery', *Vibrant – Virtual Brazilian Anthropology*, 7(2): 109-134.
- Fernández, M. (2016) Unsettling resettlements: Community, belonging and livelihood in Rio de Janeiro's Minha Casa Minha Vida, n K. Brickell (ed.) *Geographies of Forced Evictions*. London: Palgrave Macmillan.
- FIRJAN (2017) *Saneamento no estado do Rio de Janeiro Cobertura e Oportunidades de Investimentos*. Rio de Janeiro: Publicações Sistema FIRJAN.
- Foucault, M. (1987) 'Das Subjekt und die Macht', in H. L. Dreyfus and P. Rabinow (eds.) Michel Foucault. *Jenseits von Strukturalismus und Hermeneutik*. Frankfurt am Main: Suhrkamp.
- Garcia, D. (2019) 'Milícias já oferecem serviços como aterros e consultas médicas', *Journal do Brasil*, April 27
[<https://www.jb.com.br/rio/2019/04/997174-milicias-ja-oferecem-servicos-como-aterros-e-consultas-medicas.html>].
- Ghertner, A., H. McFann and D. Goldstein (eds.) (2020) *Futureproof: Security aesthetics and the management of life*. Durham and London: Duke University Press.
- Gledhill, J. (2018) 'Securitization, mafias and violence in Brazil and Mexico', *Global Discourse*, 8(1): 139-158.
- Grandin, F. (2018) 'Franquia do crime: domínio de áreas amplas pela milícia é novidade para especialistas', *O Globo*, March 21
[<https://g1.globo.com/rj/rio-de-janeiro/noticia/franquia-do-crime-dominio-de-areas-amplas-pela-milicia-e-novidade-para-especialistas.ghtml>].
- Holston, J. (2009) 'Insurgent citizenship in an era of global urban peripheries', *City and Society*, 21(2): 245-267.
- Huq, E. and F. Miraftab (2020) "'We are all refugees": Camps and informal settlements as converging spaces of global displacements', *Planning Theory & Practice*, DOI: 10.1080/14649357.2020.1776376.
- Ingold, T. (2005) 'Epilogue: Towards a politics of dwelling', *Conservation and Society*, 3(29): 501-508.

- JDB – Journal do Brasil (2018) 'Crime organizado pode inviabilizar as eleições no Rio', July 29 [<https://www.jb.com.br/rio/noticias/2018/07/29/crime-organizado-pode-inviabilizar-as-eleicoes-no-rio.html>].
- Kellet, P. (2015) 'Towards belonging: Informal design and dwelling practices in northern Colombia', in C.Klaufus and A. Ouweneel (eds.) *Housing and belonging in Latin America*. New York and Oxford: Berghahn Books.
- Koonings, D. and K. Kruijt (2015) 'Urban fragility and resilience in Latin America: Conceptual approaches and contemporary patterns' in D. Koonings and K. Kruijt (eds.) *Violence and resilience in Latin American cities*. London: Zed Books.
- Maciel Costa, M.A. (2015) 'From mud to chaos: an estuary called Guanabara Bay', *Cad. Metropol. São Paulo*, 17(33): 15-39.
- McFarlane, C. (2011) 'The city as assemblage: dwelling and urban space', *Environment and Planning D*, 29(4): 649-671.
- Ministério Público Federal (2018) 'Em audiência pública, população denuncia omissão do INEA e da Secretaria Estadual de Ambiente na Baixada Fluminense', June 15 [<http://www.mpf.mp.br/rj/sala-de-imprensa/noticias-rj/mpf-rj-em-audiencia-publica-populacao-denuncia-omissao-do-inea-e-da-secretaria-estadual-de-ambiente-na-baixada-fluminense>]
- Ministério Público Federal (2019a) Protocol meeting 26 June, São João Meriti, Rio de Janeiro, own recording and transcription.
- Ministério Público Federal (2019b) 'MPF cobra fiscalização para impedir loteamento irregular em Duque de Caxias/RJ', June 5 [<http://www.mpf.mp.br/rj/sala-de-imprensa/noticias-rj/mpf-cobra-fiscalizacao-para-impedir-loteamento-irregular-em-duque-de-caxias-rj>].
- Moncada, E. (2017) 'Varieties of vigilantism: conceptual discord, meaning and strategies', *Global Crime*, 18(4): 403-423.
- Müller, F.I. (2019) 'Securing the home: Crime, state sovereignty and social housing in Medellín', *European Review of Latin American and Caribbean Studies*, 107: 95-115.
- Müller, F.I. (2017) 'Urban informality as a signifier: Performing urban reordering in suburban Rio de Janeiro', *International Sociology*, 32(4): 493-511.

- Müller, M.-M. (2018) 'Governing crime and violence in Latin America', *Global Crime*, 19(3-4): 171-191.
- Nassif, L. (2018) 'Tá tudo dominado: As milícias assumiram o controle do Rio de Janeiro', *The Intercept*, April 5 [<https://jornalggn.com.br/cidades/enviar-guarda-nacional-dos-eua-a-fronteira-com-mexico-e-movimento-perigoso>].
- Navaro-Yashim, Y. (2010) *The make-believe space: Affective geography in a postwar polity*. Durham and London: Duke University Press.
- O Globo (2014) 'Casas invadidas por milicianos no RJ são postas à venda na web', *O Globo*, April 7 [<http://g1.globo.com/rio-de-janeiro/noticia/2014/04/casas-invadidas-por-milicianos-no-rj-sao-postas-venda-na-web.html>].
- O Globo (2015) 'Expulsos do 'Minha Casa, Minha Vida' fogem há mais de 1 ano de milícia', *O Globo*, 7 April. [<http://g1.globo.com/rio-de-janeiro/noticia/2015/04/expulsos-do-minha-casa-minha-vida-fogem-ha-mais-de-1-ano-de-milicia.html>]
- O Globo (2018) 'Milícia invade áreas de proteção ambiental para lucrar com construções ilegais?', *O Globo*, April 12 [<https://oglobo.globo.com/rio/milicia-invade-areas-de-protecao-ambiental-na-muzema-para-lucrar-com-construcoes-ilegais-22570639>].
- O Globo (2019) 'Morre a 24ª vítima do desabamento na Muzema', *O Globo*, April 22 [<https://g1.globo.com/rj/rio-de-janeiro/noticia/2019/04/22/morre-a-24a-vitima-do-desabamento-na-muzema.ghtml>].
- Paiva, L.G.M. de, G. Feltranand and J.O. Carlos (2019) 'Presentation of the Special Issue', *Journal of Illicit Economies and Development*, 1(2): 118-121.
- Perlman, J. (2009) 'Megacity's violence and its consequences in Rio de Janeiro', in K. Koonings and D. Kruijt (eds.) *Mega-Cities: The politics of urban exclusion and violence in the Global South*. London: Zed.
- Pierobon, C. (2021) 'Urban sovereignty in the age of pandemics: Illicit actors and the crisis of governance', blog series in Emergent Conversations 12, PoLAR: Political and Legal Anthropology Review [<https://polarjournal.org/>].

- Pierobon, C. (2018) *Tempos que duram, lutas que não acabam: o cotidiano de Leonor e sua ética de combate*. Doctoral Thesis. Rio de Janeiro: UERJ.
- Povinelli, E. (2011) *Economies of abandonment: Social belonging and endurance in late liberalism*. Durham and London: Duke University Press.
- Queiroz, L. (2015) 'O Minha Casa Minha Vida na mira do crime' GGN, March 23 [<https://jornalggn.com.br/habitacao/o-minha-casa-minha-vida-na-mira-do-crime/>].
- Raulino, S.F. (2013) Riscos, empregos, 'desenvolvimento' e condições de vida: temor e consentimento nas representações de populações que sofrem efeitos de proximidade da REDUC, in FASE (ed.) *50 Anos das Refinaria Duque de Caxias e a expansão da indústria petrolífera no Brasil*.
- Richmond, M. (2019) 'Hostages to both sides: Favela pacification as dual security assemblage', *Geoforum*, 104: 71-80.
- Rio on Watch (2019) *Isolamento, dívida e baixa qualidade de vida nos conjuntos habitacionais do Rio* [<https://rioonwatch.org.br/?p=22938>].
- Samimian-Darash, L. and P. Rabinow (eds.) (2015) *Modes of uncertainty: Anthropological cases*. Chicago, IL: The University of Chicago Press.
- Simões, M. (2019) 'No Rio de Janeiro a milícia não é um poder paralelo. É o Estado', interview with José Claudio Souza Alves posted on 28-03-2019 to Pública [<https://apublica.org/2019/01/no-rio-de-janeiro-a-milicia-nao-e-um-poder-paralelo-e-o-estado/>].
- Simone, AM. (2007) *At the frontier of the urban periphery*. Sarai Reader: Frontiers [<http://archive.sarai.net/files/original/db7d1dc41da06958b912b77c3ff9974a.pdf>].
- Simone, A.M. (2016) 'The uninhabitable? In between collapsed yet still rigid distinctions', *Cultural Politics*, 12(2): 135-154.
- UOL (n.d.) 'Milícia S.A.', UOL [<https://tab.uol.com.br/milicias/>].
- Vilalta, C.J., J.G. Castillo and J.A. Torres (2016) *Violent crime in Latin American cities*. Washington, D.C.: Inter-American Development Bank.
- Vigh, H. (2009) 'Motion squared. A second look at the concept of social navigation', *Anthropological Theory*, 9(4): 419-438.

- Vissirini, F., A. Akira, O. Junior, I. Areas, T. Ferreli (2016) 'Plano municipal de redução de risco de desastres de inundação para Duque de Caxias', paper presented at *International Conference of Urban Risks*, Lisbon, Portugal, June 30.
- Wolff, M. (2015) 'Building criminal authority: A comparative analysis of drug gangs in Rio de Janeiro and Recife.' *Latin American Politics and Society*, 57: 21-40.
- Zeiderman, A. (2018) 'Submergence: Precarious politics in Colombia's future port-city', *Antipode*, 48(3): 809-831.
- Zeiderman, A. (2015) 'Spaces of uncertainty. Governing urban environmental hazards', in: L. Samimian-Darash and P. Rabinow (eds.) *Modes of uncertainty: Anthropological cases*. Chicago, IL: The University of Chicago Press.
- Zeiderman, A. (2013) 'Living dangerously: Biopolitics and urban citizenship in Bogotá, Colombia', *American Ethnologist*, 40(1): 71-87.

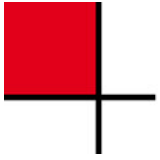
acknowledgements

I am most grateful to my informants and all research participants in the visited communities in the Baixada of Rio de Janeiro. I would like to thank the anonymous reviewers for their supportive critiques; and the editors of *ephemera* and this Special Section for their enormous work and the chance to engage with the concept of standby. I also thank Paul Talcott for his help. This research has received funding through the German Academic Exchange Service's funding scheme for postdoctoral researchers' international mobility in 2019.

the author

Dr. Frank Müller is an urban geographer at the University of Amsterdam. His research interests include urban security, housing and contested urban governance. Funded by a Global Fellowship from the European Commission (Horizon 2020), project title: Social Housing, he is a visiting scholar at the Weatherhead Center for International Affairs, Harvard University (2/2021-1/2023).

Email: f.i.mueller@uva.nl



Hydraulic standby: Anticipating water in Mexico City

Anke Schwarz

abstract

Even in cities where taps are installed in virtually all homes, this is no guarantee of water. The transient character of hydrological landscapes is evident in Mexico City, where water provision is non-permanent in one third of all dwellings. This article investigates hydraulic standby as a form of organizing, exploring modes of standby for water through the lens of anticipation. Sensing and buffering – terms borrowed from cybernetics – are identified as key practices and modes of hydraulic standby that are guided by a logic of precaution and preparedness. While sensing organizes the relation between sensory input and response, buffering refers to the collection of water in anticipation of future shortages. The article draws on 53 individual interviews and other empirical fieldwork conducted in two boroughs of Mexico City. It argues that futures are rendered present in a disparate manner across diverse urban settings, with standby taking on a classed and gendered character.

Introduction

It was a Tuesday when Mexico City's water supply system first came to directly influence my own research agenda. Looking for interview partners in one of the older, self-built and long-since formalized settlements in the southeastern part of the city in the spring of 2008, I found that none of the women I spoke to were available on Tuesdays. It emerged that this was the day 'when water comes'. Census data showed that the entire neighborhood

was connected to the water network, so I became curious. What were people doing ‘when water comes’, and how did it alter the rhythm of their everyday life? In this article, I use the term ‘hydraulic standby’ to close in on a range of social practices involved in the anticipation of water in Mexico City. Standby certainly seems to be a time-consuming activity, with Merriam Webster’s dictionary defining it as ‘to be or to get ready to act’. This mode is not induced by a lack of hard infrastructure, or piping – most homes in Mexico’s Federal District¹ are connected to the water network, and taps are omnipresent. Yet in many places, water is pumped through municipal pipes only on certain days or during certain hours of the day, with domestic water taps falling dry in the interim. Intermittence is documented through multiple sources, from activist and academic field work to census-based statistics and official statements by the Federal District’s public water utility *Sistemas de Agua de la Ciudad de México* (SACMEX, 2013). Generally speaking, tap water supply is non-permanent in about one third of all dwellings in Mexico City’s Federal District, and in a larger share of the surrounding parts of the metropolis (INEGI, 2010). As a result, taps, tanks and people stand by in anticipation of water. The way in which this hydraulic standby is organized involves a vast and at times ruptured infrastructural network, a host of specialized devices, and multiple human actors. SACMEX’ engineers, vendors of rooftop tanks and bottled water, and drivers of off-grid water tankers are all working to mobilize water while residents employ a range of more or less sophisticated domestic devices to ensure water availability despite intermittence.

Hydraulic standby: Concepts and methods

This paper focuses on the structuring of residents’ everyday life by in/active water taps, taking my earlier work on domestic water use in Mexico City as a point of departure (Schwarz, 2017). I draw on Ben Anderson’s writing on

¹ Housing roughly half of the Mexican capital’s 21 million inhabitants and the more centrally located boroughs, the *Distrito Federal* was recently renamed. Confusingly, it now runs under the official title Ciudad de México (CDMX). In effect, this created two overlapping yet distinct entities with regard to governance and law – both of which are known as Mexico City.

affective materialism and anticipation (2004, 2010) to reach beyond a policy-oriented framing of individual and collective practices as coping strategies². With Anderson, I will argue that hydraulic standby is guided by a logic of anticipatory action, something he conceptualizes as ‘acting in the present on the basis of the future’ (2010: 778). Thinking through anticipatory action deliberately breaks with a logic of risk by abandoning any attempt at precisely calculating future uncertainties, instead moving into the realm of imagining and performing futures (*ibid.*: 790). Approaching the notion of standby through a lens of anticipation seems particularly useful to reflect on the processes set in motion by the in/activity of water taps, and urban infrastructures more generally. As such, standby is not passive or effortless but actively performed; it is a manner of ordering people, water and technology in a way that renders a more desirable future present. Anderson outlines three forms of anticipatory logic: precaution, preemption and preparedness (2010: 788 ff.). Put simply, precaution is based on preventative action before an identified threat (or event) in process has become irreversible (*ibid.*: 789). Climate change mitigation with its language of tipping points is a prominent example. Preemption enters a different time frame, as it ‘acts over threats that have not yet emerged as determinate’ (*ibid.*: 790). Both precautionary and preemptive logics are thus focused on an actual (precaution) or potential (preemption) future threat. Preparedness moves to an entirely different plane, as it refers to ‘the development of capabilities and resiliences that will enable response after an event has occurred’ (*ibid.*: 792). Rooted in non-representational theories (Thrift, 2008), this conceptualization is inspired by debates about preparedness (Lakoff, 2007; Collier and Lakoff, 2015) which are ongoing in the context of critical security studies. Here, the concept of stockpiling in particular has been framed as a ‘technique of preparedness’ (Keck, 2017; Folkers, 2019). Both a logic of precaution and of preparedness play a central role in Mexico City’s hydraulic standby, as will be discussed in this paper.

Hydraulic standby unfolds against the backdrop of a solid body of literature on the geographies of infrastructure. On urban water, the debate is framed,

² As is common in the context of environmental risk, vulnerability, and resilience studies (e.g. Blaikie et al., 2004; Cutter, 2012).

for example, in terms of an urbanization of nature and its links to ideas of development, modernity, space, and technology (Swyngedouw, 2004; Kaika, 2005), in terms of citizenship, recognition and social struggle (Castro, 2006), and in terms of water governance, privatization and financialization (Bakker, 2007; Furlong, 2016). Hydraulic infrastructures have been widely discussed in the urban studies, economic and political geography fields ever since Stephen Graham and Simon Marvin's seminal *Splintering urbanism* came out in 2001. At the heart of their book is the idea that infrastructures are not only reflective of social relations but also shape and reinforce disparate dispensations of power. This is where the present paper contributes to the debate, adding insight on the affective dimensions of infrastructural experience, and heeding Jessica Budds' call to 'move away from thinking of water as a resource that is external to social relations, towards one in which social relations are embedded' (Budds, 2009: 420). To grasp the ephemeral, fleeting, unstable nature of sociotechnical systems such as a metropolitan water supply network, research on urban infrastructures often draws on STS and assemblage thinking (e.g. Graham and McFarlane, 2014). Nikhil Anand combines these perspectives in his work on Mumbai (2017), investigating the ways in which water services act as a site where urban inequality is produced and reproduced. Following the idea that urban water networks are fragile and in constant change, subject to gradual expansion and contraction, he argues that infrastructures 'are not smooth surfaces that perform as planned; instead they are flaky, falling-apart forms that constantly call out for projects of management, maintenance, and repair' (Anand, 2015). Hydraulic standby falls squarely into that realm of water maintenance and management, extending the sociotechnical network beyond the tap and into the home.

I conducted the empirical fieldwork underpinning this paper between 2012 and 2014 in two boroughs of Mexico City (Schwarz, 2017). Densely populated Iztapalapa, to the Southeast of the CDMX, is the product of a swift process of mid-20th century industrialization and popular urbanization (e.g. Azuela de la Cueva, 1991; Salazar Cruz, 2012). Along with former villages, public housing estates, prisons and major thoroughfares, it features a large housing stock in *colonias populares*, famously documented in Larissa Lomnitz' 1976 book. Iztapalapa is considered one of the poorest boroughs in the Federal District, and is infamous throughout the city for its supply disruptions and low tap

water quality. Cuauhtémoc, in contrast, constitutes the historic city center and its surroundings, and is made up of buildings dating back to the colonial period, as well as governmental offices and other public institutions, specialized retail, and pre-modern as well as modernist housing estates of all shades and qualities from run-down to solidly middle-class. Both areas, home to roughly half a million (Cuauhtémoc) and two million inhabitants (Iztapalapa) respectively, are of interest from a comparative point of view. They could be assumed to represent the urban center and semi-periphery – though Iztapalapa is by far not as peripheral as other, unserved parts of the metropolis sprawling out into the adjacent Estado de México. In any case, Iztapalapa is often described as the literal ‘Other’ to the downtown area, which is – supposedly – well-served, formal, and at the center of governmental attention.

The fieldwork sought to trace these urban representations, imaginations and materializations with respect to water and water uses in six neighborhoods per borough. The research design consisted of 53 semi-structured individual interviews covering material, perceptual and imaginary dimensions of domestic water use, and four focus group discussions with a total of 46 participants. Additional methods such as habitat biographies covering past and present housing conditions, and photo documentation of water-related devices in each household were also applied (Schwarz, 2017: 53 ff.).

Drawing on this research, the present paper focuses on the ways in which Mexico City’s in/active water taps order everyday life. The focus is on sensing and buffering as forms of organizing. Which forms do these dimensions of hydraulic standby take? What is the nature of their ingrained anticipatory logic? How do they render possible futures present across diverse urban and social settings? I will pursue these questions in the following five sections. The two main sections address sensing (3) and buffering (4) of water as two characteristic modes of standby, followed by a reflection on the findings (5), and a short conclusion (6).

Modes of standby: Sensing

The following sections trace two modes of hydraulic standby in Mexico City. I employ the terms sensing/sensors and buffering/buffers, borrowed from cybernetics, to highlight the sociotechnical character of the respective practices. Before we turn to definitions, a quick contextualization. Why is there any need for anticipatory action as regards water in Mexico City? Hydraulic standby seems to be motivated, first and foremost, by regulated intermittence, or water rationing, which is a widespread form of non-permanent supply. In contrast to spontaneous supply disruptions – which have been tied to multiple causes, including damage to water mains, leakage, variations of pressure, and sabotage – rationing is formally presented as a highly regulated form of water time. There are official rationing schemes called *Programa de Tandeo*, set up by SACMEX in collaboration with the city government (SACMEX, 2013). Much like a timetable for public transport, the 2013 spreadsheets, for instance, neatly list all 278 officially affected neighborhoods, each with their respective service hours. Take ID 74, San Miguel Teotongo Sección Acorralado: Three times a week, there should be 18 hours of water provision followed by a six-hour break. On the ground however, this formal impression quickly unravels. The official program turns into a façade, as service schedules often do not translate into actual supply rhythms at the point of use. My interview partners report that in the listed neighborhoods and many other areas, people and devices stand by for water several times a week. Yet only local experience would provide a hint as to which days of the week that might be. Rationing therefore quickly gains a more spontaneous quality than these orderly spreadsheets seem to indicate. It would seem that such intermittence – or ‘nonperformativity of the water system’ (Schwenkel, 2015a: 528) – reflects the incremental and ephemeral character of infrastructure itself.

Spectacular infrastructure, Christina Schwenkel argues in her work on a modernist housing complex erected in the late 1970s in Vinh City (Vietnam), is the site where modernity and state power are visibly performed. Yet this spectacular infrastructural performance ultimately fails when residents are no longer ‘able to see and hear material betterment’ (*ibid.*: 527). A sensory dimension is central to this experience, as the absent sound of water flushing through the pipes turns into a symbol of a breakdown of the ‘utopian ideal of

universal access' (*ibid.*). Standby appears to be at the heart of the stuttering performance of fragmented modernity that is intermittent water supply:

Twice a day (...), the abrupt sound of water racing through the pipes signals to residents to open their valves and shut them off. (...) a good ear can tell when a tank is near-full, when the distant echo of water filling an empty vessel begins to fade, before it spills over and inundates the unit. (Schwenkel, 2015b)

Such human expertise and acquired skills are central to sensing as a mode of standby. In cybernetics, sensors are defined as 'any element or subsystem in a system which picks up some kind of information' and is typically 'attuned to some specific kinds of inputs' (François, 2011: 528). Sensing as a mode of standby is relevant to the management of complex systems as it organizes the relation between sensory input and response. With respect to hydraulic standby, this 'reformulation of attention and distraction into interactivity' (Halpern, 2015: 17) relates to the ways in which flows are detected and water is collected as a way of administering water beyond the tap. The link between sensory input and response not only appears as 'a bodily reaction to lived reality' (Larkin, 2013: 336), infrastructures also 'create a sensing of modernity' (*ibid.*: 337). This act of sensing – and making sense of – infrastructural conditions is integrated into everyday life, and orders it in certain ways.

Sensors stand by until water starts flowing from the tap, which then trigger a set of buffering actions. This converts sensors into buffer managers. Whether in Vietnam or Mexico, sensing seems to imply that residents are caught in a limbo of in/activity while paying attention to multiple sensory indicators. Taste, smell and sound were commonly mobilized as indicators by the people I spoke to in Mexico City. Olfactory and gustatory sensations serve as indicators of the (non)potability of tap water, and water quality in general. Water that smells, tastes or looks 'off' was generally interpreted to indicate low quality – the expectation being transparency, odor- and tastelessness. As Fabiola, a writer and tenant living in the city center had it, taste is a matter of equality as well as of quality:

[Tap water] has a strange taste, like, I don't know if it is of chlorine? Anyway, it's not a pleasant taste. Therefore we prefer to buy purified water (...). That's

a problem, because everyone should have access to potable water without having to pay for it all the time. (Fabiola, E37: 38-40, Cuauhtémoc)³

As relevant as taste is for gauging water quality, sound is the key to water flows, and consequently for most sensing techniques. Acoustic sensing is the principal element in keeping track of water flows and topping up tanks, as one of my interviewees made clear. Berta, an accountant and tenant from Iztapalapa, described this acoustic monitoring mode in the following manner:

Those black roof-top tanks are above (...) my bedroom, you can hear when water starts to flow. (...) At dawn, I keep listening, listening, I wake up, that's how I am at daybreak. (...) I recognize when the tank is about half-full; I then get up, open the water tap and begin to set water aside. (Berta, E29: 78, Iztapalapa)

This account reveals the idling, energy-sapping nature of acoustic sensing. As sensor, Berta displays a degree of inner tension, alertness, even uneasiness during hydraulic standby – alluding to an emotional state somewhere between hopeful expectation and something more reminiscent of resignation. Prominent Mexican writer (and civil engineer) Vicente Leñero provides an impressive sensory record of such tense moments of standing by in his 1983 autobiographic novel *La gota de agua*:

During the droughts of '79, of '80, of '81, the roof-top tanks (...) were empty by mid-morning, and water did not resume ascending to them for the entire afternoon. But when night fell, at about twelve or one in the morning, the characteristic thunder in the ducts, the noise of hammer strokes, categorically announced the resumption of supply. Sometimes I woke up hearing the stream as it filled the toilet's water tank and sometimes I couldn't fall asleep until I heard it. (...) my insomnia had the length of the waiting: My God, when will the pressure increase? When will water come? (1983: 13)

This standby labor – efforts being made to anticipate the arrival of water – is a learned technique, sharpened by experience over a period of time. Even bottled water vendors can be traced through such acoustic indicators, calling out *el aguaaaaaa* in characteristic intonation while passing through Mexico City's neighborhoods. Acoustic markers of different street vending activities

³ All translations from Spanish to English are by the author. Material from interviews conducted by the author is marked as E1, E2 etc.; interviewees' names have been fully anonymized.

can be traced back to pre-colonial times and are kept alive through everyday performance as well as preservation, to the point that the Mexican National Sound Archive keeps an audio library⁴ of ‘endangered sounds’. It could be of interest to study this phenomenon more in depth elsewhere, as this would indicate that standby could indeed have pre-modern roots, predating the modern infrastructural ideal and its (non)performativity.

While human sensors lie awake, listening intently for any sign of water flow, automatic float valve mechanisms that are installed in cisterns and roof-top tanks, do a similar job. Monitoring predefined water levels, they trigger the opening of valves and/or the activation of electric pumps. Once a sensor triggers, announcing a potential water flow, storing of water – or buffering, as I call it here – is implemented. Along with acoustic indicators, hydraulic standby can also include a frequent monitoring of faucets, or as Guadalupe, a domestic worker and homeowner had it, ‘checking the tap to see at which hour’ water supply might resume (E3: 359, Iztapalapa). Monitoring techniques allow people to start filling tanks once water begins to flow and thus attempt to exploit limited provision periods to their full extent. In my interviews, it was typically the oldest woman in the household who was responsible for this strategic work of standby.

There is often another affective layer involved: A sense of abandonment strongly reminiscent of Anand’s 2017 analysis of Mumbai, where water flows come to reinforce people’s self-image as deserving/undeserving citizens. When asked about the logic of disparate patterns of water supply in Mexico City, Dolores, a 63-year-old domestic worker living in a small flat in an Iztapalapan housing complex with her two daughters and five grandchildren, told me with conviction: ‘You should understand that we are the forgotten, and only filthy, yellow water gets here’ (Dolores, E3: 113). Infrastructural shortcomings and absences are interpreted as symbols of classed and gendered rejection, of a lack of recognition, of low social status on an individual and collective level. Those who were subject to infrastructural absence or shortcomings read it as both a product and a condition of their marginalization. Others expressed feeling that they were treated unfairly,

⁴ https://rva.fonotecanacional.gob.mx/fonoteca_itinerante/oficios.html, accessed November 10, 2019.

humiliated and even punished amidst severe, longstanding limitations in water supply in their neighborhoods.

Why do they punish us so much? (...) It's all under control of the borough, you see. (...). People waste a lot, so I'm not so much against the rationing (...). The goal is less wastage (...), that's good, but the punishment is not very even. (David, E11: 73-77, Iztapalapa)

A retired engineer and homeowner from Iztapalapa, David seemed to interpret supply disruptions as a form of state control charged with unequal positions of power. Water rationing takes on an almost educational quality in his account, something that was also mirrored in other interviews. Here, sensing extends beyond the anticipation of the materialization of water flows to an exploration of meaning: 'making sense' of infrastructural absences.

Modes of standby: Buffering

Hydraulic standby moves on to the next stage once a flow of water is detected by a sensor. Buffering as a mode of hydraulic standby refers to the collection of water in anticipation of future shortages. In cybernetics, buffers are defined as 'stores which use either space (...) and/or time (...) to modulate the effects of variations in the flow of whatever it is the particular system handles (...) by smoothing out extreme behaviors' (Glanville, 2003: 171). The *International Encyclopedia of Systems and Cybernetics* adds that buffers are devices 'to allow asynchronous communication' (François, 2011: 72). Such asynchrony is the defining feature of the water buffer. It organizes water flows in way that buffers against expected and unexpected changes in volume and pressure, thus preventing the effects of shocks and decline, unexpected, sudden or incremental events. The literature distinguishes between storage and stockpiling: 'While storage traces bottlenecks in the past, as sites where intervention would have been possible (...), stockpiling projects it in the future, as a space for mitigation' (Keck, 2016: 4). Both techniques of preparedness tend to be present in hydraulic standby in the form of buffering, but with an emphasis on stockpiling. The future is made present in the buffer by way of anticipation, as the potential threat or event – a dry tap, a lack of water – is known; the only unknown is the timing or rhythm of the onset of said event. The stockpile, according to Andreas Folkers, 'creates a reservoir of

frozen time as a buffer and bridge against interruptions of time-critical circulations' (2019: 2).

Three types of buffering are briefly introduced here, all of which involve projections in time into the past and future, to differing degrees. In Mexico City, fresh water and bottled water mainly serve as buffers in the sense of stockpiling, whereas grey water is stored with a view to both the past (reuse) and the future.

Fresh water

Mexico City's water fresh buffers cushion against fluctuations in water pressure and typically take the shape of roof-top tanks, cisterns, and barrels. As pace-makers and resting places, specialized and repurposed devices provide rhythm and permanence to water within the home. The simplest way of buffering is to collect water in smaller, mobile devices such as buckets, barrels and tubs of all sizes and materials. A more complex way to manage intermittence is the installation of a more or less sophisticated interconnected system of internal piping, roof-top tanks, cisterns, pumps, and floaters, all of which stand by to manage any eventual water flow by capturing, storing, pressurizing, and distributing it to the point of use. Such systems can be fully automated (yet still require a degree of control and maintenance), or patchy and partial, requiring a higher amount of human intervention. Building up a reserve allows people to turn intermittent water provision into permanent water availability for domestic needs. Such permanency and stability is what Antonia, a middle-class tenant and tradeswoman longed for when campaigning for a large rooftop-tank to be installed in her apartment block in downtown Mexico City. Shocked by a previous disruption of water supply in her neighborhood that lasted several days, she was eager to avoid such unpleasant surprises in the future:

I had never experienced a lack of water – and all of a sudden, there was not even water for the toilet. It was very traumatic (...) all the dirty dishes, and bathing yourself in any possible way. We even used bottled water to clean a bit. (Antonia, E20: 256, Cuauhtémoc)

Buffer installations literally make a difference, as tanks and cisterns not only serve as status symbols and signs of modernity. They have a very practical

meaning for those on standby, such as homeowner and housewife Alma who lives with her extended family in an unfinished self-built concrete building in Iztapalapa:

Those who have a cistern don't need to be alert. But I don't have one, so I need to fill my tubs. (...) I get up; I almost don't sleep in order to fill them. (Alma, E9: 78-80, Iztapalapa)

With water supplied no more than once a week, and in absence of extensive, automated domestic storage systems, Alma also resorted to another technique of standby: the immediate use of water. Guided by the logic 'we run when water starts running' (E9: 299) – Alma and her daughter were in fact busy doing their weekly laundry by hand at two washstands in their courtyard during the interview. Others also did this in order to make the most of the limited provision period. Guadalupe, for instance, got up at six in the morning to do her laundry before leaving the house for her job as a domestic worker. The exhausting performance and effects of hydraulic standby including sensing and buffering are also illustrated by Dolores' report. She shared a memory from the late 1980s, at which time she was temporarily living at her mother's house in an underserviced neighborhood in southern Mexico City:

They just had a little tap at the street corner, for everybody who lived in that block. (...) the [neighbor] who noticed that water started running – at twelve, one in the night – would inform all the others on the block. [... and] everybody lined up to fetch water (...). They worked all night gathering water, and instead of resting in the morning, everybody got ready and went to work. (...) The few times I got up to help my mother, my feet buckled as I fell asleep while on the bus in the morning, standing there, holding on to the handle bar. (Dolores, E8: 385-387, Iztapalapa)

Dolores' account is remarkable for its rare openness regarding the social impact reflected in residents' daily routines. The 'sensing' neighbor was at standby, surveying the tap overnight, alerting the others only once a flow materialized. It can only be assumed that this role was taken up in turns, in a rolling night-shift system of the neighborhood water sensor.

While water from the public tap was stored as a way of buffering water amidst intermittent supply frequencies, the strategy did not seem to make the women I talked to entirely independent of unpredictable supply patterns. Even where sensing and buffering are more or less automated within the building, things

may break or people act in unplanned ways, disrupting a smooth hydraulic performance. As water did not reach his building with sufficient pressure and needed to be pumped to the roof, Oscar, a retired porter, was ‘on standby⁵ so water won’t spill’ (E13: 34) from rooftop-tanks. Without an automated pumping system, he controlled the electric pump manually and was frustrated at the lack of care by the other neighbors. There appears to be a tension between the collective and the individual that comes to the fore when buffers are shared. Difficulties in obtaining enough water to fulfill domestic needs was mainly reported from households where women were the main income-earners and nobody was at home during the day. Both Dolores and Hilda, from two different modernist housing complexes in Iztapalapa, complained that neighbors were stockpiling during the day, depriving them of water from shared buffers:

The average family in my building is (...) five or more people (...) water rises to the roof-top tanks and the families start to fill or launder or do things. That implies inequality: (...) those who come home later will not get the same pressure. (Hilda, E5: 228 and 336, Iztapalapa)

As an individual strategy, buffering hence sought to make flat dwellers less dependent on neighbors’ rhythms of water use. Ironically, it also seemed to have a tendency to amplify this dependency by privatizing a bigger share of the common buffer. Others, such as Pablo, a middle-class resident in a newly built apartment block in the San Rafael neighborhood, appear to opt out from hydraulic standby altogether. He told me that he was considering moving house, weary of limitations in water availability. ‘The city’, he argued, ‘is too complex to have these difficulties in your own home’ (Pablo, E34: 304, Cuauhtémoc). Those who have a choice may thus seek to relocate to better-serviced areas rather than continuing to endure limitations or seek collective solutions.

Bottled water

According to recent industry reports, around 250 liters of bottled water are consumed in Mexico per capita per year – the highest average per capita

⁵ The tension is clear in the Spanish ‘estoy al pendiente’, which could be translated as ‘I am pending’ or ‘I am on the lookout’.

consumption worldwide (Rodwan, 2018: 20). Ubiquitous 20-liter-jugs known as *garrafones* are the most common source of drinking water in Mexico City. These reusable PET-containers are present in literally all kitchens, and bottled water is often employed not only for drinking but multiple other uses. It hence appears to serve not only as an alternative to tap water that is not considered to be of adequate quality for human consumption. Bottled water also doubles as a buffer when there is insufficient tap water for purposes such as food preparation and personal hygiene. Whether from local purification plants or transnational beverage companies, bottled water comes at a much higher absolute price when compared with tap water (Schwarz, 2017: 125 f.). A near universal mistrust of public authorities and by extension of tap water quality, seems to buoy this highly visible commodification of water (Hamlin, 2000). Stockpiling, with a view to possible futures, is quite evident in this case. Mexico City's *garrafones* effectively represent the smallest buffer unit of potable water, an essential part of everyday life. Even in households with permanent water supply, people tend to exclusively drink bottled water. In turn, not being able to afford bottled water at all times becomes a sign of precarity. Isabel's strategy for her family is a case in point:

I have always accustomed my children to bottled water (...) and if we don't have any, well, then we drink from the tap. Their stomach has to adapt to both types of water – if your stomach gets used to only one type, it will suffer, with infections, with diarrhea. (Isabel, E21: 379, Cuauhtémoc)

A domestic worker, tenant and single caretaker in a low-income household from the downtown Paulino Navarro neighborhood, she stressed how important it is for people in her social position to condition their bodies to endure hardship. Conditioning her children's stomachs to endure (distrusted) tap water therefore follows not only a deeply classed logic, it also reveals how an anticipation of precarious future living conditions comes into play in current practices of water consumption.

Grey water

The gathering and reuse of grey water in the household represents a third type of buffering that is common in Mexico City. Tap water was captured by some of my interviewees after its first use in order to recycle (or rather downcycle) it for different purposes through a cascading scheme. This is, in Keck's sense, in

principle a form of storage, as it traces past bottlenecks and uses ‘leftovers’, expecting a repetition of water shortage in the near future. However, there are also elements of a logic of stockpiling, in the sense that the onset of a known threat (a future lack of running water) is mitigated by grey water reuse. Run-off from the shower, gathered in a tub in the bathroom to be used to flush toilets, or buckets full of laundry water, employed to wash floors, serve this purpose. Note how the required water quality decreases along the cascade as pictured in Figure 1, from more bodily to more technical uses.

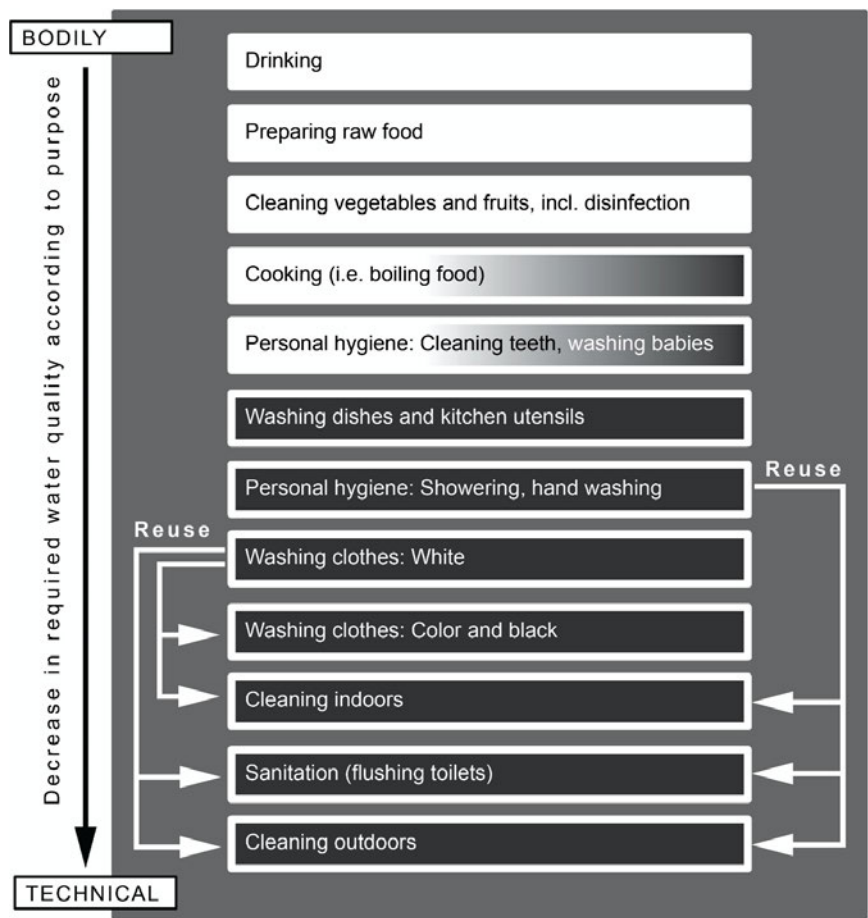


Figure 1: Cascade of domestic water use. Grey indicates predominant tap water use, white bottled water use. Source: Schwarz, 2017: 146

Reflection

As this paper has shown, sensing and buffering are common modes of hydraulic standby in Mexico City – yet how do they relate to future geographies? What is the exact nature of their ingrained anticipatory logic? With Ben Anderson, we can identify the ways in which hydraulic standby mobilizes anticipatory affects (2010: 783). The wait for water, in other words, involves anxieties, hope and despair related to making specific futures present while avoiding others. An anticipatory logic is defined by Anderson as ‘a coherent way in which intervention in the here and now on the basis of the future is legitimized, guided and enacted’ (*ibid.*: 788). Aiming to cushion fluctuations in volume and pressure, and alter the arrhythmia of water flows, sensing and buffering certainly extend into the realm of making futures present, aiming ‘to prevent, mitigate, adapt to, prepare for or preempt specific futures’ (*ibid.*: 779). Both a logic of precaution and of preparedness were found to inform practices of standby for water. Sensing as a mode of hydraulic standby follows an anticipatory logic of precaution, a ‘decision to constrain or halt from outside a process and before that process becomes irreversible’ (*ibid.*: 792). Sensing seeks to intervene in the process of running out of water, and it is done in order to start buffering at an adequate point in time, i.e. when water flows are sufficient. Buffering, in turn, follows an anticipatory logic of preparedness, enabling response after the onset of an event. In terms of hydraulic standby, that refers to accumulating water while it flows freely from the tap in order to build up a stock for those periods when the tap runs dry.

Despite the apparent passivity and stillness of standby, none of this is effortless. The exhausting and exhausted performance of standby points to an inherent tension, while also bearing glimpses of hope and despair. Again, it is Anderson who has explored the latent nature of boredom and found that it ‘can be defined as a corporeal witness, felt through both the restlessness of a visceral sensibility and a stilling of our proprioceptive sense of movement, to a momentary suspension of, and in, the transitive autonomies of a banal, immanent, plane of intensity’ (2004: 750). Such strain is certainly present in those standing by for water in Mexico City. As the effects of this forced-into-idling state are distributed unequally, possible futures are rendered present in disparate ways across diverse urban and social settings.

First and foremost, hydraulic standby orders everyday life differentially, reinforcing and materializing social and urban inequalities. As standby practices, both sensing and buffering have repercussions in other realms of everyday life, potentially disrupting ordinary rhythms and limiting personal autonomy. In the Federal District, this seemed to be a direct consequence of the absence of equitable distribution of water despite widespread connectivity to the water mains. Fluctuations in supply were mainly a matter of rationing imposed by the local water authority, displaying a spatial bias as centrally located boroughs were officially spared.

As in many other places around the globe, the modern infrastructural ideal – of advancing social progress through centralized and standardized networks including universal water supply (Graham and Marvin, 2001: 40 ff.) – has never been a reality for everyone. Yet, a binary center-periphery model does also not adequately capture Mexico City's fragmented infrastructural situation and disparate supply patterns. While Iztapalapa continued to be at a clear infrastructural disadvantage reflected in the experiences of its residents being at standby, the borough of Cuauhtémoc was not a haven of stability either. Effectively Mexico City's downtown, this heterogeneous assemblage of neighborhoods displayed a fine-grained differentiation of infrastructural conditions. Anticipatory logics of precaution and preparedness as well as the form of hydraulic standby were more a matter of social status than of geographical position within the city. At times, the conditions of hydraulic standby and other marginalizations were more similar between low-income residents of both boroughs than between neighbors. The domestic worker instructed to use water freely in her employer's flat in the inner city tended to face a wait for water in her Iztapalapan home at night. Meanwhile in an adjacent inner city neighborhood, others would be busy storing grey water for reuse to make ends meet. This adds to the literature which has shown how infrastructural breakdown reproduces classed and gendered inequalities as poorer women in particular bear the brunt of extra work (see González de la Rocha, 1994; and for water infrastructures in particular, Bennett, 1995; Sultana, 2007). An additional load of time and effort spent on securing water availability for the entire household is thus manifest not only in locations that are devoid of any type of piped water whatsoever but also in a fully connected, highly urbanized setting where hydraulic

standby is common. By imposing a certain timing of buffering activities, the arrhythmia of water provision in Mexico City collided with daily routines, depriving people of rest and recovery. The examples of Berta, Alma and Dolores are cases in point, shedding light on the ways in which infrastructural networks articulate social inequalities and relations of power. This was certainly evident during my field work, where mostly women with a relatively low social status took on sensing and buffering. Others were found to delegate standby work, either to domestic workers (again, predominantly female and of a lower social status than their employers), concierges and other administrators, and/or to complex, automatized systems involving cisterns, tanks and pumps. Standby for water is, in short, largely classed and gendered – and feminist methods such as water diaries (Lahiri-Dutt, 2015) seem particularly helpful for further research in the area.

Falling squarely into the realm of passive acceptance of the status quo as a strategy to improve access to water (Swyngedouw, 2004: 150), the exhausting and exhausted performance of standby through sensing and buffering hardly seems transformative. More often than not, the shift from public service to private task appears as a neoliberal act of responsabilization, where hydraulic standby is the product of ‘structural systemic disruptions [that] have an essential effect on the everydayness of the society, targeting the more vulnerable classes in particular, [while] they do not interrupt the flows that are beneficial for neoliberal processes’ (Dalakoglou and Kallianos, 2014: 531). Market-oriented, neoliberal regimes of water governance also tend to display a deeply gendered character (Harris, 2009). As this paper hopes to have shown, infrastructural breakdown and the anticipation of such ruptured futures are distributed unequally across urban space and the social landscape, creating differential geographies. Yet in the very same act of anticipation, there may also lay openings towards a radical otherwise future when ‘to be durative, may be as emancipatory as to be transitive’, as Elizabeth Povinelli (2011: 130) observes on the ambivalent affinities and temporalities of endurance in late liberalism. Practices of sensing and buffering are clearly involved in the making of everyday territories, generating ordinary sites and stakes of social struggle through hydraulic standby (Schwarz and Streule, 2020: 12). In addition to and extension of such individualized techniques, there are openings for alternative ways of collective organizing around water, such as

Mexico City's Right to the City charta (Zárate, 2010) and the 2015 movement pushing for a progressive reform of Mexico's federal water law.

Concluding remarks

In this paper, I have explored modes of hydraulic standby through the lens of anticipation. Standby for water, I argue, is an active everyday mode that is classed and gendered in specific way. Unpredictable rhythms of water supply clearly shape everyday lives in Mexico City, motivating hydraulic standby in the form of sensing and buffering. This arrhythmia orders the daily routine of poorer women in particular, revealing how social relations are embedded into water. The paper has conceptualized sensing and buffering as forms of organizing, and more specifically, as techniques of precaution and preparedness. It makes an empirically based contribution to the literature on anticipatory action, with hydraulic standby at its center. With a view to future research, I would like to propose expanding the temporal horizon of hydraulic standby as laid out in this paper. Zooming out from the everyday mode to other open futures, it could be argued that standing by for water may also turn into a biographical period of a person or entire community. For instance, decades may go by while dwellings or entire neighborhoods are supposedly on the brink of being connected to the water mains and receive running water. One could argue that Mexico City's self-built settlements are characterized by a form of standby that lasts years, decades, and potentially a lifetime. The empirical findings illustrate the underlying speculative logic: plots of land are typically sold unserved, with the expectation that urban infrastructures such as electricity, water and sewers will be implemented at some undefined point in the future (Salazar Cruz, 2012). Habitat biographies, a qualitative method developed in Schwarz (2017: 177 ff.), trace a life span of such changing and often uncertain infrastructural and housing conditions. Rather than an exception, this is a basic tenet of what Teresa Caldeira (2017) has coined 'peripheral urbanization'. This particular form of temporality points to an inherent promise of gradual stabilization, highlighting the effort to bring different futures to life in present urban geographies. These futures seem to bear the hope, the expectation, if not the demand to be recognized as both different and equal. Which kinds of future are made present through anticipatory actions? Hydraulic standby, it could be argued, doubles as

standby for social and urban change, for partaking in the shaping of a right to the city for all. The disparate and unequal distribution of hydrological landscapes throughout Mexico City thus provides not only the backdrop but also the stage for an exhausting and exhausted performance of standby for water.

references

- Anand, N. (2015) 'Accretion', Society for Cultural Anthropology: Fieldsights: Theorizing the contemporary: The infrastructure toolbox, 24 October. [<https://culanth.org/fieldsights/accretion>]
- Anand, N. (2017) *Hydraulic city: Water and the infrastructures of citizenship in Mumbai*. Durham: Duke University Press.
- Anderson, B. (2004) 'Time-stilled space-slowed: How boredom matters', *Geoforum*, 35(6): 739-754.
- Anderson, B. (2010) 'Preemption, precaution, preparedness: Anticipatory action and future geographies', *Progress in Human Geography*, 34(6): 777-798.
- Azueta de la Cueva, A. (1989) *La ciudad, la propiedad privada y el derecho*. México, D.F.: El Colegio de México.
- Bakker, K. (2007) 'The "commons" versus the "commodity": Alter-globalization, anti-privatization and the human right to water in the Global South', *Antipode*, 39(3): 430-455.
- Bennett, V. (1995) *Politics of water: Urban protest, gender, and power in Monterrey, Mexico*. Pittsburgh: University of Pittsburgh Press.
- Blaikie, P., T. Cannon, I. Davis, and B. Wisner (eds.) (2004) *At risk: Natural hazards, people's vulnerability and disasters*, 2nd edition. London: Routledge.
- Budds, J. (2009) 'Contested H2O: Science, policy and politics in water resources management in Chile', *Geoforum*, 40(3): 418-430.
- Castro, J.E. (2006) *Water, power and citizenship: Social struggle in the basin of Mexico*. Basingstoke: Palgrave Macmillan.

- Caldeira, T. (2017) 'Peripheral urbanization: Autoconstruction, transversal logics, and politics in cities of the Global South', *Environment and Planning D*, 35(1): 3-20.
- Collier, S.J. and A. Lakoff (2015) 'Vital systems security: Reflexive biopolitics and the government of emergency', *Theory, Culture & Society*, 32(2): 19-51.
- Cutter, S.L. (2012) *Hazards, vulnerability and environmental justice*. New York: Routledge.
- Dalakoglou, D. and Y. Kallianos (2014) 'Infrastructural flows, interruptions and stasis in Athens of the crisis', *CITY*, 18(4): 526-532.
- Folkers, A. (2019) 'Freezing time, preparing for the future: The stockpile as a temporal matter of security', *Security Dialogue*, 50(6): 1-19.
- François, C. (2011) *International encyclopedia of systems and cybernetics*, 2nd edition. Berlin: De Gruyter.
- Furlong, K. (2016) *Leaky governance: Alternative service delivery and the myth of water utility independence*. Vancouver: University of British Columbia Press.
- Glanville, R. (2003) 'A (cybernetic) musing: In praise of buffers', *Cybernetics & Human Knowing*, 10(3-4): 169-178.
- González de la Rocha, M. (1994) *The resources of poverty: Women and survival in a Mexican city*. Oxford, Cambridge: Blackwell.
- Graham, S. and S. Marvin (2001) *Splintering urbanism: Networked infrastructures, technological mobilities and the urban condition*. London: Routledge.
- Graham, S. and C. McFarlane (eds.) (2015) *Infrastructural lives: Urban infrastructure in context*. New York: Routledge.
- Halpern, O. (2015) *Beautiful data: A history of vision and reason since 1945*. Durham: Duke University Press.
- Hamlin, C. (2000) 'Water', in K.F. Kiple and K.C. Ornelas (eds.) *The Cambridge world history of food*. Cambridge: Cambridge University Press.

Harris, L.M. (2009) 'Gender and emergent water governance: Comparative overview of neoliberalized natures and gender dimensions of privatization, devolution and marketization', *Gender, Place & Culture*, 4: 387-408.

Instituto Nacional de Estadística y Geografía (INEGI) (2010) Censo de población y vivienda 2010. Aguascalientes: Instituto Nacional de Estadística y Geografía.

Kaika, M. (2005) *City of flows: Modernity, nature, and the city*. New York: Routledge.

Keck, F. (2016) 'Storage and stockpiling as techniques of preparedness: Managing the bottlenecks of flu pandemics', *Somatosphere*, 15 June. [<http://somatosphere.net/2016/storage-and-stockpiling-as-techniques-of-preparedness-managing-the-bottlenecks-of-flu-pandemics.html/>]

Keck, F. (2017) 'Stockpiling as a technique of preparedness: Conserving the past for an unpredictable future', in J. Radin and E. Kowal (eds.) *Cryopolitics: Frozen life in a melting world*. Cambridge: MIT Press.

Lahiri-Dutt, K. (2015)

- Schwarz, A. (2017) *Demanding water: A sociospatial approach to domestic water use in Mexico City*. Stuttgart: Franz Steiner.
- Schwarz, A. and M. Streule (2020) 'Introduction to the special issue "Contested urban territories: Decolonized perspectives"', *Geographica Helvetica*, 75(1): 11-18.
- Schwenkel, C. (2015a) 'Spectacular infrastructure and its breakdown in socialist Vietnam', *American Ethnologist*, 42(3): 520-534.
- Schwenkel, C. (2015b) 'Sense', *Society for Cultural Anthropology: Fieldsights: Theorizing the contemporary: The infrastructure toolbox*, 24 October. [<https://culanth.org/fieldsights/sense>]
- Sistema de Aguas de la Ciudad de México (SACMEX) (2013) *Condiciones del servicio para el programa de tandeo 2013*. México, D.F.: Sistema de Aguas de la Ciudad de México.
- Sultana, F. (2007) 'Water, water everywhere, but not a drop to drink: Politics (water politics) in rural Bangladesh', *International Feminist Journal of Politics*, 9(4): 494-502.
- Swyngedouw, E. (2004) *Social power and the urbanization of water. Flows of power*. Oxford: Oxford University Press.
- Thrift, N. (2008) *Non-representational theory: Space, politics, affect*. London: Routledge.
- Zárate, L. (2010) 'Mexico City charta: The right to build the city we dream about', in A. Sugranyes and C. Mathivet (eds.) *Cities for all: Proposals and experiences towards the right to the city*. Santiago de Chile: Habitat International Coalition.

acknowledgements

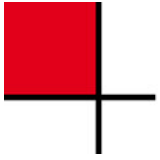
Many thanks to my interview partners, to three anonymous referees for their constructive comments on earlier versions of this manuscript, and to Julie Chamberlain for revising my English. The Heinrich Böll Foundation provided funding for my research in Mexico.

the author

Anke Schwarz is a postdoctoral researcher and lecturer in Human Geography at Technische Universität Dresden's Institute of Geography. Her recent publications include the 2020 *Geographica Helvetica* special issue 'Contested urban territories: Decolonized perspectives' (co-edited with Monika Streule), and *Demanding water: A sociospatial approach to domestic water use in Mexico City* (Steiner, 2017).

Email: anke.schwarz@tu-dresden.de

Website: ankeschwarz.net



Ruined museums: Exploring post-foundational spatiality

Friederike Landau and Lucas Pohl

abstract

The paper turns to interdisciplinary museum and ruin studies with the objective to think about space, politics and the political. Situated in a post-foundational understanding of political difference, which roughly distinguishes between ‘politics’ as the realm of standardized, normalized positions and procedures of power, and ‘the political’ as the irreducible antagonistic dimension of political life, we explore the mutual interpenetrations as well as political divergences between ruins and museums. For this purpose, we consider ‘museumification’ as a socio-spatial process that tends to inscribe an order of ‘politics’, whereas we view ‘ruination’ as a potentiality to create socio-material voids, which may (re)activate moments of ‘the political’. In this framework, the museum signifies an attempt to conserve, exhibit and transmit selected narratives of the past, potentially evoking a topographical notion of space, whereas the ruin dislocates, ambiguates and dismantles orders of the past, possibly leading to a topological understanding of space. After revisiting accounts of the museumification of ruins, we argue that the latter can be understood as a process which disambiguates, commodifies and thus depoliticizes ruins as polyvalent matters. We introduce the ‘ruination of museums’ as a material, discursive and affective process, bringing attention to the interrelated and conflicting modes of absence and presence in time and space. In ‘ruined museums’, museums and ruins coalesce into spatio-temporal tropes that attend to complex and complicated narratives of time, space and history. In ‘ruined museums’, the ossified politics of place(s) become mobilized via ‘the political’. To illustrate this conceptual proposition of the ‘ruined museum’, we engage with the 9/11 memorial museum Reflecting Absence in New York City. Through this empirical case, we hope to advance a post-foundational understanding of space that acknowledges (urban) public places as inhabited and politicized by the agency, materiality and spatiality of ghostly presences.

Museums and ruins between presence and absence

In times of economies of attention, visibility and digital hyper-connectivity on the one hand, and alleged political disenchantment, atomization and indifference on the other, one may argue that museums function as places that try to mediate these challenges. They deliver programming for the inclusion of non-audiences, they offer online content, they create spaces of encounter and exchange and invite people to participate in museum activities. While these attempts to 'activate' or 'open' the museum might point to the museums' assumed role and responsibility to serve as a public and/or democratic place (i.e. stressing their relevance as sites of contemporary societal discourse and socio-cultural transformation), museums continue to be fraught with troubling practices of (re)presenting colonial histories and artefacts, as well as providing space for the celebration of selected visibilities (i.e. marking museums as sites of continued social, cultural and racial exclusion or absence). In the context of this ephemera special issue, our aim is to put forward the notion of 'ruined museums' as a particular spatio-temporal formation that oscillates between absences and presences. These absences and presences, we argue, are situated within accelerated crises of both (re)presentation and partial (in)visibilities in public space.

Based on a post-foundational understanding of space that highlights antagonism and political difference, we aim to bring to the fore an arguably odd pair of spatial structures, scattered across urban space: museums and ruins. With the example of museums and ruins, we explore how presence and absence translate into socio-spatial structures, producing constant yet productive tensions. For this endeavor, we consider museums and ruins as two distinguishable socio-spatial structures with regards to questions of politics, the political and space. We suggest that museums aim to strengthen the existing order of things through their stable, organized and hierarchical topography, while ruins may have the capacity to challenge and change existing orders via unstable, disorganized and non-hierarchical topologies. At the same time, we acknowledge Kevin Hetherington's (1997: 215) remark that 'museums have always been heterogeneous classifying machines that aim to perform homogeneity.' With this admittedly ideal-typical conceptual scheme, however, we do in no way mean to dismiss the many historical and recent

efforts of museum scholars and practitioners to attend to social activism, (radical) democracy or community-building (cf. Janes and Sandell, 2019, Sternfeld, 2018). Instead, we strategically position the relatively more ossified notion of museums against what we call the 'ruined museum.' Based on this deliberate conceptual differentiation, we unpack the assumed binary between museums and ruins in the following way: Firstly, we trace recent trends, which discuss political engagements with abandoned buildings, suggesting that 'museumification' of ruins depoliticizes the latter by turning them into heritage sites and tourist spectacles (Edensor, 2005; Mah, 2010). Secondly, we examine the potential of politicizing museums by 'ruining' them. For this purpose, we engage with the Reflecting Absence memorial museum on Ground Zero in New York City (NYC) as an example of a socio-spatial structure that transposes a ruined form into a museum-memorial site. This site offers exhibitions and a collection of artefacts (indicative of museum functions), a commemorative architectural structure consisting of two massive 'reflecting pools', pouring water into the ground (pointing toward memorialization), which, at the same time, reminds of the death and loss that occurred in this place (signaling the ruinous character of the site). Importantly, instead of essentializing the entire ensemble as a discrete entity of 'being' a museum, a memorial, both or neither, we wrestle with the entanglements between politicizations of space, and spatializations of politics and power through what we call the 'ruined museum.' In the memorial museum in NYC, the tensions between absence and presence, between museumification and ruination come to the fore. The site makes present the absence of lost people and matter, yet it turns this loss or absence into fleeting artefacts to be encountered anew on a daily basis. In other words, Reflecting Absence is not a finished, fixed museumification of a ruin, but remains open and vulnerable to the ruination of its own museality. This spatial structure 'is' (in an ontological sense) nothing but its own absence. Against spatially or otherwise essentialist notions of museums, with the advance of the 'ruined museums', we hope to articulate new ways to conceptualize the confluences of space and politics between and across agencies, movements and standstills, absence and presence.

We employ a post-foundational negative ontology of both space and politics to think 'the political' spatially. In contrast to Deleuze-inspired ontologies,

which privilege activity and vitality, we are interested in the ontological and political positions and agencies of absence. Situated in a larger project of conceptualizing post-foundational spatial theory, which revolves around concepts such as contingency, conflict, absence and negativity, we denote negativity not as undesirable, displeasing or discomforting location or affect, but as ontological position of incommensurability and ungroundedness, which we assert is applicable to both museums and ruins (cf. Grønbæk Pors et al., 2019; Landau, 2021a). Based on our engagement with the 9/11 memorial museum, our aim is to show how 'ruined museums' reveal themselves as contested, haunted, and ambivalent. The ruined museum cannot be permanent, it never will be. With the perspective of radical political spatial theory, we suggest a notion of 'ruined museums' that allows us to not only shed light on articulations of activity or agency, e.g. collecting (or not), conserving (or not), admiring, gazing, passing-by, destroying (or not), but also to attend to notions of decay, which cannot simply be dismissed as merely passive, inert, dead or otherwise inactive.

By focusing on the relationship between absence and presence on the example of a memorial museum, we tease out how unsettled matter such as the ruined museum can unfold new modes of the agency, materiality and spatiality of absence. In other words, we foreground not only how absence affects our sense of place, but opens new avenues to attend to the contingent and complexly entangled meanings and politics of places such as museums, ruins and ruined museums. The debate about the link between absence and presence complements scholarship in ruin and museum studies; to study not only what 'is' there and tangible, but to attend to the implications of absence in places of cultural representation, narrations of history and power as well as portraying decay and loss. Our focus on absence does not simply dismiss absence as passive, inert, dead or otherwise inactive. Ultimately, by qualifying our exploration of post-foundational spatial theory as a hauntological approach, in which the ghostly implications of absence and presence play a role, we hope to open new ways to consider the politics of absence and presence in space.

Our objective in this article is two-fold: First, we develop a notion of the 'ruined museum' to initialize a discussion about the political implications of presence and absence via the example of the 9/11 museum memorial. Second,

we aim to push the parameters of absence and presence to think about space through a post-foundational approach of political difference and antagonism, as a way to advance post-foundational spatial thinking. To proceed, we briefly carve out our post-foundational approach to space and spatiality, then explore the political interconnections between ruins and museums. In what ways do museums resemble ruins? How do museums provide space for the display of processes of ruination, how are ruins musealized, and how are museums 'ruinized'?

A post-foundational approach to space

Post-foundationalism stems from a joint reading of thinkers, such as Jean-Luc Nancy, Claude Lefort, Alain Badiou, Giorgio Agamben and Ernesto Laclau, highlighting their common understanding of the difference between 'the political' on the one hand, and 'politics' on the other (cf. Marchart, 2007). While politics denotes efforts of stabilization, closure and control, the political is considered a counter-force to politics; it traverses any attempt at social sedimentation, fixation, totalization or routinization (Landau, 2019). In doing so, the political emphasizes the uncertain and contingent potential of politics, and necessarily thwarts consolidated assumptions about any 'last grounds' such as Truth, History, Science, Objectivity, Necessity or Religion. The political dislocates assumed normalcies and draws attention to the absent and ungroundable dimension of meaning and power. It causes disturbance, disorder and disruption. Some claim that the political is structurally compatible with the psychoanalytic expression of 'the unconscious' as it denotes something that cannot be symbolized by the existing/dominant order and can only be discerned in contingent ways (Pohl and Swyngedouw, 2021). Others consider the political as a spectral category with reference to Jacques Derrida. Marchart (2007: 163), for instance, points out that post-foundational political thinking is a form of 'hauntology', as it senses the political only through symptoms that both reveal and hide the truth of the repressed. The political thus never appears in-itself, for itself, but only through the cracks and limits of politics – the political 'is neither living nor dead, present nor absent: it spectralizes' (Derrida, 2006: 63). Post-foundational thought takes difference to an extreme to keep open the crumbling certainties about reality, religion, science and truth, brewing in multiple crises. Post-foundationalism

as theory, methodology and political practice departs from the assumption that there 'is' no ground, necessity or objective rationale from which to justify human existence or political action, but that it is rather from absence that any attempt at social life, society or 'politics' can be constructed. Briefly, as Marchart puts it (*ibid.*: 169), 'not "everything is political", but the absent ground/abyss of everything is the political.'

Most of the works that have recently aimed at conceptualizing post-foundational thinking have neglected spatiality and partially also materiality at the cost of theorizing politics or the political (cf. Marchart, 2007; Marritila, 2015; Paipais, 2017). At the same time, those accounts who confront post-foundational thinking with space often localize concrete political protests in contested (urban) spaces (cf. Enright and Rossi, 2018; Hou, 2010; Mayer et al., 2016), but might not push conceptual categories beyond their empirical application. As part of a larger project to think about the implications of post-foundational theories of space (Landau et al., 2021), we are concerned with the spatial expressions of politics and the political. We investigate the ways in which moments of the political can be conjured via ma(r)king absences rather than merely reifying expressions of power and presence in articulations of politics. To further increase awareness that the political must be considered in spatial terms, we extend Swyngedouw's (2014) and others claim that space for those who have no place in the social order (i.e. no or only temporary presence) must be created, conceptualized and attended to. We mobilize political difference by going beyond a merely metaphorical use of space, or rather, aim to stretch the limits of this metaphor. While we agree with the post-foundational diagnosis that space constitutes 'a mode of political thinking' (Dikeç, 2012), we elaborate on the meaning of post-foundationalism as a mode of *spatial* thinking. The starting point of our investigation rests on the relationship between topographical and topological approaches to space, which have emerged in human geography in recent years (cf. Martin and Secor, 2014). While topography is considered as the spatial realm of fixity, surface and territory – often subsumed under the notion of Euclidian space –, topology stands for spatial thinking that allows to replace sharp borders with fluid and relational boundaries. Topology traverses the fantasies of spatial ordering by pointing to multiple and incommensurable spatial components situated in one and the same place (Blum and Secor, 2011). With regard to

political difference, politics is grounded in topographical space, whereas topological space activates (and is activated by) the political. Topology dismisses the allegedly solid grounds of tropes such as 'the city' or 'the state' and instead opens the door for the spectral present absences that unsettle topographical figurations (Secor, 2013). In short, we inquire about the spatial dimensions of post-foundational thinking with the aim to understand space as structured by (political) difference to gain insight into the always-already contested and potentially haunted dimensions of both politics and space. Thus, our approach differs from vitalist Deleuzian approaches to space via topology (cf. Cockayne et al., 2020), because our notion of space departs from the assumption of a unstillable lack of absence of last grounds.

In the following, we demonstrate how conceptual differences between politics and the political can advance an understanding about the interpenetrating functions and places of museums and ruins. In this schematic framework, we position the process of museumification within the realm of politics, while we consider ruination as a process related to the realm of the political. Again, we subsume memorials and museums within the former conceptual category (and simultaneously acknowledge and encourage attempts by both museum practitioners and theoreticians to make and think museums as spaces of the political). However, to advance a difference-oriented framework of space and politics, we explore the ways in which these two spatial figurations, museums and ruins, refer to politically different realms of the social production of meaning and memory. In this complex tension between museums as hinged on the realm of politics and ruins as lingering in the realm of the political, we push for a post-foundational consideration of thinking the politics of space through absence and conflict to ultimately sharpen notions of space, spatial analysis and practice as inherently unsettled, negative and ungrounded. For this endeavor, we borrow from ruin studies an understanding of ruins as capable to unlock a topological 'metaphor for the erosive, unpredictable aspects of human memory' (DeSilvey and Edensor, 2013: 471) by contouring a political topology of ruins, depoliticized via museumification. We sketch museumification as an attempt to master the past and deprive the ruin from its instable and contingent spatiality by filling its constitutive void with prescribed and monolithic meaning. Subsequently, we examine the museum memorial site *Reflecting Absence* as an example of a 'ruined museum', which

breaks with the logic of museumification by capturing the topology of the political in a museum-like spatial urban context.

Museumification and the realm of politics

According to the International Council of Museums (ICOM), established in 1946, a museum is a 'non-profit, permanent institution in the service of society and its development, open to the public, which acquires, conserves, researches, communicates and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education, study and enjoyment' (ICOM, 2019).¹ Distilling from these five definitional functions of museums, the museum appears as a discursive and material-spatial formation, which provides a platform for the narration and display of historical artefacts, events and objects. Against this background, Theodor W. Adorno (1967: 175) refers to the museum as the 'family sepulchre of works of art', while Maurice Merleau-Ponty (Johnson, 1993: 99) sees the museum as a 'meditative necropolis.' Foucauldian museum scholars have framed museums as heterotopic spaces, which conserve and cultivate notions of knowledge in line with hegemonic apparatuses (Bennett, 2009; Hooper-Greenhill, 2015). Scholars of so-called 'new museology' have long called for a more process-oriented and malleable understanding of museums as sites of contestation and plurality (Karp et al., 2006; Karp and Lavine, 1992), having situated museums as contact zones (Clifford, 1997; Pratt, 1991) to accommodate difference and conflict. Recent museum accounts have conceptualized museums as radical, haunted and disobedient sites (Message, 2018; Sternfeld, 2018) and places with geographies of their own (Geoghegan, 2010; Macleod, 2005). To this day, museums are arguably widely conceived as grounded or materialized spatial structures and primarily considered as places to conserve narratives of power and to discipline, regulate and govern behavior (Bennett, 2009; Luke, 2002). Put differently, museums predominantly appear as more or less permanent and spatially fixed formations with walls, outsides and

¹ Please note that ICOM is currently engaging in a debate about renewing the official definition of museums, including concerns for social and environmental justice, equity, and a more political backbone:
<https://icom.museum/en/activities/standards-guidelines/museum-definition/>
 (cf. Landau, 2021b).

boundaries of some sort, however movable, flexible or fluid these walls may be.

Scholars working on ruination often refer to ‘the museum’ in rather dismissive terms, highlighting its potential to trigger a ‘commodification of memory’ (Edensor, 2005a: 126–139). Memories are commodified as soon as they are no longer part of the subject but externalized and inscribed into an object, such as a museal artefact. While museum scholars surely attend to the contested nature of exhibition-making and objecthood in museums (cf. Macdonald 2003; Martin, 1998; Reilly and Lippard, 2018), in light of the conservational function of museums, ascribed by above ICOM definition, the commodification of history, memory, memories and the past might take place, quite literally, in museums (cf. Ashworth et al., 2007 for a contrary account, arguing for the need to pluralize the past in museums). In sum, despite assumptions about museums’ rigidity or the diagnosed death of the museum (Grenier, 2013), some museums increasingly self-reflect their institutional stability or place, for example, via initiatives of story-telling in the museum to de-colonize (Lonetree, 2012) and detox (Wajid and Minott, 2019) their very institutions.

If the museum is considered a stable place which can steward and uphold historical artefacts and its related stories and sentiments over time, across generations and political regimes, this place evokes a sense of spatiality we discussed as topographic (cf. Hetherington, 1997 for a unique analysis of museum topology). Topographic museum spatiality would order, separate, categorize and classify historical and cultural artefacts, including memories. As Caitlin DeSilvey (2017: 32) puts it, ‘acts of counting, sorting, stacking, storing, and inventory convert things from the category of stuff to the status of museum object.’ The museum as a place of conservation and display can fixate and ossify individual memories from their embodied, psychic, affective, and overall haunted context, and might instead offer educational strategies to convey one version of historical turmoil and past rather than many. In short, museums as places might present a supposedly uncontroversial and solid surface of History, seemingly aligning with the mandate to educate, communicate, research and inform. This ordering aspect, which has been described as the most primordial function of museums (te Heesen, 2015), thus aims to reduce complexity, confusion, and chaos for the sake of establishing

an order and hierarchy of meaning. Despite running the risk of turning into an ultimate site of ‘nostalgia industry’ (Edensor, 2005a: 127), museums select and discriminate to show a certain dispositive of the past, while necessarily excluding, or with more violent consequences, neglecting, deprivileging, suppressing, censoring, criminalizing, condemning or not giving room and time to others.

In museum practice and scholarship, studies have shown the work of activists that aim to question the museum as a hegemonic space, which might retain and reproduce dominant narratives about who and what matters. Activist museums have, for example, highlighted the role of museums in providing local communities during and after environmental or political conflicts, in fights against racism, sexism and homo- and trans-phobia (Carvill Schellenbacher 2017; Janes and Sandell, 2019). Put differently, empirical case studies of museums have illustrated how museums have been transformed into sites of political contestation. In addition, museums’ capacities to document, exhibit and thus inform and sensitize the public about conflict and activism have been researched (for an overview, cf. Landau, 2021b). Despite these potentially politicized positions and operations of museums, however, the general understanding or definition of museums seems to consider the latter as public institutions with prescribed functions and mandates to be managed rather than places of irreducible contingency and conflict (Sandell and Janes, 2007; Lord and Lord, 2009). With regard to our post-foundational framework of political difference, museums appear as places of politics rather than the political. In short, the museum might appear as a site of abundance rather than lack (Tønder and Thomassen, 2005), or presence rather than absence. In the museum, antagonism that wages in the realm of the political is to be tamed via the politics of display, (re)presentation and pedagogy, however contestable those may be. Ultimately, with regards to the hauntological dimensions of politics and space, there might not a lot of room for ghosts in museums, for haunted counter-voices, non-conforming, suppressed and a-normalized bodies, stories and knowledges, even though they most definitely linger in the walls ornamented with relics of the past (Sternfeld, 2018; Ward, 1995)– let alone the overwhelming parts of collections, which remain unshown to the public (Macdonald, 2002). In sum, while the spatial structures of museums manifest in significantly different

ways, the majority of museums in their currently contracted states might appear as topographical spaces of politics, which set out to establish order, access and knowledge to preselected forms of knowledge and power.

Ruination and the realm of the political

In contrast to our positioning of museumification as arguably ordered, ordering and more or less coherent trope, 'the ruin's positivity depends on what it does not have – completeness, full form, order' (Cairns and Jacobs, 2014: 168). While the somewhat archetypal museum described in the last section is geared towards a stabilization of 'History'/'Memory' as seemingly monolithic forces that would create reliable, solid, uncontested or even objective narrations of the past as 'Past', it remains questionable whether the ruin can be considered an 'object' in the first place. As philosopher Mladen Dolar (2017: n.p.) puts it: 'What kind of thing is a ruin? The ruin is an object, which is the rest of an object. It is by definition a partial object, part of an object, a damaged object...it's less than an object. It is an object minus, a minus inscribed and included in the object.' As an 'object minus', the ruin is structurally fragmented, incomplete, and already includes its own negativity. Thus, the ruin is not so much understood as an object organized around a defined set of positive properties or functions, but rather as an object organized around a void (Gordillo, 2014; Pohl, 2021). While our understanding of ruins foregrounds the negativity and immateriality of ruins, we acknowledge that other approaches in ruin studies focus on ruins' material dimensions, spilling into dynamics of urban decay and, accordingly, call for an engagement with ruins with regards to 'what they are' (Edensor 2005b; Pétursdóttir, 2016).

The fascination of ruins, which has culminated in prominent signifiers such as 'ruin lust' or 'ruin porn', stems from the fact that dilapidated places usually do not appear in typically capitalist urban environments. For most city dwellers, the abandonment of residential areas, factories or even skyscrapers do not play a significant part of their everyday life. In the past, ruin scholars have pointed out that ruination should not be understood as simply a marginal phenomenon or case of exception, but rather as an ontological dimension inherent in every building: 'Every building at all times is in the

process of ruination' (Edensor, 2016: 349). Processes of conservation and restoration actively prevent built environments from making decline and degeneration visible. But as soon as these 'ontic', restorative and in a way positive processes can no longer be guaranteed, first cracks appear, and decay sets in. In post-foundational terms, ruination can be understood as the absent ground of every building, matter or space; ruination is a constant threat and possibility that persists in the oscillations between stabilization, closure, control and emancipation.

Accordingly, we consider the ruin as an open and vulnerable object, in which everything (no matter how unpleasant or inappropriate) can claim and maintain a place: 'Ruins foreground the value of inarticulacy, for disparate fragments, juxtapositions, traces, involuntary memories, uncanny impressions, and peculiar atmospheres cannot be woven into an eloquent narrative. Stories can only be contingently assembled out of a jumble of disconnected things, occurrences, and sensations' (Edensor, 2005c: 846). Since there is no authority that manages or masters the ruin, it turns into a prescribed site for memories that are not consciously remembered, but 'emerge out of the workings of the unconscious' (Edensor, 2005a: 143; cf. Pohl, 2021). Sigmund Freud (1961: 69–71) referred to the ruin as an analogy for the unconscious, because it is impossible to clearly distinguish the past from the present. Just as in the unconscious, different contradictory elements topologically coexist; regardless of their potential separation in time and space; in the ruin, a variety of different temporal and spatial layers cohabit in one and the same object (Blum and Secor, 2011). Memories arising from ruins therefore often have an uncanny effect: 'We encounter an object that, while still persisting in space and time, is displaced from its native context and so points to an elsewhere that is no longer' (Trigg, 2009: 29). The ruin evokes the familiar and the strange at the same time. Moreover, the ruin is haunted, a hauntological object par excellence, because in it, history is not simply externalized but topologically bound to the present (and future), so that the past can find its way into the present in somewhat unregulated ways (Edensor, 2001; Pohl, 2020). So, in other words, ruins are inhabited by past subjects and objects of meaning, power and desire, by ghosts, which are impossible to grasp and experience, yet penetrate the meanings, places and politics of ruins.

As ruins openly engage with ghosts, they might contribute to a ‘politics of memory’ (Derrida 2006: xviii), in which history is not stable, enclosed and controlled, but encountered in its precarious, contingent and affective relevance for the present. While various scholars in the recent past have referred to ruins as ‘political counter-sites’ (DeSilvey and Edensor, 2013: 469), offering a wide-ranging critique regarding ‘ways in which urban space is produced and reproduced’ (Edensor, 2005a: 17), post-foundational concepts such as lack, negativity and absence might offer further analytical avenues to engage with the political nature of ruins. Against the background of counter-hegemonic ways of memory-making, and memorialization, the ruin might open spaces for those specters, who might not have (or have had) a place in organized museum spaces before (again, some radical museums have been working to open museums and make room, places and times for these excluded voices, perspectives, traumas, and ghosts). As the ruin disturbs, disorders and disrupts every idea of mastering the past by pointing to the impasses unfolding from topographically ordered spaces, a ruinous analytic might advance a radical conceptualization of museums. In Derrida’s (1987: 92) words: ‘A piece of waste land [terrain vague] has no fixed limit’.² The ruin therefore breaks down the logic of spatialized routine and power, located in the realm of politics, and offers a place for the political in its radical topology.

Museumification of ruins

Since the ruin reminds us of losing mastery over socio-political realities, it is not surprising that ruins are frequently turned into heritage sites, tourist destinations, spectacles, and objects for cultural and historical consumption. We consider these processes as ‘museumification’ of ruins. Scholars have emphasized that processes of museumification are not bound to museums’ institutional setting; they ‘have no geographical limits and their essence is not based on technical or institutional aspects’ (Aykaç, 2019: 1247). However, within the last years, ruins have been considered as a preferred site for museumification (cf. Mah, 2010: 401). Museumification primarily refers to a

² The term ‘terrain vague’ denotes an ‘abandoned space’, which is defined by ‘emptiness, absence, but also promise, the space of the possible, of expectation’ (Solá-Morales, 1995: 119).

strategy of official memory-making that uses the ruin as a rem(a)inder of a particular moment in history. In this context, ruins are perceived less as objects embedded in specific social realities, but appear as historical landmarks from which we learn about a time utterly different from the present. Museumification allows to position ruins as symbolic references to an imagined past, often evoking images of a *better* past. Illustrative of this nostalgic trend is Michigan Central Station in Detroit. When it opened in 1913, Michigan Central Station was the tallest train station in the world, Detroit being one of the most prosperous and wealthiest US American cities of the 20th century. In the wake of the crisis of Fordism and political riots motivated by racist police behavior in 1967, Detroit gradually shrank by more than half its population. 75 years after its opening, the last train left the train station – and the abandoned train station became a Detroit icon, a ‘mocking symbol of its lost greatness’ (LeDuff, 2013: 81). While Detroit was flooded with post-industrial ruins at the time, no other ruin has served as a signifier to create an imaginary vision of Detroit’s former glory just as Michigan Central Station, allowing local citizens to yearningly long for a different time (Pohl, 2019). To fulfill its function as a sentimental remainder of economic vitality, the museumification of ruins such as Michigan Central leads to ‘an associative imperative to arrest decay, hence, to freeze time’ (Edensor, 2005a: 133–134). Museumified ruins are often carefully restored and preserved to stay in shape³, to represent a specific notion of a past, just as museums which exhibit artefacts of the past. One could also argue that they are lifted into a mode of standby (i.e. not fully functioning or ‘on’, but also not entirely abandoned or ‘off’). Throughout the last decades, millions of dollars have been invested in the maintenance of the Colosseum in Rome, to name another famous example for the museumification of a ruin, which have partially put processes of decay, erosion, and disintegration on hold, because ‘in order for the object to function as a bearer of cultural memory, it must be protected in perpetuity’ (DeSilvey, 2017: 32).

3 In the case of Michigan Central Station, it is worth noting that the local interest in the ruin increased significantly at the moment when it was fenced and sealed off for preservation. However, the peak of its museumification is ongoing, since it is currently subject to a massive renovation process (for a more extensive discussion, cf. Pohl, 2019).

Museumification is an ‘institutional and discursive means of past-mastering – a process with which to effect a form of depoliticization, in relation to a highly politicized and contested heterotopic space’ (Connor, 2017: 131). The museumification of ruins aims to master the past by turning the ruin into a solely historical matter – discursively and materially speaking. Similar to museum objects, objectified ruins are not to intrude social realities or provoke, unleash or encourage unpleasant memories about the past. Museumification aims to bury the unconscious, wants to dry up the ghosts who inhabit ruins and transforms unequivocally one-dimensional objects. With respect to the post-foundational difference between the topography of politics and the topology of the political, the museumification of ruins can be understood as an attempt to impose limits on the political topology of the ruin, dragging it into a topography of museumified politics. Museumification tries to provide coherence, to turn ruins into functional places or surfaces, held together by particular modes of institutionalization, (re)presentation and regulation. The museumification of ruins follows a ‘politics of conservatism’ (Edensor, 2005a: 131), through which ruins gain fixed meaning and commodified value. Instead of constituting counter-sites to commodified memories, ruins then might articulate themselves as ultimate hotspots for the commodification of memory. The reason why places such as Machu Picchu, Luxor, or Pompeji have become popular global tourist attractions is that all these sites seem to allow their visitors to gain knowledge about a ‘lost’ world, seemingly separate from ordinary or ‘real’ realities. In ruins, we experience memory as being located *outside* of ourselves, distinct from us, elsewhere, as something we can purposively enter and leave, and thus consume whenever ‘we’ want to.

The 9/11 Museum Memorial – Reflecting Absence

After examining the depoliticization of the ruin through museumification, we shift focus to investigate a possible re-politicization of the museum through ruination. Recent scholarly interest in discussing the materiality, spatiality and agency of absence informs our conceptual ambition (cf. Edensor, 2019; Frers, 2013; Ginn, 2014; Meier et al., 2013; Meyer, 2012; Meyer and Woodthorpe, 2008). We sketch the potential of a political re-reading of the museum as ruined, with the goal to (1) contribute to ruin studies’ engagement

with the challenges of museumification and (2) to advance museum studies' efforts to destabilize seemingly monolithic notions of 'History'/'Memory' towards polyvalent understandings thereof, by means of counter-hegemonic practices and interventions. In the overall discussion about the political prospective of absence as organizing matter and politics, we suggest the notion of the ruined museum to address the inherent non-fixity, contingency and ghostly nature of places that identify as or resemble museums. Although these conceptual threads would extend to ruined memorials, ruined ruins and other spatial formations, we anchor this contribution in critical museum studies and ruin scholarship while acknowledging, and welcoming spillover effects for studies on contested heritage, memorialization and curatorial strategies.

American journalist Adam Gopnik (2014) points to the interferences between the function of museums and memorials at the 9/11 site:

What happened on 9/11...was a crime deliberately committed in open air as a nightmarish publicity stunt, one already as well documented as any incident in history. We can't relearn it; we can only relive it. This means that, if there is an absolute case for a memorial, the case for a museum is more unsettled. Museums first preserve, and then teach, and, although a few grimly eloquent objects are preserved here — a half-crushed fire engine, a fragment of the pancaked floors from one tower — nothing is really taught. ...Those who lack faith in fixed order and stable places have a harder time building monuments that must, in their nature, be monolithically stable and certain...

While some of these observations can easily be called into question, such as the general dismissal that the 9/11 museum does not teach anything, or that monuments generally lack order, what is worth noting in the context of our argument is the intricacy of museums and memorials. In short, the 9/11 complex is a strange place, not quite a museum, not equivocally a monument, a still-living, necessarily haunted creature, which we conceptualize as 'ruined museum'. Overall, we argue that the ruined museum changes our thinking about ruins, museums and memorials as places imbricated in complex pasts, to acknowledge the entangled politics of these symbolical and material infrastructures as ambivalent. This conceptual proposition shall also spark conversation about counter-hegemonic futures for ruinous sites. Briefly, the ruined museum encourages us to think of museums as always-already imbricated in ruination, potentially inhabited by ghosts, and thus less

controllable than often imagined. In addition, it shall promote further understanding of ruins as only-ever partially prone to an ossified narration of the past.

Meyer and Woodthorpe (2008) discuss the conceptual interpenetrations of museums and cemeteries, reiterating the necrophilous associations of museums mentioned earlier. If we consider the museum through the lens of a cemetery, we encounter the presence of something materially absent, maybe even something beyond absence. Accordingly, all spatial configurations are charged with a particular social expectation to make *something* present in or via absence. Regardless of the concrete, differently layered entanglements between ruins, museums and cemeteries, we consider all these spatial infrastructures as spaces which can mobilize the political via the conjuration of absences and presences. Meyer and Woodthorpe (*ibid.*: 6) specify that 'absence occupies a space' via specific objects which exude situated forms of agency. This agency, as well as its function and form, is contested because it is haunted by pasts, presents, possible and desirable futures, potentials, and by the political. Brief, museums and ruins (and cemeteries and memorials, for that matter) can become sites for and of the political because they affect matter with regards to how memory, time and place are being displayed, experienced, felt, conserved. In this understanding of both absence and presence as active, Maddrell (2013: 505) considers absence as 'given presence through the experiential and relational tension between the physical absence (not being there) and emotional presence (a sense of still being there), i.e. absence-presence is greater than the sum of the parts.' In this beyond-zero-sum-game scenario, the ruined museum activates absent presents, absent pasts, present absences, present pasts, thus conjuring the void spaces that cannot be fully grounded or filled, as the ruined museum remains inhabited by ghosts.



Figure 1: One of the 'reflecting pools' at the 9/11 Museum Memorial, Photograph: Author

So, how and where do we find these ruined museums? In what ways do they differ from conventional museums (or ruins or memorials)? Do they *feel* different? Do they look different? What are their spatial features? To ground our conceptual discussion, we turn to the 9/11 memorial museum complex, including the *Reflecting Absence* installation by Israeli-American architect Michael Arad and landscape architect Peter Walker. The formation was selected in an international design competition which included more than 5,200 memorial proposals from 63 countries (Figure 1; 9/11 Memorial, 2019a). On the official website, the memorial is treated as a separate spatial, communicative and cultural unit from the 'official' museum. We subsume this functional split between the 'museum', whose official name is *9/11 Memorial Museum*, and the *Reflecting Absence* 'memorial' in our investigation, following James Young (2016: 328), one of the jury members to select the architectural design for the site, who urges to acknowledge the inseparability and interdependency of history and memory. We explore the political and ruinous potential of thinking the memorial *as* museum, the memorial-museum *as* ruin, the ruin *as* museum – briefly, the overall spatial arrangement as ruined museum. Young (*ibid.*) compares the mandates of *Reflecting Absence* and the 9/11 museum with the Holocaust Memorial to the Murdered Jews of Europe in Berlin as 'both commemorative and informational, a site of both memory and

of history, each as shaped by the other.’ Framed by Young (2016: 325) as ‘counter-monument’, which sets out to ‘break the conventional rules of the monument’, *Reflecting Absence* is unassertively positioned as an ‘exceptional’ site.

Since all the debris and destroyed materials have been cleared, one might wonder whether we can speak of a ruin in the context of this memorial at all? *Reflecting Absence* surely is not a ruin in the narrower sense of the term (i.e. a left-over architectural form, a skeleton of a formerly solid building). However, in line with our ruinous ontology outlined above, we consider the memorial as an ‘object minus’ as elaborated above. The object minus includes a minus/lack in its objecthood, thus revealing its inherent incompleteness, lack, or simply the impossibility of full presence. The hauntological dimensions of the memorial foreground history not as something that happened exclusively and definitively in the past, but as something leaving traces in the present (and in the future, too; cf. Sternfeld, 2018). While traces attempt to present some of the lingering present of the past, they also indicate the absence of present or presence. So, whatever happened in the past is not gone or done with for good, but lingers and conjures affects in the here and now. Hence, we mobilize the memorial museum as a ruined museum.

While distinctions between memorial museums and memorials remain ambivalent, if not redundant, we argue that, in the particular case of *9/11 Memorial Museum*, including the *Reflecting Absence* site, the uncontested presence of a ‘real’ museum leverages a radical understanding of socio-spatial structures. The ruined museum commemorates history in the museum, memorial, ruin or the hybrid form of any or some of these in the ghostly trope of the ruined museum.⁴ With regards to *Reflecting Absence*, Karen Wilson Baptist (2015: 3) argues that there is an ‘ephemeral presence of the deceased on the memorial site’. She highlights that ‘the victims of 9/11 may remain tangibly present, for they are dispersed throughout Manhattan as DNA in the earth, dust on a windowsill, flotsam pulverized beneath a scientist’s

⁴ The proposal of an International Freedom Center (IFC) was even more controversial, which would have taken an explicitly normative stance on advocating for ‘the human struggle to secure, protect, and exercise freedom’ (Watts, 2009: 413).

instrument' (*ibid.*: 6). Matter-of-factly, some unidentified human remains are stalled in the bedrock next to the memorial plaza, so that traces of the people and buildings who died at the attack still linger on the very site of terrorism. In addition, more than 10,000 everyday objects have been gathered in the museum to commemorate the 2,977 casualties of the terrorist attacks.

In her essay *aesthetics of absence*, Maria Sturken (2004) reflects on the implications of the immense amount of dust which arose from *Ground Zero*, and the vanishing of a large variety of larger and smaller-scale material objects and debris. Unlocking Yaeger's (in Greenberg, 2003) understanding of 'rubble as archive', Sturken evokes both the documentary and logistical dimensions of dust and rubble. However, beyond potential 'functions' of dust, the actual material rem(a)inders on site are much more complex, and potentially escaping any clear purpose or meaning. Objects are present in their absence, literally absent because they have been disposed as rubble, but they are also still whirling around. Maybe, the commemorative matter (i.e., destroyed office equipment such as computers, chairs, desks and uncountable stacks of paper, as well as steel, concrete, glass and aluminum) still lingers in modes of absent presence, present absence, or present past. The particular spatial (dis)embeddedness or hauntedness of the site is two-fold: First, there is the (dis)connection between heterogeneous matters, using heavy, imposing materials like bronze, metal, marble and glass for the memorial and museum architecture, and more ephemeral matters such as air, trees and water. Second, there is the (dis)connect with the everyday, re-emergent uses of the neighborhood as commercial areas in downtown New York. Because the memorial is partially located at street level, the official 9/11 Memorial website (2019b) argues that it:

allow[s] for its integration into the fabric of the city, the plaza encourages the use of this space by New Yorkers on a daily basis. The memorial ground is not be isolated from the rest of the city; they will be a living part of it.

While this description emphasizes the 'integrative' and 'vitalizing' elements of the museum memorial complex, in our reading of the museum through the ruin (and vice versa), the lines between absence and presence, life/vitality and death, human and more-than-human elements become ambiguated. In short, the specters of 9/11 are still haunting the site, either as corporeal remains or

traumatic memories, unfinished or untold stories. In psychoanalytic terms, the site could be read as a place where 'the repressed' constantly 'returns', finding its way (back) into everyday life. Put differently, the ghosts on site are 'alive' and well. *Reflecting Absence* has a strange, even uncanny, contemporaneity to itself – every-busy New Yorkers rushing through and by during their daily commutes; tourists dwell and pass-by, gaze, commemorate. Ultimately, as Steve Pile (2005: 253) puts it, 'New York remains haunted by the events of 9/11, and this matters.'

Based on this, we could argue that *Reflecting Absence* unlocks a topological notion of space. Instead of unfolding a topographical order, the memorial museum itself folds into a complex spatiality. The intertwining of over- and underground exposure and space to commemorate and experience absence and presence, the tension between exterior and interior elements, the mixture of visible and invisible spaces, accessible and inaccessible parts – all these spatial considerations make it impossible to obtain a neutral or fixed standpoint, a solid ground from which it would be possible to view the memorial as a 'whole'. Parts of the memorial are 'on', others 'off'. The site itself stands by between modes of activity, activation and passivity. While the memorial commemorates the former solid grounds of the World Trade Center, once 415 and 417 meters tall (1,368 and 1,362 feet), the memorial also stands in contradiction to this former impressive height, which expanded into the sky, creating an almost phallic spatial exterior or outside. Instead, the museum, but more visibly the memorial site ungrounds its own former grounds, it pulls, 'swallows' its visitors, passers-by, standers-by into its own negative ground, into the void. The structure shoots into the ground, goes inside and visualizes only a fraction of its former height of 10 meters (35 feet). The memorial is the ultimate spatial inversion of its previous use. The black marble pools flowing into the ground are designed as emblematic of the towers' 'footprints', somewhat fetishizing the desire to mark the spatial leftovers of the Twin Towers (Sturken, 2003: 319). While the suggestion to incorporate old 'shells' or 'skins' of the towers were ruled out, the terminology of the 'footprints' not only humanizes the towers' 'feet', but also creates an understanding of their structural anchorage and groundedness.⁵ In sum, the

⁵ Heath-Kelly (2018) has powerfully drawn attention to the problematic implications of the anthropomorphization of the trees at the memorial site.

monument quite literally represents a void, ungrounds assumed former grounds, opens a wound falling into an ungroundable ground of pain and loss.



Figure 2: Original steel beam of the former World Trade Center inside of the 9/11 Museum, Photograph: Author

The museum, which opened almost three years after the memorial was inaugurated in 2011, explicitly aims to document the history of the terrorist attacks and its contemporary impacts in ‘monumental spaces’ (9/11

Critical of a revitalizing and vitalist account on the commemoration of human loss by non-human actants, Heath-Kelly points to the symbolical endowment of vegetal matter with an ‘ability to speak’ and a ‘capacity to heal’, which might (over)responsibilize non-human matter. In light of the prominent presence of water at the memorial, it might be worth exploring the blurring lines between nature and culture in memorialization via a hydro-feminist lens. Taking water as matter that remembers and evokes memory (Neimanis, 2017), which is excessive and lacking at the same time might unlock an antagonistic account on ambivalent, ruinous matter. Understanding this matter as viscous and porous (Tuana, 2008) might further saturate the hauntological and topological hinges of a post-foundational approach to space.

Memorial, 2020). You enter the museum via an overground entry pavilion designed ‘as a bridge between the memory of past events and the promise of renewal through reconstruction’ to descend to the underground exhibition space (ibid.). You literally enter the museum via an empty space, the museum being situated in the spatial void of the former World Trade Center (Figure 2). The museum contains conventional features such as ticketing (26 US dollars for adult admission), and the museum’s overall self-presentation in many ways reminds of classical museum settings of exhibition-making and knowledge communication. Yet, there is also something persistently unsettling about the museum. It resembles what Adrienne L. Burk (2007: 952) calls ‘counter-hegemonic monuments’, which are ‘designed to unsettle social relations, rather than provide closure.’ The museum ‘recognizes the power of place’, which both implicitly refers to its solid, topographical notion of space, but also points to the ungroundable, topological physical and discursive location of its site. In short, the museum presents itself as both a conventional museum and a site destabilized by its inescapable and present past, its ruinous character. Because it is open to its own historically contingent character for both the commemoration of the past and the future, the site is open and vulnerable to contested understandings of how and where and based on what remainders to commemorate the loss and death that occurred at the site. In sum, the museum memorial complex has shown itself as a socio-spatial structure that it ‘is’ neither fully a ruin nor ‘is’ it a just a museum in however conventionally defined terms. It is precisely the double negation which qualifies the site as an empirical example of a post-foundational approach to spatiality. Moreover, by deducing from this real-life spatial structure, we have grounded our conceptual speculation about the intricate interrelations between museums, memorials and ruins under the term of ruined museums.

Outlook: Ghosts dancing in ruined museums

To conclude, the ruined museum does not function as a stable container of ‘History’, ‘Truth’ or ‘Time’, but a leaking space of sedimented conflicts. It is full of unresolved struggles such as disharmonious interpretations of historical events and narratives. The ruined museum is neither fully grounded nor definitively established. It hovers between absences and presences with regards to both contemporary and historical occurrences that transform a

museum into a museum, but also exceeds reified notions of 'History', 'Memory' and 'Time'. The ruined museum leaves the narrow realm of politics behind and instead heads towards the ungroundable realm of the political. The ruined museum is a contested place, articulated from ontological negativity and incompleteness, haunted by multiple temporalities and differently situated human and more-than-human agencies. The ruined museum is not one unitary place with solid foundations (now less than ever, although it also never has been), it is no object we can easily enter, possess or master with a prescribed function or use (let alone use value). The ruined museum is probably not even a very visitor-friendly environment, to be honest, as these museums prefer dis-organization over order, excess over systematicity, ghosts over money, absence over presence. If the ruined museum constitutes an object at all, it is an 'object minus' (Dolar, 2017) or an 'impossible' one (Marchart, 2013). We close these reflections by looking back on the ways in which the notion of ruined museums might provide possible approaches to politicize understandings of space. We mobilized two interdisciplinary discourses on the spatial infrastructures of museums and ruins to conjure the notion of the ruined museum, which attends to the haunted and contested materialities, spatialities and agencies of absence. Maybe, the concept of ruined museums will backfire, in a non-violent manner, to re-think both approaches to museums and ruins, and their respective understandings of haunted time, topological space and the politics of space and memory.

We hope that the conceptual advance of the ruined museum is beneficial and instructive for a variety of interdisciplinary debates in spatial, political and museum theory. With regards to museum research and practice, we might have unleashed some ghosts into the dialectics of presence and absence to be negotiated in museums to advance the acknowledgement and critical engagement with history, politics of memory and memorialization as inherently conflicted. We are aware that the seemingly binary positioning of museums as spaces of politics, and ruins as spaces of the political, might have withheld more speculative and experimental approaches to 'other' museums, such as possible museums, or post-museums (Steiner and Esche, 2007; Watermeyer, 2012). However, in line with radical museologists such as Bishop and Perjovschi (2014) or Nora Sternfeld (2018), we hope that the notion of the

museum as a ruined place might motivate museum scholars and practitioners to make, quite literally, more space and time for polyphonic and necessarily antagonistic positions about exhibitions, politics of (re)presentation and (re)collection. With regards to the spatial framework of ruined museums, we have aimed to challenge the museum's seemingly topographical position, which primarily offers space for organized and hegemonic knowledge (e.g. strategically targeted educational, diversity, outreach and community programs). We have worked towards an understanding of museums as topological spaces which endure, encourage and exhibit the complexity and chaos of historical pasts and meanings. Ultimately, since the definition of the museum is currently undergoing transformation – revealing deeper-seated conflicts about what a museum is actually assumed to 'be' (Landau, 2021a) – which has subtly revealed mindfulness about the role of social conflicts and struggles, we hope that the notion of ruined museums contributes to conceptualize museums as contested public spaces. With this paper, we wish to bring forth some preliminary conceptual tools broaden our understanding that both ruins and museums are to be sensed and theorized not only in the most obvious places of their assumed place, form and function, but beyond, besides and below themselves – briefly, to look for museums not only in museum buildings and for ruins not only in ruined places. Ultimately, with this perspective, we hope to initialize a debate about the multiple opportunities that lie within post-foundational political thought to conceptualize the antagonistic nature of space.

references

- Adorno, T.W. (1967) *Prisms*. London: Neville Spearman.
- Ashworth, G.J., B.J. Graham and J.E. Tunbridge (2007) *Pluralising pasts: Heritage, identity and place in multicultural societies*. London, Ann Arbor: Pluto Press.
- Aykaç, P. (2019) 'Musealization as an urban process: The transformation of the sultanahmet district in Istanbul's historic peninsula', *Journal of Urban History*, 45(6): 1246-1272.

- Baptist, K.W. (2015) 'Incompatible identities: Memory and experience at the National September 9/11 Memorial and Museum', *Emotion, Space and Society*, 16: 3-8.
- Bennett, T. (2009) *The birth of the museum: History, theory, politics*. London: Routledge.
- Bishop, C. and D. Perjovski (2014) *Radical museology or, 'what's contemporary' in museums of contemporary art?* London: Koenig Books.
- Blum, V. and A.J. Secor (2011) 'Psychotopologies: Closing the circuit between psychic and material space', *Environment and Planning D: Society and Space*, 29(6): 1030-1047.
- Burk, A.L. (2006) 'Beneath and before: continuums of publicness in public art', *Social & Cultural Geography*, 7(6): 949-964.
- Cairns, S. and J.M. Jacobs (2014) *Buildings must die: A perverse view of architecture*. Cambridge, MA: The MIT Press.
- Carvill Schellenbacher, J. (2017) 'Empowering change: Towards a definition of the activist museum' [<https://museum-id.com/empowering-change-towards-a-definition-of-the-activist-museum/>].
- Clifford, J. (1997) *Routes: Travel and translation in the late twentieth century*. Cambridge, MA: Harvard University Press.
- Cockayne, D.G., D. Ruez and A.J. Secor (2020) 'Thinking space differently: Deleuze's Möbius topology for a theorisation of the encounter', *Transactions of the Institute of British Geographers*, 45(1): 194-207.
- Connor, A. (2017) *The political afterlife of sites of monumental destruction: Reconstructing affect in Mostar and New York*. London, New York: Routledge.
- Derrida, J. (1987) *The truth in painting*. Chicago, London: The University of Chicago Press.
- Derrida, J. (2006) *Spectres of Marx: The state of the debt, the work of mourning and the new international*. London, New York: Routledge.
- DeSilvey, C. (2017) *Curated decay: Heritage beyond saving*. Minneapolis, London: University of Minnesota Press.

- DeSilvey, C. and T. Edensor (2013) 'Reckoning with ruins', *Progress in Human Geography*, 37(4): 465-485.
- Dikeç, M. (2012) 'Space as a mode of political thinking', *Geoforum*, 43: 669-676.
- Dolar, M. (2017) 'Power and the architectural unconscious', paper presented at the symposium on power in architecture, Ljubljana, Slovenia, September 21.
- Edensor, T. (2001) 'Haunting in the ruins: Matter and immateriality', *Space and Culture*, 11/12: 42-51.
- Edensor, T. (2005a) *Industrial ruins: Space, aesthetics and materiality*. Oxford, New York: Berg.
- Edensor, T. (2005b) 'Waste matter: The debris of industrial ruins and the disordering of the material world', *Journal of Material Culture*, 10(3): 311-332.
- Edensor, T. (2005c) 'The ghosts of industrial ruins: Ordering and disordering memory in excessive space', *Environment and Planning D: Society and Space*, 23(6): 829-849.
- Edensor, T. (2016) 'Incipient ruination: Materiality, destructive agencies and repair', in B. Mikkel and T.M. Sørensen (eds.) *Elements of architecture: Assembling archaeology, atmosphere and the performance of building spaces*. London, New York: Routledge.
- Edensor, T. (2019) 'The haunting presence of commemorative statues', *ephemera*, 19(1): 53-76.
- Enright, T. and U. Rossi (2018): *The urban political. Ambivalent spaces of late neoliberalism*. Basingstone: Palgrave Macmillan.
- Frers, L. (2013) 'The matter of absence', *cultural geographies*, 20(4): 431-445.
- Freud, S. (1961) *Civilization and its discontents*. New York: Norton & Company Inc.
- Geoghegan, H. (2010) 'Museum geography: Exploring museums, collections and museum practice in the UK', *Geography Compass*, 4(10): 1462-1476.
- Ginn, F. (2014) 'Death, absence and afterlife in the garden', *cultural geographies*, 21(2): 229-245.

- Gopnik, A. (2014) Stones and bones. Visiting the 9/11 Memorial and Museum. [<https://www.newyorker.com/magazine/2014/07/07/stones-and-bones>].
- Gordillo, G. (2014) *Rubble: The afterlife of destruction*. Durham: Duke University Press.
- Greenberg, J. (ed.) (2003) *Trauma at home: After 9/11*. Lincoln: University of Nebraska Press.
- Grenier, C. (2013) *La fin des musées*, Paris : Open Edition Journals.
- Grønbaek Pors, J., Olaison and B. Otto (2019) 'Ghostly matters in organizing', *ephemera*, 19(1): 1-29.
- Hetherington, K. (1997) 'Museum topology and the will to connect', *Journal of Material Culture*, 2(2): 199-218.
- Heath-Kelly, C. (2018) 'Survivor Trees and memorial groves: Vegetal commemoration of victims of terrorism in Europe and the United States', *Political Geography* 64: 63-72.
- Hooper-Greenhill, E. (2015) *Museums and the shaping of knowledge*. London, New York: Routledge.
- Hou, J. (2010) *Insurgent public space: Guerrilla urbanism and the remaking of contemporary cities*. London/New York: Routledge.
- International Council of Museums (2019) Museum definition [<https://icom.museum/en/activities/standards-guidelines/museum-definition/>].
- Janes, R.R. and R. Sandell (eds.) (2019) *Museum activism*. Abingdon, Oxon, New York: Routledge.
- Johnson, G. (1993) *The Merleau-Ponty aesthetics reader: Philosophy and painting*. Evanston: Northwestern University Press.
- Karp, I., C.A. Kratz, L. Szwaja and T. Ybarra-Frausto (eds.) (2006) *Museum frictions: Public cultures, global transformations*. Durham: Duke University Press.
- Karp, I. and S.D. Lavine (eds.) (1992) *Exhibiting cultures: The poetics and politics of museum display*. Washington: Smithsonian Inst. Press.
- Landau, F. (2019) *Agonistic articulations in the 'creative' city: On new actors and activism in Berlin's cultural politics*. London: Routledge.

- Landau, F. (2021a) '[Un]Grounding agonistic public space: Approaching Mouffe's spatial theory via museums', in F. Landau, L. Pohl and N. Roskamm (eds.) *[Un]Grounding: Post-foundational geographies*. Bielefeld: transcript.
- Landau, F. (2021b) 'Konflikttraum Museum: Überlegungen für Museumstheorie und praxis', in H. Mohr and D. Modarressi-Tehrani (eds.) *Museen der Zukunft*. N/A.
- Landau, F., L. Pohl and N. Roskamm (eds.) (2021) *[Un]Grounding: Post-foundational geographies*. Wiesbaden: transcript.
- LeDuff, C. (2013) *Detroit: An American autopsy*. New York: Penguin Books.
- Lonetree, A. (2012) *Decolonizing museums: Representing Native America in national and tribal museums*. Chapel Hill: University of North Carolina Press.
- Lord, G.D. and B. Lord (2009) *The manual of museum management*. Lanham: AltaMira.
- Luke, T.W. (2002) *Museum politics: Power plays at the exhibition*. Minneapolis: University of Minnesota Press.
- Macdonald, S. (2002) *Behind the scenes at the science museum*. Oxford: Berg.
- Macdonald, S. (2003) 'Museums, national, postnational and transcultural identities', *Museum and Society*, 1(1): 1-16.
- Mah, A. (2010) 'Memory, uncertainty and industrial ruination: Walker Riverside, Newcastle upon Tyne', *International Journal of Urban and Regional Research*, 34(2): 398-413.
- Macleod, S. (2005) *Reshaping museum space. Architecture, design, exhibitions*. London, New York: Routledge.
- Marchart, O. (2007) *Post-foundational political thought. Political difference in Nancy, Lefort, Badiou and Laclau*. Edinburgh: Edinburgh University Press.
- Marchart, O. (2013) *Das unmögliche Objekt: Eine postfundamentalistische Theorie der Gesellschaft*. Berlin: Suhrkamp.
- Marrtila, T. (2015) *Post-foundational discourse analysis: From political difference to empirical research*. Basingstone: Palgrave Macmillan.

- Martin, P. (1998) *Popular collecting and the everyday self: The reinvention of museums?* London: Leicester University Press.
- Martin, L. and A.J. Secor (2014) 'Towards a post-mathematical topology', *Progress in Human Geography*, 38(3): 420-438.
- Mayer, M., C. Thörn and H. Thörn (eds.) (2016) *Urban uprisings: Challenging neoliberal urbanism in Europe*. Basingstoke: Palgrave MacMillan.
- Meier, L., L. Frers and E. Sigvardsdotter (2013) 'The importance of absence in the present: Practices of remembrance and the contestation of absences', *Cultural Geographies*, 20(4): 423-430.
- Message, K. (2018) *The disobedient museum: Writing at the edge*. London: Routledge.
- Meyer, M. (2012) 'Placing and tracing absence: A material culture of the immaterial', *Journal of Material Culture*, 17(1): 103-110.
- Meyer, M. and K. Woodthorpe (2008) 'The material presence of absence: A dialogue between museums and cemeteries', *Sociological Research Online*, 13(5): 1-9.
- Neimanis, A. (2017) *Hydrofeminism: Bodies of water - Posthuman feminist phenomenology*. London: Bloomsbury.
- Paipais, V. (2017) *Political ontology and international political thought: Voiding a pluralist world*. London: Palgrave Macmillan
- Pétursdóttir, Þ. (2016) 'For love of ruins', in B. Mikkel and T.M. Sørensen (eds.) *Elements of architecture: Assembling archaeology, atmosphere and the performance of building spaces*. London, New York: Routledge.
- Pile, S. (2005) 'Spectral cities: Where the repressed returns and other short stories', in J. Hillier and E. Rooksby (eds.) *Habitus: A sense of place*. Sydney: Ashgate.
- Pohl, L. (2019) 'The sublime object of Detroit', *Social & Cultural Geography*, online first: <https://doi.org/10.1080/14649365.2019.1683760>.
- Pohl, L. (2020) 'Object-disoriented geographies: The Ghost Tower of Bangkok and the topology of anxiety', *cultural geographies*, 27(1): 71-84.
- Pohl, L. (2021) 'Rem(a)inders of loss: A Lacanian approach to new urban ruins', in C. O'Callaghan and C. Di Felicianantonio (eds.) *The new urban ruins*:

Vacancy, urban politics, and international experiments in the post-crisis city.
Bristol: Policy Press.

Pohl, L. and E. Swyngedouw (2021) 'The World and the real: Space and the political after Lacan', in F. Landau, L. Pohl and N. Roskamm (eds.) *[Un]Grounding: Post-foundational geographies*. Bielefeld: transcript.

Pratt, M.L. (1991) 'Arts of the contact zone', *Profession*, 33-40.

Reilly, M. and L.R. Lippard (2018) *Curatorial activism: Towards an ethics of curating*. London: Thames & Hudson.

Sandell, R. and R.R. Janes (2007) *Museum management and marketing*. London: Routledge.

Secor, A.J. (2013) 'Topological city', *Urban Geography*, 34(4): 430-444.

Solá-Morales, I. (1995) 'Terrain vague', in C. Davidson (ed.) *Anyplace*. New York: Anyone Corporation.

Steiner, B. and C. Esche (eds.) (2007) *Mögliche Museen*. Köln: Verlag der Buchhandlung Walter König.

Sternfeld, N. (2018) *Das Radikaldemokratische Museum*. Berlin: De Gruyter.

Swyngedouw, E. (2014) 'Where is the political? Insurgent mobilisations and the incipient "return of the political"', *Space and Polity*, 18(2): 122-136.

te Heesen, A. (2015) *Theorien des Museums zur Einführung*. Hamburg: Junius.

Tønder, L. and L. Thomassen (2005) *Radical democracy: Politics between abundance and lack*. Manchester: Manchester University Press.

Trigg, D. (2009) *The aesthetics of decay: Nothingness, nostalgia, and the absence of reason*. New York: Peter Lang.

Tuana, N. (2008) 'Viscous porosity: Witnessing Katrina', in S. Alaimo and S. Hekman (eds.) *Material feminisms*. Bloomington: University of Indiana Press.

Ward, F. (1995) 'The haunted museum: Institutional critique and publicity', *October*, 73: 71-89.

Watermeyer, R. (2012) 'A conceptualisation of the post-museum as pedagogical space', *JCOM*, 11(01).

Watts, L.S. (2009) 'Reflecting absence or presence? Public space and historical memory at Ground Zero', *Space and Culture*, 12(4): 412-418.

Young, J.E. (2016) 'The memorial's arc: Between Berlin's Denkmal and New York City's 9/11 Memorial', *Memory Studies*, 9(3): 325-331.

9/11 Memorial (2019a) 'About the memorial' [<https://www.911memorial.org/about-memorial>].

9/11 Memorial (2019b) 'Design competition' [<https://www.911memorial.org/design-competition>].

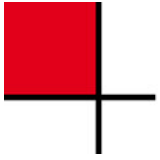
9/11 Memorial (2020) 'About the museum' [<https://www.911memorial.org/visit/museum/about-museum>].

the authors

Dr. Friederike Landau is Assistant Professor for Cultural Geography at Radboud University (NL). Drawing on post-foundational theory, Friederike is interested in understanding new modes of political mobilization and agency (Landau, 2019). More recently, Friederike has explored routes towards the post-foundational conceptualization of spatiality and public space (Landau et al., 2021). Empirically, Friederike has looked at artists' and cultural workers' interventions in urban cultural politics, their engagement in the politics of public art and critical museum-making. Email: info@friederikelandau.com

Dr. Lucas Pohl is a postdoctoral researcher at the Department of Geography of Humboldt-University Berlin (GER). He received his Ph.D. at the Department of Human Geography of Goethe-University in Frankfurt with a dissertation thesis that elaborates on a psychoanalytic approach of urban ruination. More generally, he works on the interstices between urban cultural geography, psychoanalytic theory, and philosophy with a focus on social- and spatial theory, built environments, and political action. The latest results of his research have been published in *Cultural Geographies*, *Social & Cultural Geography*, *Theory, Culture & Society* and *Housing Studies*.

Email: lucas.pohl@geo.hu-berlin.de



Dancing with a billboard: Exploring the affective repertoires of gentrifying urban spaces

Linda Lapiņa

abstract

Based on analysis of a spontaneous dance encounter with a billboard on a construction site in a gentrifying neighborhood in Copenhagen, this article examines the potential of dance as an affective methodology for engaging with urban spaces on standby. Drawing on dance studies, affect theory and feminist new materialisms, I discuss an autoethnographic vignette of the dance encounter to show how affective methodology enables attending to embodied, spatial and temporal aspects of standby as a mode of organisation of temporary urban spaces. I propose the notion of affective repertoires to capture how dance can surface the range of ambivalent, heterogeneous affects that permeate and are afforded by the 'active inactivity' of standby. I discuss how dance as an affective methodology expands the researcher's capacities to affect and be affected, facilitating knowledge production that better accommodates the ambivalence, frictions and multiplicity of urban spaces on standby. Apart from proposing the notion of affective repertoires as a prism for unraveling urban spaces on standby, the article's discussion of the potential of dance as embodied knowing contributes to the emerging research field of affective methodologies.

Affective methodology for urban spaces on standby

This article explores dance as an affective methodology for unraveling embodied, spatial and temporal dimensions of gentrifying urban spaces. These interim spaces offer a unique prism for examining the ambivalence,

frictions and heterogeneities of standby, since they simultaneously embody acceleration and suspension; change and standstill. Earlier studies have explored the multiplicity and uncertainty of interstitial, disordered urban spaces or wastelands (Edensor, 2005; Brighenti, 2013; Vacher, 2015). On one hand, as these spaces are perceived as un-safe, un-inhabited and un-productive, their unintentional mode of organisation seems to offer alternatives to modernity and utilitarianism; on the other hand, they represent a 'wasteland aesthetic' that romanticizes and commodifies urban wilderness and abandonment (Gandy, 2016). In contrast, Mortimer-Sandilands has discussed how wastelands can point 'towards a queer ecology that both emerges from and politicizes melancholy natures, incorporating the experience of a "world of wounds" into an ethical stance that resists, rather than fostering, fetish', where these landscapes foster affective experiences 'of loss and change, rather than idyll and replacement' (2010: 334-345). Consequently, the mode of standby of urban wastelands seems to oscillate between continuity and disruption, holding the potential to challenge *and* reinforce predominant ways of relating to and being in urban space.

In addition, past and present temporary activist and artist presences further augment the standby of many privately-owned vacant lots in gentrifying neighborhoods, including the one discussed in this article. Some studies suggest that these alternative uses of space offer possibilities for democratic participation, contesting prevailing norms and inspiring new urban politics (Pinder, 2008; Paiva and Cachinho, 2018). Others argue that such DIY (Do-It-Yourself) spaces might be limited to small-scale interventions that do not necessarily call for alternative forms of authority and political subjectivity (Iveson, 2013). Furthermore, studies point to how alternative uses of space for creative and/or community-building purposes can lubricate urban development and aggravate the long-term precarity of their users (Madanipour, 2018), contributing to urban branding and gentrification (Colomb, 2012). In other words, artistic and activist uses of 'empty spaces' do not necessarily challenge the spatiotemporal logics of gentrification that fluctuate between desires to preserve an authentic past and longing for improvement and progress (Kern, 2015; 2016; Valverde, 2015; Lapiņa, 2017). In short, earlier studies highlight affective ambivalence and tensions regarding the materiality and potentiality of interim spaces in gentrifying

neighborhoods, where their modes of standby can both comprise catalysts for change and reinforce mainstream urban development.

This article explores dance as an affective methodology that enabled me to feel and bring-together, differentiating-entangling (Barad, 2007, 2014) these frictions and forces of the ‘active inactivity’ of standby of urban spaces in transition. I analyse an autoethnographic vignette based on fieldnotes written after I spontaneously danced with a blank billboard in Nordvest, a gentrifying neighborhood in Copenhagen. On the night of the dance, the billboard had just appeared on a construction site that had been seemingly dormant for more than a year and a half. Even being aware of lives unfolding and affects ticking in these construction sites that were put to and afforded various temporary uses, I saw them as embedded into spatiotemporal logics of gentrification: as awaiting development. The dance offered a mo(ve)ment of dishabitation, disrupting this predominant analytical prism. It reconfigured what could be sensed and known, attuning me to perceive and conceptualize flows and multiplicities of urban vacancy. I capture these tensions, ambivalences and heterogeneities by developing the notion of ‘affective repertoires’ of space.

Affect offers a unique prism for approaching urban spaces on standby. Drawing on affect theory and feminist new materialisms, I approach affect as the medium through which space, time and bodies come to matter (Lapiņa, 2020a). As discussed above, urban spaces on standby are neither ‘on’ nor ‘off’, in an ambiguous state of in – between. Their standby *feels* passive, dormant, hibernating; and at the same time, under tension, available, ready to be activated: a site of ‘active inactivity’ both outside and within spatiotemporal logics of gentrification. This ambiguity has an affective charge: as proposed by Berlant (2016: 395), sites of ambivalence are also sites of attachment, intimacy and desire; in other words, sites of affective saturation. Focusing on affect enables studying flows and intensities of standby that circulate across bodies, space and time, not necessarily directly observable or articulated in words. Consequently, ‘finding form for the empiricism of the unsaid’ (Berlant et al., 2017: 14) calls for attending to bodily and affective experiences. For instance, in her study of post-conflict urban spaces as affectively ‘sticky’, Laketa shows how ‘performative space enacted as an assembly of a plurality

of bodies opens the notion of the performative beyond the linguistic domain' (2018: 181).

The past decades have brought a burgeoning forth of theoretical work on affect in social sciences and humanities, often linked to developments in feminist thought, nonrepresentational geography and philosophy (Grosz, 1994; Massumi, 2002; Sedgwick, 2003; Ahmed, 2004, 2010; Manning, 2007; Thrift, 2007; Clough, 2008; Berlant, 2011; Blackman, 2012). Following a Spinozist understanding, affect can be conceived as a distributed field of flows and intensities circulating through, around and beyond bodies (Clough, 2008; Blackman, 2012; McCormack, 2013), entailing mutual enactment of bodies, space and time (Braidotti, 2002; Mol, 2002; Barad, 2007). The fluidity, heterogeneity and diffuse distribution of affect pose challenges for empirical studies. Affect can feel impossible to locate or pin down: it seems to be everywhere at once and nowhere in particular.

Despite recent work on affective methodologies (Hickey-Moody, 2013; Knudsen and Stage, 2015; Lorimer, 2013), there remains a lack of methodological developments supporting empirically grounded research on affect (Blackman, 2015; Berlant, 2016). In particular, there is a need for methodologies that account for how affect is felt and experienced through the body, enabling bodies to act, feel and think in new ways, producing new embodied knowledges (Borovica, 2019).

Drawing on studies of dance and affectivity, I explore the potential of dance as an affective methodology. I examine how dance enables addressing spatial, temporal and embodied facets of urban spaces on standby, attending to the affective ambivalence that inhabits and fuels it. I propose the notion of affective repertoires, applied to gentrifying urban spaces, to examine how ambiguous affective circulations can manifest as more of the same, as being locked in place, but also offer instances of rupture, disrupting habitual ways of thinking, being and acting in the world.

Affective methodology entails experimenting with feeling and form, qualitatively mutating (Berlant, 2016) the range of experiencing and knowing. Methodological approaches to affect have aimed to address its heterogeneity and ambivalence by emphasizing affective attunement, sensitivity and

experimentation (Stewart, 2011; McCormack, 2013; Blackman, 2015). In addition, Gherardi argues for the need of attending to affective ‘placeness’: ‘relating to a place, a dwelling in it (...) to stress the becoming-with and the affective attunement to other (human and more-than-human) bodies and histories, and the material-semiotic construction of place’ (2019: 750).

As I will demonstrate in my analysis of the vignette, dance enables an attunement to place, time and embodiment that is pivotal when investigating urban spaces on standby. Dance enables exploring and performing standby as a continuous unfolding of the potential for something to happen, differentiating-entangling conflicting forces and intensities (Barad, 2014). Combined with the autoethnographic vignette as an exercise in performative writing (Page, 2017; Lapiņa, 2020a), dance emphasizes the co-becoming of the various agents that inhabit urban spaces on standby: human and more-than-human bodies, discourses and affects, their coming-together-apart enabled by an asynchronous, multi-layered experience of time (Borovica, 2019).

Before presenting the vignette that tells of the dance, I provide context for this research by introducing Nordvest and its construction sites on standby. I then discuss how dance can comprise an affective methodology, offering prisms for approaching spatial, temporal and embodied aspects, as well as affective repertoires, of urban spaces on standby.

Construction sites on standby as spaces of affective saturation

I engaged with the construction site and the billboard as part of the fieldwork for my PhD (2014-2017). The PhD was a study of changing spaces, relations and intersecting markers of difference in Nordvest, a gentrifying neighbourhood in Copenhagen, involving fieldwork and interviews (Lapiņa, 2017). In 2014, there were more than ten seemingly dormant construction sites in Nordvest. The pace of gentrification had slowed as the housing market in Copenhagen took years to recover after the financial crisis of 2008-2009. Some of these sites had stood seemingly abandoned, on standby, for more than a decade. However, even as these sites were awaiting development, they were teeming with life, initiatives including a DIY skatepark, ad hoc

neighborhood potluck dinners, an old factory building turned into a center for independent culture and arts, a resident-driven park, tents put up by homeless people, campfires, parties, and a housing activism workshop. The sites were inhabited by assemblages of human and more-than-human making: weeds, bicycle parts, old furniture, scraps of plastic, animals. Consequently, at the time of fieldwork, these spaces comprised a multi-layered blend of DIY urbanisms (Iveson, 2013), artistic interventions in urban space (Pinder, 2008; Vacher, 2015; Paiva and Cachinho, 2018) and interstitial urban wastelands (Brighenti, 2013; Gandy, 2013, 2016).

The ambivalent affects surrounding the construction sites surfaced in my interviews with residents. My informants evoked the vacant lots to speak about the neighborhood as a place that ‘just is’, outside a spatiotemporal logic of development and optimization (Lapiņa, 2020b). In other words, they romanticized these vacant sites, attracted by their unintentional nature, ‘wasteland aesthetic’ (Gandy, 2016), edginess and authenticity. On the other hand, they emphasized the multiple interim use practices of the sites as contributing to a sense of liveliness, creativity and community activism. Yet, informants also highlighted the precarity of these sites as doomed to disappear, as indicators for the pace of gentrification. Thus the sites comprised spaces of affective saturation (Laketa, 2018) with regards to the ambivalence and heterogeneity of standby, combining seeming standstill, temporary activation, suspension and anticipated acceleration.

In the middle of my fieldwork, in summer of 2015, I myself moved to Nordvest. I had not intended to ‘go native’, but Nordvest as a gentrifying neighborhood was the place where my then-partner and me could afford an apartment. We co-purchased an apartment next to one of the construction sites, the one where the billboard would eventually appear. Between 2009 and 2013, the industrial, decaying buildings on the site had housed a Do-It-Yourself, Do-It-Together cultural centre, The Candy Factory. The centre had offered a range of events and activities: concerts, exhibitions, debates, a bike workshop, recycling initiatives, a garden full of mostly dumpster-dived plants. The activists had had a temporary use agreement with the owner of the lot. In 2013, realizing their departure could no longer be delayed, they used the funds raised (by far insufficient to purchase the site) to arrange one last event. They

whitewashed the buildings. A former activist told me this was a gesture of erasure, dispelling accumulated traces of their presence.

The whitewashed buildings stood as a ghostly, skeletal-like presence/absence for over a year. As we moved into our new apartment in the summer of 2015, the construction process was gaining momentum – finally, it seemed. I witnessed the changes unfold close-hand. Digging of a foundation pit, an eerily turquoise-blue body of water in the bottom. Razing of plants. Piling up of the various objects inhabiting the site for removal – broken furniture, moldy mattresses, empty bottles, weathered cardboard, a broken shopping cart. Appearance of a wired fence around the site.

Thus in the summer of 2015, just before my dance with the billboard, there was a sense of transition. The feel of standby had changed: activation seemed no longer a matter of indeterminable future. Yet, the site had not yet become a full-blown construction site; there was still a feeling of lingering and suspension. This article examines how dance, as an affective methodology, enabled me to feel and explore these contradictory, fluctuating affective repertoires of urban spaces on standby. Before presenting the vignette of the dance with the billboard, I review insights from scholarship on dance which inform my proposal of dance as an affective methodology.

Dance as an affective methodology for urban spaces on standby

Artistic practices offer ways to approach the affective ambivalence of urban spaces on standby, as they engage directly with feelings, senses and embodied experience (Pinder, 2008), changing the feel of time and space (Paiva and Cachinho, 2018). Dance is a particularly fruitful point of departure for affective methodology for standby. It is a ‘technique through which bodies develop the capacity to be affected by other bodies’ (McCormack, 2013: 74), attuned to the environment and affective responses of others in that environment (Atkinson and Duffy, 2019: 22). Dance performs key elements of affective methodological approaches: it facilitates ‘a slowed ethnographic practice attuned to the forms and forces unfolding in scenes and encounters’ (Stewart, 2017: 192) and attunes the dancing body to the entanglements and relations that make up the place it dances with/in (Gherardi, 2019).

In my own practice as a dancer, which has deepened since 2015, I approach dance as a way to expand my body and its capacities to feel, relate and resonate; to be and become otherwise (Braidotti, 2002). I become increasingly aware of how dance heightens my sensitivities to my environment, also outside moments where I am actually dancing. Of particular importance with regard to exploring the affective ambivalence of urban spaces on standby, I find that dance increases my ability to register and make space for contradictory feelings that pull in multiple directions, allowing me to experience embodiment as simultaneously fragmented, outstretched and distributed.

Dance offers opportunities for new experiences and conceptualizations of space, time and embodiment with regards to urban spaces on standby. Studies of dance have explored how it influences audiences' and dancers' affective experiences of *space* (Simpson, 2011; Barbour and Hitchmough, 2014; Edensor and Bowdler, 2015; Paiva and Cachinho, 2018; Atkinson and Duffy, 2019). These studies show how dance can expose and challenge assumptions about how spaces can be occupied and the actions that they afford. Dance invites us to 'understand place as an effect of the inhabitation of movement' where 'space and movement fold into each other and are strongly dependent on the corporeal dimensions of the body' (Atkinson and Duffy, 2019: 21-23). For instance, through witnessing dance performances in public spaces such as streets and squares, the habitual experience of these spaces changes: passages of transit become spaces for lingering, inviting different forms of experience and social interaction (Simpson, 2011; Edensor and Bowdler, 2015; Paiva and Cachinho, 2018). Furthermore, dance's primacy of movement questions emphasis on boundaries, rootedness and territories that are characteristic of static conceptions of space and place (Cresswell, 2015). In other words, dance can attune the ethnographer to multiplicities of urban spaces on standby.

Dance also affords new ways of inhabiting and experiencing *time*. Dance can disrupt habitual, everyday rhythms that direct ways of acting in space (Edensor and Bowdler, 2015). It can slow down time (Barbour and Hitchmough, 2014), as if adding depth and thickness to temporality. In her analysis of improvised dance workshops with female university students interested in creative methods and feminist theory, Borovica (2019: 30) shows how dance as a method invites an 'asynchronous experience of time (...)

– time in dance is experienced as interrupted, alinear, contingent of past and future together with presence’. Dance can also represent a way to elicit and re-configure memories of past events. For instance, after a screening of a documentary that resonated with the participants’ experiences of intergenerational trauma, To (2015) invited the members of the audience to perform a series of self-chosen movements. Conveying affective responses beyond words, these movements embodied the past that continues to haunt and rupture the present (Gordon, 2008), transcending ‘the limits of verbal and written engagement of haunted histories’ (To, 2015: 82). These examples show how movement can enable experiences and conceptualisations of non-linear, multidirectional temporalities. The seemingly past and yet-to-arrive come together into a disjointed, multi-layered temporality, which is pertinent for addressing the temporal aspects of standby.

Apart from opening up the multiplicities of space and time, dance (recon-)figures the dancing *body*, enhancing its capacities to move and be moved. Dance attunes us to sensory and affective flows, evoking the relationality and potentiality of our embodiment (Borovica, 2019). The directionality of movement emphasizes that the body is not delimited by flesh, skin and bones but continuously made through embodied, affective encounters: ‘to point to something is to stretch the body out to the object but also to draw the object into the articulatory potential of bodily movement’ (Atkinson and Duffy, 2019: 23). This echoes feminist materialist conceptions of the body and matter as affectively made, distributed, fluid and relational (Barad, 2007; Bennett, 2010; Blackman, 2012; Neimanis, 2017). Through lived movement, dance enables bodily experiences of, and co-becomings with, ambivalent affective flows of urban spaces on standby.

In order to explore the affective flows of urban sites on standby that dance made available to me, I propose the notion of ‘affective repertoires’ of space. I draw on the notion ‘repertoires of site’ employed by Barbour and Hitchmough (2014) in their analysis of a site-specific dance performance in a Chinese garden. Drawing on fieldwork and autoethnographic vignettes, the authors show how the sensory environment is configured by the dancers’ capacities to move. Consequently, (witnessing) new ways of moving can change experiences of a given site. Barbour and Hitchmough (2014: 67) conceptualize repertoire as a ‘range of cultural, traditional, personal and

physical choices available, including the range of typical movement behaviours of people in the site and those suggested by the site'. I conceive affective repertoires of standby as the range of ambivalent, contradictory affects that permeate and are afforded by urban spaces on standby. Here, 'affective repertoires' do not denote human emotional capacities to feel (as when the term appears in, for instance, psychology) but rather the capacities of a site to evoke and afford a range of affects in encounters between (researching) bodies and space. As I discuss in the analysis following the autoethnographic vignette, dance offers new ways of investigating how affect is spatialized, and how it makes up space, addressing affective ambivalence and multiplicity.

A dance with a billboard on a construction site

I come upon the billboard on a Friday night in August. I am on my way home from a conference dinner, stimulated, tired, full of resonance from conversations at a harbourside restaurant. The keynote speakers at the conference made repeated references to dance as a metaphor for thinking. 'We are all dancing', one of them said, most of the bodies implicated in this 'we' trapped in rows of auditorium chairs attached to one another. A jazz band was hired to play at the dinner, yet hardly anyone danced.

Warm breezes embrace me as I bike home, listening to music on my headphones. As I maneuver my bike over the cobblestones into our street, I am confronted by a blank, shimmering surface on a metal and concrete podium, elevated over the street.

This object is vibrating, humming with activity. There is a buzz emanating from it. I make sense of the object as a yet-blank billboard, a surface that will be claimed by advertisements for the new condominiums to be built on the site that is now enclosed by a wire fence.

I immediately perceive the billboard as a threatening, monstrous presence, a harbinger of gentrification. I see it as if it was already displaying advertising images of nuclear family life in Danish design surroundings: images with authentic, stylish edge that I imagine would sell apartments in this part of the city.

I park and lock my bike in its usual place next to the wire fence that separates me from the billboard. I have made up my mind about what it is I see. Yet the vibration continues to tickle and nudge me. I am repelled and yet drawn to the billboard. Separated by the metal fence, I cannot walk up to it. I cast a furtive glance around me. The street is empty. I take off my backpack. Somehow it happens that I start dancing, facing the billboard.

As I move, I sense us moving together. We are apart, and yet aligned, made of the same stuff. Like the billboard, I am a monstrous harbinger of gentrification, embodiment of capitalism and nuclear family aspirations, just having taken a loan to co-purchase an apartment on this street with my romantic partner. And the billboard and me are both more than that: entanglements of feeling and matter, distributed and interconnected layers of experience. We cannot be contained. 'We' are in the concrete that forms the foundation of the billboard, the music playing in my headphones, the wire that forms a screen between us.

The billboard feels like a white hole, drawing me in while also multiplying me. We dance fluctuations of openings and closures. Our location is a portent of (im)possibility, spanning multiple layers and connections across space, time and modes of presence/absence.

The mo(ve)ment of our dancing bodies resonates with human and nonhuman presences, including ones that might seem gone or not-yet-arrived.

Ravaged plants Candy Factory activists peeling paint

broken furniture

construction workers and equipment to arrive from Eastern Europe

mildewed walls spider webs in decaying buildings

the blue lagoon at the bottom of the construction pit

the new residents glass, steel and concrete of the buildings to emerge

babies put to sleep on balconies

rooms populated by Danish design objects made elsewhere

We are all here, moving with one another. The space explodes-implodes into multiple connections.

I am not sure how long it is that we dance. My breathing has accelerated, my heart is beating. I no longer sense the vibration of the billboard as coming from the outside. I am with/in it, struck, undone.

At some point movement subsides even as the space continues humming.

At some point I pick up a rucksack from the ground. I take a deep breath. I find a set of keys. I turn and walk up to a front door of a building. The movements are mine, yet they feel alien.

Assembling an affective methodology for standby

Drawing on the vignette, this section explores how dance works as an affective methodology for studying urban spaces on standby. The dance enabled different sensorial experiences, interrupting the habitual observational and pragmatic modes of moving in the world (Paiva and Cachinho, 2018). These experiences had a lasting impact for knowledge production. I first examine how dance attuned me to openness and multiplicity of space, time and embodiment. I then explore how, through enabling me to ‘think, feel, and act in new ways, (...) pivotal in opening investigation of the intangible, fleeting, and sensory dimensions of social life’ (Borovica, 2019: 34), dance as an affective methodology affords unpacking affective repertoires of standby – attuning the dancing body to a broad range of feelings in movement. Finally, I discuss how dance as an affective methodology enables ambivalence and multiplicity in knowledge production.

Space, time and embodiment of urban spaces on standby

While we danced, space and time felt multiple, breaching out to what otherwise might have seemed elsewhere and else-when: the decaying factory building now torn down, the evicted activists, the condominiums and the bodies that would build and inhabit them. I had perceived the construction site as a singular location, on hold in an unfolding unidirectional gentrification narrative. Dance offered a way to experience asynchronous

time and multiplicity of space, making me attuned to the continuous discontinuity (Berlant, 2016) of standby. The dance enabled embodied, felt knowledge of time out of joint (Sharma, 2014), a present saturated with pasts that are not over and futures that are not yet-to-come (Gordon, 2008; Barad, 2017). Dancing (with) this multiplicity of space and time, I could apprehend the intensities and assemblages of movement and stillness (McCormack, 2013) of the site.

Furthermore, the dance transformed the dancing bodies. I felt it was not an 'I' who danced. It was a 'we', at first composed of me and the billboard, different yet *'aligned and made of the same stuff'*, then extended to include other presences and mo(ve)ments. The embodied labour of the dance can be grasped as re-mem(ber)ing – a bodily activity of re-turning (Barad, 2017: 83), a re-shuffling of what, who, when and where register as present. This can be linked to Barad's notion of 'spacetime mattering' where 'scenes never rest, but are reconfigured within, dispersed across, and threaded through one another' (Barad, 2010: 240). The dance enabled me to sense this threading through, as I myself became thread through and resonated with the materialities of the billboard and the site.

The dance comprised a mo(ve)ment of becoming able to attend to how any kind of fixity ('myself', 'billboard', 'construction site to be developed') is '(...) only a semblance, a seeming, a projection effect of interest in a thing we are trying to stabilize' (Berlant, 2016: 394). Instead, matter became charged with intensity, splintering and layered; fluid, relational, multiple and multiplying. I was literally dancing with the no-more and not-yet presences of the construction site: the activists, the decaying factory building, the construction workers, the future human and more-than-human inhabitants of the condominiums. I sensed my body as an assemblage of multiple presences, its capacities to affect and become affected were expanded, attuned to a broader range of connections and intensities, feelings and actions (Massumi, 2002; Clough, 2008; Blackman, 2012).

In order to understand how dance works to expand the sensorium and capacities to assemble, surfacing bodies as relational matrices, open systems that reach towards one another (Manning, 2009: 66), I would like to visit the work of the philosopher Langer who conceives dance as 'vital movement' that

‘is always at once subjective and objective, personal and public, willed (or evoked) and perceived’ (1953: 174). She argues that dance movements constitute virtual powers:

(...) all the motion seems to spring from powers beyond the performers. (...) dancers appear to magnetize each other; the relation between them is more than a spatial one, it is a relation of forces (...). They are dance forms, virtual powers. (*ibid.*: 175-176)

Langer’s analysis of how dance movements are animated by powers beyond the performers is useful in exploring dance as an affective methodology. Dance literally extends the dancing body in space, time and with respect to what might seem bodily limits. A moment, a space, and bodies become experienced not just through movement, but *as movements*. As I will discuss in the final part of the analysis, these movements enact knowledges that accommodate frictions, multiplicity and ambiguity.

Affective repertoires of urban spaces on standby

I have explored how dance as an affective methodology enables unraveling temporal, spatial and embodied facets of urban spaces on standby. In this section, I unfold affective repertoires of urban spaces on standby: the range of ambivalent, heterogeneous affects circulating through and afforded by the spacetime-mattering (Barad, 2007, 2017) of these sites.

Even as I and my informants experienced the construction sites as spaces of affective ambivalence, we were inclined to conceive them on a gentrification timeline. For instance, perceiving them as spaces that ‘just are’, outside of a logic of optimization and development (Lapiņa, 2020b), or juxtaposing community activism and artistic initiatives to modes of organising in the neoliberal city reinforces binary thinking. The construction sites on standby constitute opposites to what is happening elsewhere in Copenhagen, thus reproducing the latter as the norm.

Dancing attunes me to the standby of these sites as more than a glitch in the spatiotemporal logics of gentrification: to the multiplicity and entanglement of bodies and spaces, contradicting feelings, divergent mo(ve)ments. This is illustrated by how dance reconfigures the dancing bodies through affective circulations and entanglements, extending their possibilities to affect and be

affected (Hickey-Moody, 2013). I am drawn to and repelled by the billboard. I am moved and I start moving. We move together, breaching out in space and time, becoming a new experiential assemblage from difference (Braidotti, 2011; Berlant, 2016). 'Our' movements are continuously altered by the new sense of assemblage emerging, by the feeling that we are 'made of the same stuff', which remains uncontainable and divergent. The more monstrous and unrecognizable this assemblage feels, the more my surroundings spill into 'me' and 'I' into them, differentiating-entangling (Barad, 2014).

Dancing with the billboard enabled me to perceive fluctuating, overlapping affects of changing intensities: vague, impure, entangled. Affective repertoires of standby could be best conceptualised as the changing range and amplitude of these mo(ve)ments. Things remained different even through mo(ve)ments of recognition of them being made of the same stuff, resonating towards one another. Dance enabled attunement with the affective intensities that permeate standby as a heterogeneous space of becoming, making me perceive the space, its multiple presences and affects as entangled and multiple rather than binary opposites.

Dance movements expanded my capacities to feel and resonate with the billboard, the construction site and their multiple presences. I felt I was being moved by and moved with relational forces (Langer, 1953) which expanded my way of being present and conceiving the space. It made me relate differently to the site, disrupting the affective hierarchies and binaries of difference that had hitherto, without me entirely acknowledging it, structured my thinking: 'progressive' activists, 'monstrous' billboard, 'unjust' urban development. This highlights how dance enabled a way of relating where emplaced affective intensities work not towards establishing boundaries between 'us' and 'them' and 'thickenings of difference' (Laketa, 2018: 192) but towards increased apprehension of ambiguity and heterogeneity. This highlights the experimental quality of affective methodology (Gherardi, 2019), where a feeling of something happening disturbs and animates ideas already circulating in ways that might open up possibilities for thinking and be(com)ing otherwise (Braidotti, 2002; McCormack, 2013: 9-10). Dance enables exploring affective repertoires of standby as sensed amplitudes of mo(ve)ment where '(...) all objects are granular and moving toward each other to *make new forms of approach from difference and distance*' (Berlant, 2016: 408,

my emphasis). Dance enabled exploring and performing standby as a continuous, heterogeneous unfolding of the potential for something to happen, mattering through conflicting forces and intensities, simultaneously emergent and stifled.

The disruptive potential of the dance: The (un)knowability of urban spaces on standby

The dance has had lasting impact on my knowing of the construction sites of Nordvest. I continue struggling to make sense of these sites. While conceptualisations from other studies of urban spaces on standby resonate with particular facets or modes of organisation of Nordvest's construction sites, they also seem ill-fitting. At certain points of time, the construction sites could have been recognized as vague, unintentional spaces, urban wastelands (Gandy, 2013, 2016), as disordered (Edensor, 2005) or interstitial spaces (Brighenti, 2013). In other aspects, they might be conceived as dominated by temporary artistic and activist initiatives or DIY urbanisms (Pinder, 2008; Colomb, 2012; Iveson, 2013; Madanipour, 2018). Alternatively, they could be seen as contributing to the neighborhood's authenticity, edge and 'crunchy chic', fueling gentrification (Kern, 2015). In earlier work, I have evoked the term 'dormant' to capture the active inactivity of these spaces (Lapina, 2017, 2020a). However, also this notion does not capture how these sites are bursting with activity, not just on hold for something to happen.

The dance was a pivotal mo(ve)ment in bringing about this perpetual crisis of articulation, of making me aware of the multiple, heterogeneous affectivity of gentrifying urban spaces. The dance made me attuned to the interplay of fixity and change in affectively saturated spaces (Laketa, 2018), enabling me to attend to the multiple 'placeness' (Gherardi, 2019) and divergent spatiotemporal logics of the construction sites.

This shows how affective methodology can transform the sensibilities that shape the research process – and extend the researching bodies with regards to conceiving the affective, spatiotemporal and embodied facets of urban spaces on standby. Experiences of standby materialize as a field of changing intensities, making these felt fluctuations constitutive for knowledge production (Stewart, 2011; McCormack, 2013). 'Dynamic bodily potentiality

and multiple becomings' coexist with 'fixation, habit, repetition, accumulation, and willingness to break free (or not)' (Borovica, 2019: 29). However, rather than conceiving of these as two inherently different forms of experience (Borovica, 2019) or asking how affectivity of spaces can *either* reinforce boundaries *or* enable different comings-together (Laketa, 2018), my analysis shows how habits and ruptures, the surprising and the mundane, fixity and change, boundaries and fluidity morph into one another. As we danced, I no longer perceived the billboard as an external entity, a 'monstrous harbinger of gentrification'. The dance brought about a multiplicity of becomings and muddling of affective hierarchies: on one hand, I recognized myself as a 'monster' complicit in gentrification; at the same time, 'I' became woven into the assemblage of affects, bodies and spaces on/of the site. Furthermore, the dance queered habitual ways of being and moving: when the 'I', seemingly disentangled from the dance, performed the routine actions of picking up a rucksack, locating keys, unlocking a front door, they felt strange and uncanny, challenging taken-for-grantedness of ways of moving in the world. Affective repertoires of standby denote exactly these entanglements of familiarity and rupture, sameness and difference. They entail '(...) confidence in an apartness that recognizes the ordinary as a space *at once* actively null, delightfully animated, stressful, intimate, alien, and uncanny' (Berlant, 2016: 399, my emphasis).

As an affective methodology, dance mo(ve)ments hold the potential to move and disrupt 'us' and 'our' sensibilities, just like standby disrupts binaries of movement and standstill, transformation and being locked in place. As the body becomes open to be affected in new ways, it can encounter knowledges that resist established shapes, and change its form in the process.

However, these are knowledges that resist stable forms. My analysis remains haunted by a tension between the sensed and the articulated (and articulable). This process of knowledge production is wrought with aspirational ambivalence, manifesting as a tension between affective forces that pull in various directions. I keep feeling that the 'more of it' of affective repertoires of standby escapes analysis, that 'the thing of the event is still missing' (Borovica, 2019: 33). I choose to view this tension as one to be lived with(in) rather than solved (Deleuze and Guattari, 1994), one that might enable living the openness of situations (Massumi, 2015: 6). Often academic knowledge

production seeks to explain, reduce, solve and delimit ambiguity. I propose engaging with the tension of what can(not) be captured in words as pointing towards the (un)knowability of standby.

Attempts to understand, unavoidably partial and incomplete, might reinforce a separation between a knowing self and a knowable object. In contrast, dance enables *experiencing* embodied knowledges of the divergent forces and flows entangled in affective repertoires of urban spaces on standby. This process of knowledge production is wrought with tension, as these knowledges cannot be contained, they leak, slip and evade.

I aim to practice living with the tension between what escapes and what is brought together, differentiating-entangling (Barad, 2014). These mo(ve)ments of tension provide ‘affective openings-out’ (Braidotti, 2013: 166) that support ‘coming to terms with the present in new fundamental ways’ (Braidotti, 2013: 187). They might enable encountering knowledges that are plural, mobile and unfinished, made up of impulses that always want to slip away (McCormack, 2013: 79).

Even as these knowledges are unsettled and unsettling, they are not free-floating. They remain embedded in the affective, embodied labour that produces them, even as this labour extends the implicated matter and its registers of experience. For decades, feminist scholars have argued that situatedness and partiality are enabling constraints in knowledge production (Rich, 1984; Haraway, 1988). Blackman (2012) proposes an ethics of entanglement that recognizes and reflects on how the researcher is implicated in their research process. In more recent work on posthuman feminist phenomenology, Neimanis (2017) explicitly addresses how our situated subjectivity is not ‘our’ own, how it leaks. She calls for performing a corporeal relational ethics in order to ‘(...) give an account of our own (very human) politics of location, even as this situatedness will always swim beyond our masterful grasp, finding confluence with other bodies and times’ (Neimanis, 2017: 6). Having experienced the breaching out of the spacetime-mattering of standby, I remain a body that moves in habitual ways, even as their ordinariness strikes me as strange. I struggle to let non-extractive knowledge emerge from my experience, even as these attempts are wrought with friction and sometimes collapse into grasps towards fixity.

Conclusion

In this article, I explore dance as an affective methodology for urban spaces on standby, taking point of departure in a spontaneous dance encounter with a billboard on a construction site in a gentrifying neighborhood. Drawing on feminist new materialisms, affect theory and dance studies, I show how dance enables attending to spatial, temporal and embodied aspects of standby. I discuss how dance attuned me to affective repertoires, highlighting the range of ambivalent, entangled affects circulating through and afforded by urban spaces on standby. In this process, standby emerges as a continuously unfolding, overspilling affective infrastructure, fuelled by and fueling ambivalence and multiplicity.

Dance comprises a particularly enabling catalyst for attending to a plurality of figurations. As I have shown, dance affords be(com)ing an outstretched and outstretching, permeable researcher-self. It cultivates sensitivity, attunement and experimentation (Stewart, 2011; McCormack, 2013), surfacing entanglements of matter and affectivity (Gherardi, 2019). Dance enables a distributed form of perception, which can bring fragments and traces together-apart, moving beyond binary understandings of fixity and change, sameness and difference, the habitual and the transformative.

Attending to ambivalence and multiplicity, dance enables being, becoming and knowing otherwise. The dance was not just an opening with regards to an object I was researching (the construction sites on standby) but a disruption in the process of seeking knowledge. These mo(ve)ments brought about a relationality beyond divisions between developers and activists, displaced activists and gentrifiers, human and non-human bodies. This did not mean a collapsing of differences or undoing of inequalities. Instead, it showed how dance constitutes an act of re-membering (Barad, 2017), reshuffling who and what is recognized as participating in a shared space, and the affective flows that inhabit and comprise this space.

Beginning my engagement with the dormant, vague construction sites of Nordvest, I did not anticipate dancing with a billboard – and even less writing about it. This highlights the experimental, emergent quality of affective approaches to research and the importance of the researcher's capabilities to

resonate and become-with the researched (Gherardi, 2019). In this respect, affective methodology emerges as fuelled by fluidity and ambivalence which permeate urban spaces on standby, enabling experiments with co-becoming, where the methodology cannot be disentangled from that which it seeks to know. As a research practice that extends the body's capacities to feel, relate and resonate, dance attenuates the capabilities to engage with affective repertoires of gentrifying urban spaces. The dancing body extends and expands affectively, becoming able to accommodate a range of emotions, also multiple layers of grief and loss (Mortimer-Sandilands, 2010).

references

- Ahmed, S. (2004) *The cultural politics of emotion*. Edinburgh: Edinburgh University Press.
- Ahmed, S. (2010) *The promise of happiness*. Durham and London: Duke University Press.
- Atkinson, P. and D.M. Duffy (2019) 'Seeing movement: Dancing bodies and the sensuality of place', *Emotion, Space and Society*, 30: 20-26.
- Barad, K. (2007) *Meeting the universe halfway. Quantum physics and the entanglement of matter and meaning*. Durham and London: Duke University Press.
- Barad, K. (2010) 'Quantum entanglements and hauntological relations of inheritance: Dis/continuities, spacetime enfoldings, and justice-to-come', *Derrida Today*, 3(2): 240-268.
- Barad, K. (2014) 'Diffracting diffraction: Cutting together-apart', *Parallax*, 20(3) 168-187.
- Barad, K. (2017) 'Troubling time/s and ecologies of nothingness: Re-turning, re-memembering, and facing the incalculable', *New Formations*, 92: 56-86.
- Barbour, K. and A. Hitchmough (2014) 'Experiencing affect through site-specific dance', *Emotion, Space and Society*, 12(1): 63-72.
- Bennett, J. (2010) *Vibrant matter. A political ecology of things*. Durham and London: Duke University Press.
- Berlant, L. (2011) *Cruel optimism*. Durham: Duke University Press.

- Berlant, L. (2016) 'The commons: Infrastructures for troubling times', *Environment and Planning D*, 34(3): 393-419.
- Berlant, L., L.G. Zarranz and E. Ledoux-Beaugrand (2017) 'Affective assemblages: Entanglements & ruptures – An interview with Lauren Berlant', *Atlantis*, 38(2): 12-17.
- Blackman, L. (2012) *Immaterial bodies: Affect, embodiment, mediation*. London: Sage Publications.
- Blackman, L. (2015) 'Hauntologies: Exploring an analytics of experimentation', in B.T. Knudsen and C. Stage (eds.) *Affective methodologies: Developing cultural research strategies for the study of affect*, London: Palgrave Macmillan.
- Borovica, T. (2019) 'Dancing the strata: Investigating affective flows of moving/dancing bodies in the exploration of bodily (un)becoming', *Qualitative Inquiry*, 25(1): 26-36.
- Braidotti, R. (2002) *Metamorphoses: Towards a materialist theory of becoming*. Cambridge: Polity Press.
- Braidotti, R. (2011) *Nomadic theory*. New York Chichester, West Sussex: Columbia University Press.
- Brighenti, A.M. (2013) 'Introduction', in A.M. Brighenti (ed.) *Urban interstices. The aesthetics and the politics of the in-between*. Surrey: Ashgate.
- Clough, P.T. (2008) 'The affective turn: Political economy, biomedica and bodies', *Theory, Culture & Society*, 25(1): 1-22.
- Colomb, C. (2012) 'Pushing the urban frontier: Temporary uses of space, city marketing, and the creative city discourse in 2000s Berlin', *Journal of Urban Affairs*, 34(2): 131-152.
- Cresswell, T. (2015) *Place: A short introduction*. 2nd Edition. Chichester: John Wiley & Sons.
- Deleuze, G. and F. Guattari (1994) *What is philosophy?* New York: Columbia University Press.
- Edensor, T. (2005) 'The ghosts of industrial ruins: Ordering and disordering memory in excessive space', *Environment and Planning D*, 23(6): 829-849.

- Edensor, T. and C. Bowdler (2015) 'Site-specific dance: Revealing and contesting the ludic qualities, everyday rhythms, and embodied habits of place', *Environment and Planning A*, 47(3): 709-726.
- Gandy, M. (2013) 'Marginalia: Aesthetics, ecology, and urban wastelands', *Annals of the Association of American Geographers*, 103(6): 1301-1316.
- Gandy, M. (2016) 'Unintentional landscapes', *Landscape Research*, 41(4): 433-440.
- Gherardi, S. (2019) 'Theorizing affective ethnography for organization studies', *Organization*, 26(6): 741-760.
- Gordon, A. (2008) *Ghostly matters: Haunting and the sociological imagination*. Minneapolis: University of Minnesota Press.
- Grosz, E. (1994) *Volatile bodies: Toward a corporeal feminism*. Bloomington: Indiana University Press.
- Haraway, D. (1988) 'Situated knowledges: The science question in feminism and the privilege of partial perspective', *Feminist Studies*, 14(3): 575-599.
- Hickey-Moody, A. (2013) 'Affect as method: Feelings, aesthetics and affective pedagogy', in R. Coleman and J. Ringrose (eds.) *Deleuze and research methodologies*. Edinburgh: Edinburgh University Press.
- Iveson, K. (2013) 'Cities within the city: Do-It-Yourself urbanism and the right to the city', *International Journal of Urban and Regional Research*, 37(3): 941-956.
- Kern, L. (2015) 'From toxic wreck to crunchy chic: Environmental gentrification through the body', *Environment and Planning D*, 33(1): 67-83.
- Kern, L. (2016) 'Rhythms of gentrification: Eventfulness and slow violence in a happening neighbourhood', *Cultural Geographies*, 23(3): 441-457.
- Knudsen, B.T. and C. Stage (2015) 'Introduction: Affective methodologies', in B.T. Knudsen and C. Stage (eds.) *Affective methodologies: Developing cultural research strategies for the study of affect*. London: Palgrave Macmillan.
- Laketa, S. (2018) 'Between "this" side and "that" side: On performativity, youth identities and "sticky" spaces', *Environment and Planning D*, 36(1): 178-196.

- Langer, S.K. (1953) *Feeling and form. A theory of art*. New York: Charles Scribner's Sons.
- Lapiņa, L. (2017) *Making senses of Nordvest: Tracing the spaces, bodies and affects of a gentrifying neighborhood in Copenhagen*. PhD Thesis. Roskilde University.
- Lapiņa, L. (2020a) 'Re-membering desire. Visual tracings of a billboard', in C. Drozynski and D. Beljaars (eds.) *Civic spaces and desire*. London: Routledge.
- Lapiņa, L. (2020b) "'Diversity tourists'? Tracing whiteness through affective encounters with diversity in a gentrifying district in Copenhagen', *Social and Cultural Geography*, doi: 10.1080/14649365.2020.1783349.
- Lorimer, J. (2013) 'More-than-human visual analysis: Witnessing and evoking affect in human-nonhuman interactions', in R. Coleman and J. Ringrose (eds.) *Deleuze and research methodologies*. Edinburgh: Edinburgh University Press.
- Madanipour, A. (2018) 'Temporary use of space: Urban processes between flexibility, opportunity and precarity', *Urban Studies*, 55(5): 1093-1110.
- Manning, E. (2007) *The politics of touch: Sense, movement, sovereignty*. Minneapolis: Minneapolis University Press.
- Manning, E. (2009) *Relationscapes: Movement, art, philosophy*. Cambridge, Massachusetts: MIT Press.
- Massumi, B. (2002) *Parables for the virtual*. Durham and London: Duke University Press.
- Massumi, B. (2015) *Politics of affect*. Cambridge and Malden: Polity Press.
- McCormack, D.P. (2013) *Refrains for moving bodies: Experience and experiment in affective spaces*. Durham and London: Duke University Press.
- Mol, A. (2002) *The body multiple: Ontology in medical practice*. Durham: Duke University Press.
- Mortimer-Sandilands, C. (2010) 'Melancholy natures, queer ecologies', in C. Mortimer-Sandilands and B. Erickson (eds.) *Queer ecologies: Sex, nature, politics, desire*. Bloomington: Indiana University Press.
- Neimanis, A. (2017) *Bodies of water. Posthuman feminist methodology*. London: Bloomsbury Academic.

- Page, T. (2017) 'Vulnerable writing as a feminist methodological practice', *Feminist Review*, 115: 13-29.
- Paiva, D. and H. Cachinho (2018) 'Artistic practices and the redistribution of the sensible in Largo do Chiado: Attention, corporeal isles, visceral politics', *Tijdschrift voor Economische en Sociale Geografie*, 109(5): 597-612.
- Pinder, D. (2008) 'Urban interventions: Art, politics and pedagogy', *International Journal of Urban and Regional Research*, 32(3): 730-736.
- Rich, A. (1984) *Blood, bread and poetry: Selected prose 1979-1985*. London: Little Brown & Co.
- Sedgwick, E.K. (2003) *Touching feeling. Affect, pedagogy, performativity*. London: Duke University Press.
- Sharma, S. (2014) *In the meantime. Temporality and cultural politics*. Durham and London: Duke University Press.
- Simpson, P. (2011) 'Street performance and the City: Public space, sociality, and intervening in the everyday', *Space and Culture*, 14(4): 415-430.
- Stewart, K. (2011) 'Atmospheric attunements', *Environment and Planning D*, 29(3): 445-453.
- Stewart, K. (2017) 'In the world that affect proposed', *Cultural Anthropology*, 32(2): 192-198.
- Thrift, N. (2007) *Non-representational theory: Space, politics, affect*. Abingdon, Oxon: Routledge.
- To, N. (2015) 'Diasporic montage and critical autoethnography: Mediated visions of intergenerational memory and the affective transmission of trauma', in B.T. Knudsen and C. Stage (eds.) *Affective methodologies: Developing cultural research strategies for the study of affect*. London: Palgrave Macmillan.
- Vacher, M. (2015) 'Spaces of difference, different spaces: A study of urban transformations in an old paint factory', in H. Steiner and K. Veel (eds.) *Invisibility studies: Surveillance, transparency and the hidden in contemporary culture*. New York: Peter Lang.
- Valverde, M. (2015) *Chronotopes of law: Jurisdiction, scale and governance*. London: Routledge.

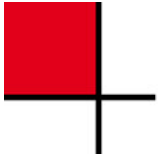
acknowledgements

I thank the editors and anonymous reviewers for their challenging and generous comments, which have greatly improved the article. I am particularly grateful to Laura Kemmer for her support in the writing of this article.

the author

Linda Lapina is a researcher, dancer and a migrant. She works as assistant professor of Cultural Encounters at Roskilde University in Denmark. Grounded in feminist theory, her research focuses on affects in contested urban spaces; race and differentiated whiteness in the context of East to West migration in Europe; and intergenerational loss and more-than-human embodied memory. Next to feminist-inspired methods like autoethnography and memory work she is devoted to exploring the potential of affective and arts-based methodologies.

Email: llapina@ruc.dk



Scenes of the bystander

Derek McCormack

Many trajectories of thought are opened up by the question of standby. Cutting across these trajectories is the assumption that standby is a condition of being available, of being-on-hand. To speculate with standby is to think about the production and emergence of this condition, about how this condition is undergone and experienced, and about how it generates capacities to act. This special issue is an invitation to explore how standby capacities are distributed across and between bodies, devices, and environments. It is an opportunity to consider the technical, social, and affective infrastructures that sustain standby as a condition of being ready and those infrastructures that may inhibit, prevent, or suspend particular courses of situational action.

This invitation to distribute standby capacities and agencies across multiple assemblages and associations remains haunted, however, by the presence of a stubbornly human figure of ethical and political in/action: the bystander. The figure of the bystander reminds us of how, in certain situations, the in/action of the individual can become the focus for an insistent and unavoidable judgement. The possible in/action of the bystander embodies, in turn, the potential failure of standby as a condition of readiness to act. It is a prompt to ask about how standby as a mode of organizing makes action-in-the-event possible and about the conditions that make such action less likely. And it is an encouragement to think about the friction between an expanded conception of standby and a rather more bounded and more human figure.

The bystander stands by: this claim foregrounds the ethical and political ambiguity of the figure as the embodiment of inaction, passivity, or indifference. In standing by, the bystander stands ready, primed to respond. In standing by the bystander also, in some versions, *stands with*, aligning and orienting themselves with others. But in standing by, the bystander also appears to fail to act. The bystander fails to respond to the ethical or political demands of the event or situation or circumstance as it unfolds insofar as it foregrounds the suffering of another. The bystander is called to account by the performative refrain of an insistent and unavoidable demand: *why, given how things were, did you not act?*

The force of this demand is intensely scenographic. It often revolves around the scene of an event that seems to require a response. And the prominence of the bystander as a scenographic figure owes much to the after-lives of one scene in particular. In the early morning of March 13th 1964, a 28-year-old Italian-American, Kitty Genovese, finishes her shift in a bar in Queens, New York. She begins walking home but apparently thinks she is being followed. She changes her route, but is assaulted on the street by Winston Moseley. A number of people hear the struggle between Moseley and Genovese and shout from the windows of their respective apartments. Moseley leaves the scene, before returning to find Genovese lying in the doorway of an apartment block. He rapes and assaults her again. A neighbor finds her but she dies (Lemann, 2014).

Kitty Genovese's murder became a parable of the bystander in contemporary urbanized society. However shocking, it was not simply the murder that made headlines: it was the non-intervention of those who apparently witnessed it. A story published on the front page of *The New York Times* on March 27th claimed that 37 individuals witnessed the event in one way or another but did not intervene. Explanations centered on the growing sense of alienation, moral indifference and affective detachment in US cities. The case seemed to offer a diagnosis of the ills of modern life, an argument made by the author of the original *Times* story in a follow-up publication (Rosenthal, 2008). Beyond public commentary, this scene became a problem-case through which the figure of the bystander was articulated through the psychological sciences.

The story of the case featured in psychology text-books for decades (Manning et al., 2007). Pivotal here is work by the social psychologists John Darley and Bibb Latané (1968). Rejecting efforts to explain the apparent failure of anyone to intervene at the scene of the Genovese crime in terms of social or urban alienation, Darley and Latané hypothesized that the ‘bystander effect’ emerged because responsibility for intervention (and possible feelings of guilt about non-intervention) became diffused and diluted by awareness of the presence of other witnesses.

To demonstrate the significance of this effect Darley and Latané constructed an experimental situation in which college students overheard the apparent distress of another student. The students were then faced with an implicit choice about whether or not to report the distress to the organizers of the experiment. Darley and Latané found that under experimental conditions the ‘presence of other bystanders reduced the individual’s feelings of personal responsibility and lowered the [sic] speed of reporting’ (1968: 377). They also observed that those who did not respond were no less visibly emotional or agitated than those who did: the former group certainly did not appear more indifferent or apathetic. On this basis Darley and Latané argued that ‘non-intervening subjects had *not decided not to respond*. Rather they were still in a state of indecision and conflict concerning whether to respond or not’ (*ibid.*: 282). Those who had ‘witnessed’ but not intervened in the murder of Kitty Genovese had found themselves neither in a state of inactive passive indifference nor one of decisive non-intervention. Instead, they were in an ongoing state of tensed, unresolved affective disquietude, a state that complicated any straightforward opposition between activity and passivity.

Darley and Latané’s research had an important influence on efforts within the human sciences to make sense of the role and responsibilities of the bystander. It seemed to resonate with emerging efforts to scrutinize the bystander as an ethical and political figure as part of the reflexive project of modern social science, particularly in the wake of the genocidal violence of the Second World War. The Genovese case provided a focus for attempts to understand the conditions under which forms of intervention/non-intervention emerge in relation to violence at a range of institutional, territorial, and temporal scales (Vetlesen, 2000). Subsequent experiments corroborated Darley and Latané’s findings while also providing more nuanced

explanations of the factors shaping decisions to intervene and, at the same time, questioning any neat equation between numbers of bystanders and likelihood of intervention (see Fischer et al., 2011). Notably, in rejecting ‘social’ explanations for the failure of bystanders to intervene, Darley and Latané ignored the role that markers of difference, including race, gender, or class, might have played in generating different senses and possibilities of action and inaction. They also paid insufficient attention to how a strict separation of bystander, victim, and perpetrator is sometimes insufficient when thinking about responsibility and responsiveness (see Bauman, 2003).

It is also worth noting that the details of the attack and murder which prompted Darley and Latané’s research paper, details based upon the report in *The New York Times*, turned out to be quite inaccurate (Lemann, 2014; Manning et al., 2007). Accounts based upon that report, including Darley and Latané’s, too easily assumed that people watched impassively from their windows for the duration of the attack. As various commentators have observed, the initial report

grossly exaggerated the number of witnesses and what they had perceived. None saw the attack in its entirety. Only a few had glimpsed parts of it, or recognized the cries for help. Many thought they had heard lovers or drunks quarrelling. There were two attacks, not three. And afterward, two people did call the police. A 70-year-old woman ventured out and cradled the dying victim in her arms until they arrived (Singal, 2016).

Despite these qualifications the bystander continues to be mobilized as a vehicle for organizational, cultural, and ethico-political change. Increasing numbers of organizations, including universities, have introduced policies and procedures for bystander training: these encourage a form of situational attention, action and intervention in order to prevent the reproduction of forms of micro-violence and harassment. Bystander training can be understood as an effort to generate a kind of standby infrastructure of attention through cultivating sensitivity to forms of micro-violence and to the incipient potential of situations to generate toxic forms of asymmetric

relationality.¹ The aim of this training is not necessarily to go beyond the figure of the bystander, but to allow it to be performed differently, and in ways that anticipate, pre-empt, and prevent the perpetration of unacceptable practices and acts (Byers, 2016). Crucially, these policies are also underpinned by the assumption that bystanders can be trained to think of themselves as reservoirs of possible intervention: ‘in principle, even the most initially passive and remote bystander possesses a potential to cease being a mere onlooker to the events unfolding’ (Vetlesen, 2000: 521).

A concern with the figure of the bystander goes beyond such forms of training. *Objectified*, a 2018 short film directed by Dorothy Allen Pickard, exemplifies how the promise and problem of the bystander can be staged in scenographic form. Produced for the Museum of Homelessness, the film is based upon an exhibition of the same name that premiered at Manchester Art Gallery and which featured 20 objects through which different stories of homelessness are told.² *Objectified* focuses on the relation between lives lived in the ongoing wake of homelessness, the objects around which these lives are organized, and wider responses to these lives. The film is composed of three scenes staged in parallel across and between which a camera pans. The first is a bedroom in which a woman recounts something of the experience of homelessness. She dwells, for instance, on the value of bin-bags as valued devices for gathering and holding a world together. The second scene is a room in which people sitting around a table talk of the experience of homelessness and of mental illness. The third scene is a scientific laboratory of sorts in which a neuroscientist, Dr Lasana Harris of UCL, performs an MRI scan on a subject. The aim of the scan, according to Harris, is to see how the brain ‘responds to pictures of different kinds of people, including pictures of dehumanized people like the homeless’³. Harris suggests that the result of the scans shows that the brain does not respond to these pictures because people do not want to think about the experience of being homeless. He also suggests that

¹ See, for instance, the way in the bystander figures in my own institution, Oxford University: <https://edu.admin.ox.ac.uk/bystander#collapse1654551>.

² See <https://museumofhomelessness.org/2018/07/25/objectified-10-14-october/>.

³ From a transcript of the film ‘Objectified’

listening to stories of homelessness can change how the brain responds, therefore making it possible to modify the bystander effect.

A number of points can be made about *Objectified*. The film and the research on which it is based can be understood through an expanded sense of the situational forces developed in Darley and Latané's study. As Darley and Latané observed, 'if people understand the situational forces that can make them hesitate to intervene, they may better overcome them' (1968: 383). In *Objectified* it is notable that what counts as a situational force is extended, via neuro-imaging, into processes operating below thresholds of attention, raising questions about how, and with what implications, the locus of agency and decision-making is framed via neuroscience (see Harris and Fiske, 2006). Second, *Objectified* offers a reminder of the role of objects as witnesses to the non-eventful duration of particular forms of life (and death) and, relatedly, a reminder of how these objects might participate in the process of narrating lives otherwise. However, and third, *Objectified* exemplifies how the affective situations of the bystander are made explicit, palpable, and potentially modifiable, through the staging of scenes.

This scenographic approach resonates with arguments and experiments across a range of disciplines, from cultural studies (Stewart and Liftig, 2002; Povinelli, 2011; Berlant, 2016) to theatre and performance studies (Hann, 2018) to geography (Closs-Stephens, 2019; Raynor, 2019). In such work the scene is a way of giving form to the feeling of being in relation to the sense that something is happening (or not happening). The idea of the scene also articulates the relation between the situational forces of the bystander and recent thinking about infrastructure as something more than technical. As Laurent Berlant has written: 'infrastructure is defined by the movement or patterning of social form. It is the living mediation of what organizes life: the lifeworld of structure' (2016: 393).

Read through Berlant's writing, scenes are important ways in which situational forces on standby within worlds become collective-affective infrastructures: scenes give tonality and palpable tension to situations in their collective unfolding. Scenographic infrastructures do not provide any guarantee of a benign outcome or, more fundamentally, of any action at all. They can just as easily generate inaction, collective quietude, or failure.

Indeed, the bystander sometimes remains in a tensed state of active inaction because a situational infrastructure sustains this state: as Darley and Latané noted, in particular circumstances, the assumed or recognized presence or absence of others provides what we might think of as an affective infrastructure through which bystanders remain in a condition of standby when something else is required. And, equally importantly, the fact that actions do not cross the threshold of attention sufficient to become a scene might mean they continue unnoticed.

The notion of situation needs qualification, however. It is one thing to foreground the situational forces shaping the bystander effect through scenographic experiments like *Objectified* and, beyond this, to expand the domain of these forces to include processes taking place in the brain. But situations are not always recognized as such, and there is not always a kind of ‘green glow highlighting difficult situations’ (Elk and Devereaux, 2014: np). Equally, the situational forces that might shape a scene are arguably less site-specific than those in relation to which the bystander emerged as a psychological figure. While scenes of proximate attention and witnessing remain important, the multiplicity of platforms and channels for paying attention to and witnessing events as they unfold means that the position of the bystander can no longer be defined solely in terms of a condition of being *at the scene* in a traditional sense. As Zygmunt Bauman put it, ‘bystanding’ is ‘no more the exceptional plight of the few. We are all bystanders now – witnesses to pain-infliction and the human suffering it causes’ (2003: 139).

Bauman’s comment is a reminder of the affinity between the bystander and the witness, particularly in relation to traumatic events (see also Dewsbury, 2003; Carter-White, 2012). The claim that we are now all bystanders and/or witnesses in a mediatized world also needs qualification however, not least because it erases differences in responsibility for a range of actions and events. It mirrors the invocation of the Anthropocene as a way of generalizing responsibility for climate change across an undifferentiated field of humanity. But not everyone is a bystander, and not everyone is implicated in failures to respond, or at least not in the same way. And not responding is not always a failure insofar as this nonresponse is a recognition of the risk of exposure to the violence of particular forms of asymmetrical power. That said, there is evidence that social media provide new standby infrastructures for developing

important forms of attention and witnessing. Carrie Rentschler has shown, for instance, how ‘hashtag activism’ social-media produces a form of ‘networked feminist witnessing’ that ‘model[s] social intervention into racial and gender violence via the transformation of feeling bystanders into media witnesses to gender justice’ (2017: 656).

It is therefore not enough to generalize the bystander or the witness but to examine the differentiated spacetimes of both and the conditions under which these spacetimes emerge. And, relatedly, it is important to develop a multi-prepositional sense of the form of standing by, or of the *stances* invoked by the figure of the bystander. How, for instance, do different forms of standing by, with, for, or against, emerge? This might allow us to grasp how the scenographic spacetimes of the bystander are becoming increasingly elastic, not least as evidence of differentiated participation in processes occurring over many time-horizons becomes explicit. In that sense, to stand by does not necessarily mean standing (or staying) *with* in any straightforward way, because the processes in relation to which the bystander is tensed can operate over decades and centuries. The figure of the bystander is not therefore reducible to situational co-presence, but necessarily becomes implicated in multi-temporal modes of witnessing, participation, complicity, and passivity. Nor is it reducible to a binary opposition between intervention and non-intervention in which the former is simply affirmed as a mode of action. Primed as it is by assumptions about the value and necessity of intervention, the figure of the bystander actually raises important questions about how intervention can reproduce the problems of a range of political positions and formations (Elk and Devereaux, 2014)

The agency of the bystander also needs troubling. It is worth recalling here that the bystander exemplifies the ideal of the actively responsible individual subject who bears responsibility because they possess the capacity to take a decision. The subject, in this analysis, is already defined, delimited, and relatively coherent, even if the state of indecision in which it finds itself is not. The bystander is an affirmation – and to some extent an implied judgement – of human agency as decisional. And yet the technical and media infrastructures through which the bystander now pays attention and witnesses also encourage the distribution and dispersal of decisional agency across devices, networks, and systems that filter and frame how and what

things show up as significant in contemporary lifeworlds. This poses questions about how far the responsibility of the bystander can continue to be framed in terms of individual agency when many of forces that shape the conditions for action/inaction are not immediately legible or palpable as situational, but which remain latent within and across diverse institutions and organizations. It might mean focusing less on the bystander as a paradigmatic ethical figure on standby, but on bystanding as an always provisional form of collective infrastructure for attending to conditions whose incipient violence does not always become the scene of a situation.

The scenographics of the bystander are unsettling and being unsettled. Certainly, scenes of proximity, such as those framing accounts of the murder of Kitty Genovese, no longer provide straightforward infrastructures for disclosing the situational forces that temper and tense the in/action of the bystander. The lesson here is not necessarily to leave the scene behind. It is to devise new imaginative-affective scenarios that diagram different forms of implication in processes and events operating well beyond the orbit of the immediate or the here and now. It requires thinking about the relation between bystanding and the persistence of structures of injustice whose temporalities stretch across pastness, presence, and futurity. It requires reckoning with the inescapability of bystanding as a state of 'knowing that something needs to be done, but also knowing that we have done less than needs to be and not necessarily what needed doing most; and that we are not especially eager to do more or better, and even less keen to abstain from doing what should not be done at all' (Bauman, 2003: 143). This does not mean that the condition of being a bystander is a generalized state in which we already and always find ourselves. Instead, bystanding takes shape circumstantially as a tensed affective orientation towards others. It is the ongoing implication, more or less scenographic, of our stances towards or away from the violence, actual or potential, of many worlds (Laurie and Shaw, 2018).

references

- Berlant, L. (2016) 'The commons: Infrastructures for troubling times', *Environment and Planning D*, 34(3): 393-419.

- Bauman, Z. (2003) 'From bystander to actor', *Journal of Human Rights*, 2(2): 137-151.
- Byers, D. (2016) 'Recognition of social pain among peers: Rethinking the role of bystanders in bullying and cyberbullying', *Smith College Studies in Social Work*, 86(4): 335-354.
- Carter-White, R. (2012) 'Primo Levi and the genre of testimony', *Transactions of the Institute of British Geographers*, 37(2): 287-300.
- Closs-Stephens, A. (2019) 'Feeling "Brexit": Nationalism and the affective politics of movement', *GeoHumanities*, 5(2): 405-423.
- Darley, J. and B. Latané (1968) 'Bystander intervention in emergencies: Diffusion of responsibility', *Journal of Personality and Social Psychology*, 8(4): 377-383.
- Dewsbury, J-D. (2003) 'Witnessing space: "knowledge without contemplation"', *Environment and Planning A*, 35(11): 1907-1932.
- Elk, L. and S. Devereaux (2014) 'The failure of bystander intervention', *New Inquiry*, December 23, 12-23.
- Fischer, P., JI. Krueger, T. Greitemeyer, C. Vogrincic, A. Kastenmüller, D. Frey, M. Heene, M. Wicher, M. Kainbacher. (2011) 'The bystander-effect: a meta-analytic review on bystander intervention in dangerous and non-dangerous emergencies', *Psychological Bulletin*, 137(4): 517-537.
- Hann, R. (2018) *Beyond scenography*. London: Routledge.
- Harris, L. and S. Fiske (2006) 'Dehumanizing the lowest of the low: Neuroimaging responses to extreme out-groups', *Psychological Science*, 17(10): 847-853.
- Laurie, E. and I. Shaw (2018) 'Violent conditions: The injustices of being', *Political Geography*, 65(1): 8-16.
- Lemann, N. (2014) 'A call for help: what the Kitty Genovese story really means', *The New Yorker*, March 3.
- Manning, R., M. Levine and A. Collins (2007) 'The Kitty Genovese murder and the social psychology of helping: The parable of the 38 witnesses', *American Psychologist*, 62(6): 555.

- Povinelli, E. (2011) *Economies of abandonment: Social belonging and endurance in late liberalism*. Durham, NC: Duke University Press.
- Raynor, R. (2019) 'Speaking, feeling, mattering: Theatre as method and model for practice-based, collaborative, research', *Progress in Human Geography*, 43(4): 691-710.
- Rentschler, C.A. (2017) 'Bystander intervention, feminist hashtag activism, and the anti-carceral politics of care', *Feminist Media Studies*, 17(4): 565-584.
- Rosenthal, A.M. (2008) *Thirty-eight witnesses: The Kitty Genovese case*. New York: Melville House.
- Singal, J. (2016) 'How the false story of Kitty Genovese's murder went viral', *The Cut*, April 5. [<https://www.thecut.com/2016/04/how-the-false-story-of-kitty-genovese-s-murder-went-viral.html>].
- Stewart, K. and A. Liftig (2002) 'Scenes of life/Kentucky mountains', *Public Culture*, 14(2): 349-359.
- Vetlesen, A.J. (2000) 'Genocide: A case for the responsibility of the bystander', *Journal of Peace Research*, 37(4): 519-532.

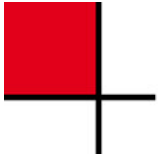
acknowledgements

Thanks to the editorial collective of *ephemera* and to Birke Otto for their assistance in preparing this piece. I am also very grateful to the editors of this special issue for their patience and persistence.

the author

Derek McCormack is Professor of Cultural Geography at the University of Oxford. He is the author of *Refrains for moving bodies: Experience and experiment in affective spaces* (2014) and *Atmospheric things: On the allure of elemental envelopment* (2018), both published with Duke University Press.

Email: derek.mccormack@ouce.ox.ac.uk



After progress: Notes for an ecology of perhaps

Martin Savransky

‘Perhaps! – But who is willing to concern himself with such dangerous perhapses! For that we have to await the arrival of a new species of philosopher, one which possesses tastes and inclinations opposite to and different from those of its predecessors – philosophers of the dangerous “perhaps” in every sense. –And to speak in all seriousness: I see such philosophers arising.’

Friedrich Nietzsche (1990), *Beyond Good and Evil*.

‘We tried ruling the world; we tried acting as God’s steward; then we tried ushering in the human revolution, the age of reason and isolation. We failed in all of it, and our failure destroyed more than we are even aware of. The time for civilisation is past. Uncivilisation, which knows its flaws because it has participated in them; which sees unflinchingly and bites down hard as it records–this is the project we must embark on now.’

Paul Kingsnorth and Douglas Hine (2017), *Uncivilisation: The Dark Mountain Manifesto*.

Introduction: Deep in the mud



Francisco Goya, 'Fighting with Cudgels', c. 1820-1823.

'The painter, Goya, has plunged the duelists knee-deep in the mud. With every move they make, a slimy hole swallows them up, so that they are gradually burying themselves together.' We owe it to the late Michel Serres (1995: 1) to have bequeathed to us, a whole three decades ago, an unsettlingly prescient reading of Francisco Goya's painting from his famous *Black Paintings* series, 'Fighting with Cudgels', in which two duelists battle each other in a quicksand. Serres' reading was unsettling because it lucidly rendered Goya's early nineteenth-century painting a picture of our present, disclosing how, in being attentive to each other's movements, to their own gestures and counter-tactics, these duelists are plunged into a situation in which they 'fight to the death in an abstract space, where they struggle alone, without marsh or river. Take away the world around the battles', Serres continued (1995: 3), 'keep only conflicts or debates, think with humanity and purified of things, and you obtain stage theatre, most our narratives and philosophies, history, and all of social science: the interesting spectacle we call cultural. Does one ever say *where* master and slave fight it out? Our culture abhors the world.'

In the intervening years since Serres's interpretation of the painting, things have not changed much. And yet, if in 1990 he could still phrase in the interrogative our culture's role in the transformation of the climate and the

ecological devastation of the world¹; and if he could still hope that, by moving beyond the politics of the city and the polis, by becoming physicists, it might be possible for those who govern to ‘invent a new natural contract’ (1995: 44), to replace war with peace; today it is clear that no amount of science and no new global contract theory can singlehandedly satiate our culture’s ravenous spectacles. Quicksands are notoriously tricky to pull oneself out of. And now that ecological devastation is no longer a question but a *fait accompli*, now that the dice have been thrown, what transpires amidst runaway climate change, mass extinction events, air pollution, ocean acidification, desertification, and the other manifold processes of ecological devastation that besiege the present is that it is things, the marshes and the rivers, that have been brought into the ring with their own catastrophic cudgels, thereby becoming objects, instruments, and subjects of a global, non-symmetrical war in which victory is no longer a possible outcome (Grove, 2019).

That this should have happened is not, it has to be said, due to a lack of physicists, geologists, or climate scientists. Nor is it for want of activism. Tempting though it appears to be, it can neither be blamed on ‘ignorance’, nor on mere denial. Knowledge alone won’t clean the mud off our bodies. Indeed the problem is not so much that we don’t or didn’t know, but that we can’t stop. For as Félix Guattari (2001: 28) already put it in his *The Three Ecologies*, ‘it is the ways of living on this planet that are in question’: a precarious intertwining of existential territories that is fragile, finite, singular, and capable of veering into stratified and deathly repetitions. Which is also to say that the problem belongs to a different order. It has to do, perhaps, with the fact that the swallowing powers of a quicksand are indissociable from the very dynamics of battle, from the sheer habits, activities, and sensibilities that simultaneously constitute the duelists *qua* duelists and configures and subtends the fight as an event. Revisiting Serres’s interpretation of the painting today, one might therefore say that what renders *abstract* the space in which the duelists fight is not their ignorance or sheer indifference to the world in which they wage war. It is not

¹ It is worth noting that the now well-known Intergovernmental Panel on Climate Change (IPCC) was founded only two years earlier, in 1988.

even their ire, their fear, their desire for victory, or their thirst for revenge. It is the *progress* they are making with every step they take: each swing of the cudgel bringing them infinitesimally closer to the victorious outcome they both seek, each step sinking their bodies deeper into the mud.

Critics of progress at the end of the last century tacitly espoused the hope that ‘progress’ was, above all, an idea. An idea with a dodgy history and dangerous consequences, to be sure. But an idea nonetheless, which, like all ideas, could be analytically dissected and problematised, intellectually criticised and politically denounced (for a longer history of the idea see Nisbet, 1980). As far as the idea was concerned, their critiques did what they were supposed to: they made present that the idea of progress was irrevocably entangled with the history of capitalism, colonialism, and extractivism, and as such intellectually complicit in the devastating consequences they brought about for peoples, critters, and environments around the world, and especially outside the North. But no amount of criticism is enough to bring to a standstill what had always been more than ideal. ‘Progress’, it turns out, might well have the character of a quicksand, suffusing the very modern mode of evaluation from which the values of global development, infinite growth, scientific advance, technological innovation, salvage accumulation, and ethical betterment are derived. And it is one which simultaneously infuses and animates well-meaning dreams of cosmopolitan redemption, stories of innocence and reconciliation, and proposals for new contractual obligations: what we call ‘progressive’ politics. Rather than an idea, then, ‘progress’ is more akin to a world-ploughing machine that has rendered the ground for collective living and flourishing too loose and granular to provide any further sustenance.

Such are the quicksands of progress that, now that the mud is truly reaching our nostrils, now that the present environmental condition confronts us with its own dramatic urgency, what becomes perceptible is that, far from dragging us out, the modes of political, scientific, and aesthetic organisation *by which we have stood* have rendered us *bystanders* to our own drowning. ‘How quickly depends on how aggressive they are: the more heated the struggle, the more violent their movements become and the faster they sink in.’ (Serres, 1995: 1). Indeed, perhaps what’s most challenging about the present environmental condition is not so much its urgency, which swiftly

animates eco-modernist dreams for a quick and effective response and the progressive hope of something better ahead. It is its permanence – the fact that there is no foreseeable future in which we will be rid of the mud that now engulfs us. This is indeed one of its most frightening aspects, for without stories of progress, it's 'not easy', Anna Tsing (2015: 282) notes, 'to know how to make a life, much less avert planetary destruction.'

How to inherit a devastated world? How to cultivate collective arts of living and dying after progress? What might it mean to live and die precariously in the mud, outside the progressive coordinates by which we have stood and thanks to which we thought we knew where we were going? My sense is that it is precisely in the wake of such questions, that the present itself opens up, that the polysemic notion of 'standby' which this special issue invites us to consider might perhaps be deserving of a new kind of attention. At once evoking an idle presence (the one who merely 'stands by', or the 'bystander'), a metastable state of readiness to act (that which is 'on standby'), and responsive abidance ('I stand by you'), standby's ambiguity might be reason enough to hesitate and pay attention. But when even in 2014 the Intergovernmental Panel on Climate Change (2014: 527) intimated the need (and the breathtaking impossibility) of a collective standstill, sentencing that climate change 'can only be mitigated and global temperature be stabilised when the total amount of CO₂ is limited and emissions eventually approach zero', the attention that a modality like standby calls for is other than that provoked by alarm, which decries the comportment of the one who 'stands by' as a function of their sheer idleness and indifference in the face of an impending catastrophe. While it is true that, as environmental activists rightly demand, there is much urgent work to be done to bring such a standstill within the realm of the possible, it is also true that mitigation is not *progress*: the damage cannot be undone.

But if there's one thing we might still be able to avoid is letting the same story of progress continue to subtend our tales of devastation, as stories of regression and resignation. Which is why, right alongside the urgent work of activists, it seems to me that ruminating on 'standby' as a possible mode of organisation today requires that we refuse the progressive valuations of activity and passivity that immediately render this notion suspect. If it has a chance of evoking anything other than indifference or an incitement to

repeat the very dynamics and commitments by which we sink in, standby will have to be connected with a different mode of evaluation, with a different work to be done: that of an aesthetic, political and ecological collective reorganisation at the limit where the opposition of motion and stillness gives way to the immanent and almost imperceptible movement of an indeterminate otherwise, making other values discernible, and other stories relatable. In other words, I want to suggest that to take standby as a mode of organisation seriously might require that we learn to stand by a *perhaps*. To learn, that is, at once to sense and to trust the insistence of an indeterminate otherwise, the dim intensity of a minor opening that might, in spite of all, inspire in us sensibilities, values, habits and practices that can nourish arts of living and dying well with others in the wake (Savransky, forthcoming; Tsing et al., 2017). What follows are a series of speculative notes to that end, notes for what I'd like to think of as 'an ecology of perhaps'.

Quicksands of progress: History, plantation, regression

To acquire a taste for what an ecology of perhaps might harbour, we may need to dwell a little longer in the space of exhaustion generated in the quicksand of progress. Not to revel in the devastating consequences that this world-ploughing machine has brought about, but above all to understand, even if only summarily, the metamorphosis that the story of progress engendered in the first place. To sense, in other words, what could still be reclaimed in and from the mud, what might still be stolen back, perhaps. For the assembling of this machine of a boundless, linear, and upwards historical trajectory that progressively prorogued the end of the world did not come about through mere human ingenuity or optimism, but was rendered possible by a series of concerted efforts, as much intellectual, political, economic, and environmental, to turn the world into a single, overarching order – an operation of 'monification' carried out through the devaluation of everything that was plural, specific, singular, and local (Savransky, forthcoming).

As the conceptual historian Reinhart Koselleck (2004) famously showed in his *Futures Past*, the efficacy of the modern story of progress, of a new

historicity breaking with all precedent, was accomplished in no minor way by the bulldozing of stories (*Historie*) in the name of History (*Geschichte*), thereafter understood as the name for events themselves and not for the stories that relayed them in always divergent ways. But this, in turn, implied an accompanying operation, it made possible ‘the attribution to history of the latent power of human events and suffering, a power that connected and motivated everything in accordance with a secret or evident plan to which one could feel responsible, or in whose name one could believe oneself to be acting.’ (Koselleck, 2004: 35) This ‘philological event’ of the condensation of stories into History, Koselleck (2004: 35) argues, ‘occurred in a context of epochal significance: that of the great period of singularization and simplification which was directed socially and politically against a society of estates. Here, Freedom took the place of freedoms, Justice that of rights and servitudes, Progress that of progressions (*les progrès*, the plural) and from the diversity of revolutions, “The Revolution” emerged.’

As the plurality of stories was sacrificed on the modern altar of History, so too did the habit of letting ourselves be collectively affected by other stories, to be inspired by the alternative paths they open up, to be lured by the possibilities they create. Storytelling became nothing but the product of the human imagination, and stories its mere figments – ‘just stories’. From the eighteenth century onwards, only powerful events would count, the only trustworthy account in operation was History, and Progress was its philosophy: no longer merely an ideology of the openness of the future and the uselessness of the past, but ‘a new everyday experience which was fed continually from a number of sources: technical development, the increase of population, the social unfolding of human rights, and the corresponding shifts in political system.’ (Koselleck, 2004: 60).

It is on the basis of this new form of experience that colonialism drew up its modern geography of anachronisms, comparing other collective modes of organisation, other ways of living and dying with others, along a single diachronic line in which non-European peoples, modes of coexistence, forms of knowledge, and even parts of the Earth were regarded, like the myths and stories by which they lived, as inhabiting Europe’s past (see Hindess, 2008). What’s more, just as Progress, as a mode of temporalisation, had emptied the past and replaced stories with History, it also animated operations of

geospatialisation, exhausting the polyphony of ecological relations through the expansion of monoculture plantations. ‘Consider’, Tsing writes,

the elements of the Portuguese sugarcane plantation in colonial Brazil. First, the cane, as the Portuguese knew it: Sugarcane was planted by sticking a cane in the ground and waiting for it to sprout. All the plants were clones, and Europeans had no knowledge of how to breed this New Guinea cultigen. The interchangeability of planting stock, undisturbed by reproduction, was a characteristic of European cane. Carried to the New World, it had few interspecies relations. As plants go, it was comparatively self-contained, oblivious to encounter. Second, cane labor: Portuguese cane-growing came together with their newly gained power to extract enslaved people from Africa. As cane workers in the New World, enslaved Africans had great advantages from growers’ perspectives: they had no local social relations and thus no established routes for escape. Like the cane itself, which had no history of either companion species or disease relations in the New World, they were isolated. They were on their way to becoming self-contained, and thus standardizable as abstract labor. [...] Interchangeability in relation to the project frame, for both human work and plant commodities, emerged in these historical experiments. It was a success: Great profits were made in Europe, and most Europeans were too far away to see the effects. (2015: 39)

Indeed, if progress constitutes an operation of ‘monification’ it is not just because it *posited* the world as one, not only because it involved a new way of *conceiving* of time or space, or of judging the ways in which others inhabit the world. If it is a world-ploughing machine it is because it also attempted to cast much of the Earth itself under its shadow, engendering a devastation that was *ecological* in its most expansive sense: at once a ravaging of soils, of geographical differences, of interspecies and social relations, of knowledges, of movements, of human freedoms, of histories, of plural forms of living and cultivating worlds. Meanwhile, at some remove from its effects, this process gave way in one and the same breath to what Koselleck (2004: 238) calls the modern ‘postulate of acceleration’, according to which ‘historical experience was increasingly ordered by the hierarchy produced through a consideration of the best existing constitution or the state of scientific, technical, or economic development.’ Thus ‘progress’ instituted itself as a mode of evaluation from which the value of global development, infinite growth, scientific advance, technological innovation, salvage accumulation, and ethical betterment is derived.

Hence the predicament that the environmental condition confronts us with today: if cultivating collective arts of living and dying after progress feels like such an unthinkable task, it is because, as Gilles Deleuze (2006: 2) once put it, ‘we always have the beliefs, feelings and thoughts we deserve given our way of being or our style of life.’ It is, in other words, because progress implicates not simply what we know or ignore, but the very modes of political, scientific, and aesthetic organisation by which we have evaluated what makes lives worth living, and what makes futures worth living for. In this context, one can well appreciate the suspect connotations that a notion like ‘standby’ can evoke. When the future is ours to conquer along the upwards trajectory of progress, the modality of ‘standby’ can only be tolerated so long as it is associated with the assembling of infrastructural forms of socio-technical agency at the service of bringing that future about (Hetherington, 2016); so long, that is, as its function is that of drawing plural forms of temporality into progress’s own rhythms. By contrast, anything short of the steady *activity* that may be required to sustain such progressive rhythm risks the charge of *regression*, the accusation that one is shunning the heritage of the Enlightenment, the great achievements of human emancipation, of scientific rationality, of critical thinking and insubordination against a closed-off future (Stengers, 2015). Yet again, however, the charge of regression drags us back into the dynamics of battle.

For an ecology of perhaps

To say that we always have the beliefs, feelings and thoughts that we deserve given our way of being or our style of life; to say that progress infects our lives, our movements, and the grounds that (no longer) sustain them, is to make present that, whenever the question of progress is concerned, it can never be simply a matter of thinking our way out of our way of living. Rather, from the quicksands in which we’ve sunk, it is always a matter of *living our way into other modes of thinking* (Savransky, 2019). It is a matter of experimenting with other modes of aesthetic and political organisation that may inspire in us the beliefs, feelings and thoughts that we might seek, so as to render one another capable of appraising lives worth living and a futures worth living for outside of the coordinates of progress. And as any survival guide might advise, it may be that interrupting the dynamics through which

the quicksand has swallowed us up involves precisely an experimentation, not simply to stand still, which would render us paralysed, but to *stand by*: to inhabit the very limit at which motion and stillness give way to the immanent and almost imperceptible movement of an indeterminate otherwise. The limit, in other words, at which one can sense the glimmer of a perhaps.

More than the undecidable moment that constitutes the condition of possibility for every decision, interruption, revolution, responsibility and truth (cf. Derrida, 2005), a 'perhaps' names the dim intensity of a minor opening, of a task to be performed, of a being to be accomplished. It designates the insistence of an otherwise in the midst of a situation. It is what confronts a situation with a dramatic and generative problem but does not say what the answers to the problem should be. As such, a perhaps draws the situation into the hold of a question the former cannot answer without also accepting to become transformed by the otherwise that the question generates. Perhapses, as Nietzsche (1990) said, are 'dangerous' indeed, both because they might never come to pass, and because nothing guarantees that their passing will drive the situation toward better ends. Instead, a perhaps calls on the present with the character of an interminable task, with an ongoing and unfinished experimentation to be carried out with others, underway and yet to be realised, at our own risk, while we still can.

The wager is that accepting to seek modes of organisation at the limit where our actions and inactions open up to other rhythms and temporalities, at the limit where standing by might give way to a perhaps, may well teach us something valuable about how to inherit a devastated world in a manner that does not contribute to the progressive dynamics that have contributed to its devastation. And if that is a possibility, even if just a dim one, it is because perception is intimately tied to our dynamics of action. As the psychologist James Gibson argued in *The Ecological Approach to Visual Perception* (2015: 119), our perception of the environment is shaped by what the latter *affords* in terms of action, what it renders us capable of – for better or ill. In Gibson's ecological proposal, what is primarily perceived of an earthly surface that is horizontal, extended and sufficiently rigid, is not its abstract qualities – its form, colour, or texture –, but that it '*affords support*'. In other words, that it is 'stand-on-able, permitting an upright posture for

quadrupeds and bipeds. It is therefore walk-on-able and run-over-able. It is not sink-into-able like a surface of water or a swamp, that is, not for heavy terrestrial animals. Support for water bugs is different.’

This is to suggest that the affordances of the environment aren’t subjective: values and meanings inhere in environments themselves, instead of being added to them by a human mind (see also Savransky, 2016). And as Gibson was right to point out, though they are aspects of the environment, affordances are *relative to* the very dynamics of activity and inactivity that the animal proffers to it in return, that is, to the very mode of exploration and navigation through which the environment is perceived. Unlike the physical properties of an environment, therefore, affordances belong to what we could call *ecological agencements*: the way in which the multiple heterogeneous participants that compose an environment render each other available to one another, laying out together the manner in which they and the environment come to exist. If it is worth calling it *agencement*, and not ‘assemblage’², it is because the French term *agencer*, which means to lay out, to arrange, or to piece together, also reminds us that ‘agency’ or ‘intention’ is a function of the assemblage itself – of the multiple connections that have succeeded in being established and through which it has come into being.

This is of considerable importance. Because if agency belongs to the *agencement* itself, it is clear that experimenting with ‘standby’ cannot simply be a matter of choosing whether or not to act, as if one was faced with a moral dilemma. It has nothing to do with consenting to a new eco-nihilism that would tell us that the best course of action available is to do nothing. At stake, rather, is precisely the possibility of becoming available to one another in a manner that no longer accepts the simplifications of temporality and spatiality that progressive rhythms incite, those that render environments nothing but drillable, extractable, clearable, burnable, or developable. By inviting us to inhabit the limit at which motion and stillness give way to something else, what the notion of standby intimates, perhaps,

² ‘Assemblage’ is, of course, the much-debated English translation of *agencement*, the term that Deleuze and Guattari (1987) use in the original French version of *A Thousand Plateaus* and which, according to Deleuze, provides a general logic at work in that book.

is the possibility of altering rhythms of progressive activity so as to make perceptible a thousand different movements, displacements, alterations and variations there where Progress sees only irrelevant detail (see Lapoujade, 2019). What it makes dimly resonate, as a question that keeps us in its hold, is the chance of collectively engendering other arrangements, other modes of organisation through which a plurality of old and new, human and more-than-human stories, of forms of living and dying otherwise, of minor ecological rhythms, relations, temporalities and singular forms of value, may insist and persist inside and in spite of earthwide devastation. To cultivate, in short, ecological agencements attuned to the insistence of a perhaps.

In this sense, ‘standby’ implies a reorganisation that is at once political, aesthetic and ecological. For it involves nothing less than the radical redistribution of the senses and of sensibilities, of patterns of feeling, of the immanent values that our devastated environments might still be capable of *in the hold of perhaps*: as when mushrooms growing in deforested landscapes turn out to be generative of practices, interspecies relations and forms of value that are irreducible to their price-tag in Japanese restaurants (Tsing, 2015); or when new shepherding practices in the south of France led urban shepherds and sheep to regenerate worlds, landscapes and their reciprocal relations in the wake of agricultural modernisation (Despret and Meuret, 2016); as when Enlightened and colonial values inscribed in an eighteenth-century library in Portugal become upended and transfixed by a colony of bats that inhabit its folds and soil everything along their nocturnal flightpaths (Savransky, 2019); or when the pragmatic experiments of a collective of priests allow them to learn how to respond to a profusion of ghosts in the wake of a tsunami, enabling the survivors to share stories of their dead, and the dead to reconcile with the loss of their living (Savransky, forthcoming).

Standing by the possibility of being assembled otherwise, these and other agencements do not harbour the promise of restoring what has been lost, or the prospect of a future in which the earthwide precarity that pervades the present will have been relegated (yet again) to the dustbin of history. Indeed, these are not comfortable narratives, progressive stories to lift us out of the quicksand: matsutake mushrooms do not usher in a new postcapitalist age; these new shepherding and grazing practices transform environments in

ways that may well be detrimental to wild boars, wild birds, and flowering plants; the bats upend the Enlightened values of the library just as the latter reduces them to a mere touristic curiosity; and in the wake of the tsunami, the dead, in their thousands, won't come back to life, nor will the living go back to theirs. These are muddy stories, of precarity and fragility. And yet, what they give us a taste of, and what they might perhaps render efficacious, is the sense that one can never determine ahead of time what beliefs, feelings, and thoughts an ecological agencement may inspire in those who participate in its cultivation.

As a result, standing by the indeterminate otherwise that these and other ecological agencements make perceptible might yet lead us to experiment along other political dimensions. It might make us available to the possibility that, perhaps, there is an after to the progressive modes of organisation by which we have stood; that just as the end of our world is not the end of the Earth, perhaps the end of progressive politics and the story of progress is neither the end of stories nor of politics as such. Standing by the minor futures these muddy ecological assemblages help us envisage, perhaps they may encourage us to trust that alongside those activists who struggle to avert some of the most catastrophic forms of devastation, there is another work to be done: the patient and careful task of learning to become attentive to other stories. Stories which offer neither salvation, redemption, or reconciliation, and won't rid us of the mud, but which may perhaps open up dimensions of living together that our dynamics of activity have led us to neglect. Stories that may, just *perhaps*, inspire in us the beliefs, feeling, and thoughts we may need in order to learn how to cultivate plural ways of appraising lives worth living and futures worth living for after progress.

references

- Deleuze, G. (2006) *Nietzsche and philosophy*, trans. Hugh Tomlinson. London: Continuum.
- Deleuze, G. & Guattari, F. (1987) *A thousand plateaus: Capitalism and schizophrenia*, trans. Brian Massumi. New York: Semiotext(e).
- Derrida, J. (2005) *The politics of friendship*, trans. George Collins. London & New York: Verso.

- Despret, V. and Meuret, M. (2016) 'Cosmoecological sheep and the arts of living on a damaged planet', *Environmental Humanities*, 8(1): 24-36.
- Gibson, J. (2015) *The ecological approach to visual perception*. London & New York: Routledge.
- Grove, J. (2019) *Savage ecology: War and geopolitics at the end of the world*. Durham & London: Duke University Press.
- Guattari, F. (2001) *The three ecologies*, trans. Ian Pindar and Paul Sutton. London & New Brunswick, NJ: The Athlone Press.
- Hetherington, K. (2016) 'Surveying the future perfect: Anthropology, development and the promise of infrastructure', In P. Harvey, C. B. Jensen, and A. Morita (eds.) *Infrastructures and social complexity: A companion*. London: Routledge, pp. 40-50.
- Hindess, B. (2008) 'Been there, done that...', *Postcolonial Studies*, 11(2): 201-213
- Intergovernmental Panel on Climate Change (2014) *Climate change 2014: Mitigation of climate change*. New York: Cambridge University Press.
- Kingsnorth, P. and Hine, D. (2017) 'Uncivilization: The dark mountain manifesto.' In C. Du Cann et al. (eds.) *Walking on lava: Selected works for uncivilised times*. White River Junction, VT: Chelsea Green Publishing.
- Koselleck, R. (2004) *Futures past: On the semantics of historical time*, trans. Keith Tribe. New York: Columbia University Press.
- Lapoujade, D. (2019) 'To act at the limit'. In R. Göring, B. Gronau, and L. Schwarte (eds.) *Aesthetics of standstill*. Berlin: Stenberg Press.
- Nietzsche, F. (1990) *Beyond good and evil*, trans. R.J. Hollingdale. London: Penguin.
- Nisbet, R. (1980) *History of the idea of progress*. New York: Basic Books.
- Savransky, M. (2016) *The adventure of relevance: An ethics of social inquiry*. Basingstoke and New York: Palgrave Macmillan.
- Savransky, M. (2019) 'The bat revolt in values: A parable for living in academic ruins'. *Social Text*, 37(2): 135-146.

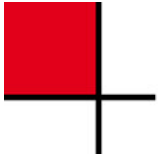
- Savransky, M. (forthcoming) *Around the day in eighty worlds: Politics of the pluriverse*. Durham & London: Duke University Press.
- Serres, M. (1995) *The natural contract*, trans. Elizabeth MacArthur and William Paulson. Ann Arbor, MI: University of Michigan Press.
- Stengers, I. (2015) *In catastrophic times: Resisting the coming barbarism*, trans. Andrew Goffey. Lüneburg: Opern Humanities Press.
- Tsing, A. (2015) *The mushroom at the end of the world: On the possibility of life in capitalist ruins*. Princeton, NJ: Princeton University Press.
- Tsing, A., Swannson, H., Gan, E., Busband, N. (2017) *Arts of living on a damaged planet: Ghosts and monsters in the anthropocene*. Minneapolis: University of Minnesota Press.

acknowledgements

I would like to thank Laura Kemmer, Annika Kühn, Vanessa Weber, and Birke Otto for their kind invitation to contribute these reflections to their special issue, and for their thoughtful comments on an earlier version. I am very thankful also to Craig Lundy for our many conversations and collaborations on the theme of “after progress”, as well as to all those who participated in our co-organised symposium series with the same title, generously supported by The Sociological Review Foundation.

the author

Martin Savransky is Senior Lecturer in the Sociology Department at Goldsmiths, University of London. He is the author of *The adventure of relevance: An ethics of social inquiry* (Palgrave, 2016) and *Around the day in eighty worlds: Politics of the pluriverse* (Duke University Press, forthcoming), and has co-edited *Speculative research: The lure of possible futures* (Routledge, 2017).
Email: m.savransky@gold.ac.uk



On Standby ... at the borders of 'Europe'

Nicholas De Genova

Introduction

The questions of migration and refugee movements and the related disputes over borders present us with vital material through which to re-conceptualize the politics in and of organization (the thematic focus of this journal). In this Note, I will provide some reflections on what is otherwise a largely descriptive account of some recent events that have played out at the putative borders of 'Europe'. Marx and Engels memorably asserted with regard to their own theoretical conclusions that they 'merely express, in general terms, actual relations springing from an existing class struggle, from a historical movement going on under our very eyes' (Marx and Engels, 1848[1967:235]). Migration, on a global scale, is indeed a historical movement taking place all around us, 'under our very eyes', and our challenge — theoretically and politically — is to comprehend and critique what is at stake in *actual* struggles, the real social relations of unresolved antagonism and open-ended struggle that continuously constitute social life (De Genova, 2010:111). Ultimately, these questions provoke a radical reconsideration of the very meaning and consequentiality of the European project and are central to addressing what I have otherwise designated as the 'European' Question (De Genova, 2016b).

Migrant and refugee movements transgressing the borders of 'Europe' and the reactive border enforcement tactics of the sovereign powers of Europe (the European Union as well as the European nation-states, both EU members and not) have been ensnared in an irreconcilable struggle, especially since 2015,

and this protracted struggle has been a very prominent centerpiece of a dominant discourse of ‘crisis’ in Europe (cf. Bojadžijev and Mezzadra, 2015; Carastathis, Spathopoulou and Tsilimpounidi, 2018; De Genova, 2017; 2018; Franck, 2018; Jeandesboz and Pallister-Wilkins, 2016; Lafazani, 2018b; New Keywords Collective, 2016; Spathopoulou and Carastathis, 2020). At the end of February 2020, the language of ‘migrant crisis’ rose once again to spectacular visibility when the Turkish government cynically mobilized migrants and refugees and deliberately instigated clashes with Greek border guards (Erlanger, 2020; No Border Pazarkule/ Edirne, 2020; Stevis-Gridneff and Gall, 2020).

Beginning on or around February 29, 2020, at the borders of ‘Europe’, Greek soldiers, riot police and other border guards, as well as armed civilian militias, confronted migrants and refugees with violently racist malevolence. A rush on the borders by several thousand migrants and refugees, cynically manipulated and partly orchestrated by the Turkish government, was met by Greek authorities with unbridled viciousness, including tear gas, truncheons, stun grenades, rubber bullets and live ammunition, as well as the deliberate use of high-speed boats to destabilize and potentially sink migrant vessels and endanger the lives of the passengers (Stevis-Gridness, 2020a; Stevis-Gridness et al., 2020; cf. No Border Pazarkule/ Edirne, 2020). Frustrated by a lack of European support following Turkish military losses in Syria’s Idlib province (on Turkey’s border), Turkish President Recep Erdogan unapologetically weaponized migration and defiantly proclaimed in a televised address, ‘We opened the doors’ (Stevis-Gridneff and Gall, 2020).

Remarkably, Turkish gendarmes literally escorted migrants to the border and assisted their efforts to cross. In many instances, privately operated commercial buses heading toward the border were intercepted by Turkish authorities, inspecting and partitioning Turks from (non-Turkish) ‘migrants’ and coercively relocating the migrants and refugees who were independently making their way to the border onto state-run buses that were assembled to ensure that the unruly rush would be superintended and managed as effectively as possible. Near the actual sites of border-crossing, Turkish authorities installed checkpoints, beyond which Turkish citizens, whether humanitarian personnel or solidarity activists, were generally prohibited. Thus, the Turkish authorities assembled massive agglomerations of several

thousands of migrants and refugees in makeshift staging areas, on standby — with no shelter or facilities, fending for themselves against the cold, rain, mud and hunger — where they were presumed to eventually cross the border into Greece but also violently cordoned off from returning back into Turkey. Turkish authorities even engaged in skirmishes with Greek border guards in order to facilitate migrant border-crossings by land and intervened to regulate the price of crossing by boat. In some instances, the very same Turkish police or soldiers who assisted migrants in their efforts to cut through and tear down border fences later brutalized them when they had not succeeded to cross and sought to head back toward the nearest Turkish towns (No Border Pazarkule/Edirne, 2020). Thus, even as Turkish authorities appeared to be supporting migrants' border-crossing endeavors, they also thereby enacted a policy of containment. Plainly, for Turkey, such facilitation of the autonomous momentum of human mobility was motivated by the desire to channel the movements of migrants and refugees onward toward 'Europe', where they could become someone else's 'problem'. But it is instructive all the same to note how state powers are compelled by the subjective force of migration to respond and adapt their tactics, whether through brute resistance or cynical, self-serving cooperation and complicity. The very same actors who previously colluded as junior partners in enforcing EU-rope's border (İşleyen, 2018; Topak, 2014) were now actively dismantling it.

'The borders of Greece are the external borders of Europe. We will protect them', responded Greek Prime Minister Kyriakos Mitsotakis (Stevis-Gridness, 2020a). Ursula von der Leyen, the European Commission President, immediately rallied behind Greece: 'Our first priority is making sure that order is maintained at Greece's external border, which is also Europe's border' (Erlanger, 2020). Greece's flagrant and ruthless refoulement of asylum seekers was accompanied by a presidential decree that summarily suspended Greece's consideration of all asylum petitions for a month. Likewise, Greece resorted to herding border-crossers into secret extrajudicial detention camps (Stevis-Gridness et al., 2020). Mitsotakis stoked well-worn Greek nationalist distrust of Turkey and invoked the specter of Turkish aggression, declaring: 'The problem is an asymmetric threat and illegal invasion of thousands of people that threatens our territory' (Stevis-Gridness, 2020b). Several migrants were shot and killed outright by Greek border enforcement authorities. Galvanized

by the ferocity of the official response, armed civilian vigilante patrols in Greek border villages physically attacked migrants and refugees as well as journalists and humanitarian aid workers and other NGO staff and violently obstructed migrants and refugees, including pregnant women and small children, from disembarking from small precarious dinghies and boats (Stevis-Gridness, 2020b). Eye-witness solidarity activists in Turkey, in particular the members of No Border Pazarkule/ Edirne who traveled to these borderzone sites to set up soup kitchens to provide food for the migrants, reported migrants having been beaten and having had their money, phones, clothing and shoes confiscated by Greek border guards before being pushed back to Turkey in freezing temperatures and heavy rain, naked and barefoot (No Border Pazarkule/ Edirne, 2020).

When we are witness to the sorts of ruthless and gratuitous violence that plays out at the borders of Europe, particularly in these examples of both the border enforcement authorities and fascistic paramilitary mobilizations by civilian vigilantes in Greece, what is at stake is the manifestation of a distinctly *European* postcolonial racism (cf. Balibar, 1992; De Genova, 2016b). In this context, it matters little that Greece was not historically a colonial power. What is far more salient is that Greece is being pressed, as has been true for several years, to ‘prove’ its deservingness for continued inclusion in the European Union and the larger orbit of European (racial) prestige (Cabot 2014:23-40) and therefore to ‘earn’ its place in ‘Europe’ — and counteract its marginalization within EU-rope — by serving dutifully as the EU’s frontline border guard (Spathopoulou, 2016; 2019; Stierl, 2017). Indeed, the fact that Greece was itself colonized under the Ottoman (Turkish) Empire only exacerbates the Europeanism of Greek reaction, such that longstanding Greek nationalist resentment and suspicion toward Turkey can be so thoughtlessly channeled into violent hostility toward those (non-European) migrants and refugees who are constructed to be an ‘illegal invasion’ and an ‘asymmetric threat’, racialized as non-white and very likely perceived to be a virtual ‘mob’ of ‘Muslims’. And very soon thereafter, with the rising panic of the COVID-19 coronavirus pandemic, this perceived menace of migration predictably came to be re-framed as a contagion of suspect, unruly, unwashed bodies, presumptive carriers of infectious diseases and ghoulish viruses. Here, Europe confronts migrant and refugee mobilities by spiraling into a delusional frenzy.

Alarmist reactions to a putative 'migrant' or 'refugee crisis' in Europe have nonetheless repeatedly offered fresh and compelling evidence of the primacy and autonomy of (transnational, cross-border, postcolonial) migrant and refugee mobilities, as well as the great variety of migrants' and refugees' urgent, defiant and incorrigible practices of exercising an elemental freedom of movement, disregarding or subverting borders and making audacious claims to space (De Genova, 2016a; 2017; De Genova, ed., 2017; New Keywords Collective, 2016; cf. Bojadžijev and Mezzadra, 2015; El-Shaarawi and Razsa, 2019; Garelli and Tazzioli, 2013a; 2016c; Hess and Kasperek, 2017; Kasperek, 2016; Kasperek and Speer, 2015; Lafazani, 2018a; Mitchell and Sparke, 2018; Razsa and Kurnik, 2014; Scheel, 2017; 2019; Tazzioli, 2014). The forces arrayed to alternately govern, discipline, punish and repel them — the reaction formations of border enforcement — render Europe, rather than a space of refuge or freedom, into a space of rejection for most migrants and refugees. Indeed, on the EU-ropean scale, the regime of so-called 'hotspots' installed since 2015 for sorting and ranking distinct migrant and refugee mobilities has served as a crude mechanism for the preemptive rejection and mass illegalization of the great majority of asylum-seekers (Antonakaki et al., 2016; Carastathis, Spathopoulou and Tsilimpounidi, 2018; Garelli and Tazzioli, 2016a; 2016b; Mitchell and Sparke, 2018; Neocleous and Kastrinou, 2016; Papoutsi et al., 2018; Sciurba, 2016; Spathopoulou, 2016; 2019; Tazzioli, 2016; Vradis et al., 2019).¹

Moreover, accompanying the official 'emergency' measures, we have witnessed a larger sociopolitical process of what Aila Spathopoulou has called

-
- 1 The implementation of the so-called 'hotspot' strategy was devised by the EU in response to the escalating numbers of migrants and refugees in 2015 and implemented at several ports in Italy and the Greek islands, the most prominent of which are Lampedusa and Lesvos. 'Hotspots' were proposed as emergency 'reception centers' with the capacity to provide shelter for as many as 1,500 people at key ports of first arrival on EU territory, for the purpose of speedy identification, registration and fingerprinting. In practice, the hotspots operate as detention camps dedicated to perfunctory and crass sorting between those deemed to be likely to have a credible asylum petition, who are then to be redistributed to other EU countries, and everyone else, who have commonly been served deportation orders as quickly as possible.

‘hotspotization’ (Spathopoulou, 2019; cf. Spathopoulou and Carastathis, 2020), which has extended the borders of ‘Europe’ and permeated a variegated spectrum of other spaces of containment and confinement, forced or self-organized migrant encampment, blockage and deceleration and other forms of protracted dispersal and the entrapment of migrants and refugees within their own mobility without relief (Franck, 2017; Tazzioli, 2019a, 2019b; Tazzioli and Garelli, 2018). Consider the makeshift self-organized migrant and refugee camps at Calais, long branded in an unmistakably colonial/ racist idiom as ‘The Jungle’. The Calais Jungle has presented a kind of inverted image of the official hotspots installed by the EU as emergency reception centers that quickly devolved into permanent detention camps. Notably, Calais is full of people with papers that grant them some provisional ‘legal’ residency status in Italy or elsewhere in the European borderlands, but they seek another ‘Europe’ — the price of which is ‘illegality’, precarity and destitution. The Calais camps were repeatedly viciously assaulted and destroyed by French police and eventually violently evicted in 2016, but still today migrants and refugees continue to re-organize themselves and new camps re-appear. These camps are, in effect, permanent staging areas organized autonomously by the migrants themselves as an amorphous platform for activating their mobility projects. They are a space of ‘standby’, sites where migrants constantly alternate between waiting and self-activation.

Goaded forward by Turkish forces and barricaded and blocked by Greece, it might appear as though the migrants and refugees stalled in dismal borderzone camps were mere pawns in some larger geopolitical game. That impression, while partially accurate, would be incomplete and misleading. Without trivializing the dire predicaments and desperation of many of them, the Turkish state’s opening of the border catalyzed a force that it might seek to manipulate but that it could never really control — the subjective force and autonomous determination of a great confluence of human mobilities. For years now, literally millions of migrants and refugees who initially sought to simply pass through Turkey en route to ‘Europe’, for whom Turkey was meant to be a zone of ‘transit’, have resided and worked in Turkey, in a more or less indefinite condition of enforced waiting, while also oftentimes actively and persistently seeking to resume their larger mobility projects (Biehl, 2015;

Osseiran, 2017a; 2017b). As Souad Osseiran (2017b) has demonstrated, for most, these are not experiences of merely marking time in passive resignation, but rather prolonged yet productive engagements in *making time* — making time work, making time productive, toward the ends of making a living, making a life and making a future. Even in a kind of standby mode, the subjectivity and autonomy of migration remains operative and poised to reactivate itself given the right opportunity. It is this autonomous subjective force that the Turkish state summoned forth with Erdogan's proclamation that the borders would be opened. Many migrants abandoned their jobs in the informal economy, sold off their possessions and spent their meager savings in a bid to seize upon the occasion and make their way to the Greek border (No Border Pazarkule/ Edirne, 2020). Thereafter, it was this same incorrigible subjectivity that the Turkish state fecklessly sought to tame and control into a manageable force that it could deploy to its geopolitical advantage. Yet, even when repelled by the Greek border guards and corralled by Turkish checkpoints in a kind of no-man's land at the border, the standby modality of the migrants and refugees remained a resource for prospectively out-waiting and potentially out-witting the two faces of the border regime.

What is at stake in all of this, therefore, is the veritable *struggle* over the borders of Europe — migrants' and refugees' struggles to realize their heterogeneous migratory projects by exercising their elementary freedom of movement, thereby appropriating mobility, transgressing and subverting the border regime and thus making spatial claims, as well as the reactive struggle of state powers to subdue and discipline the autonomy of migration (cf. Ataç et al., 2015; De Genova et al., 2018; El-Shaarawi and Razsa, 2019; Garelli and Tazzioli, 2013; Kasperek and Speer, 2015; Pezzani and Heller, 2013; Rigo, 2011; Scheel, 2017; Soto Bermant, 2017; Stierl, 2019; Tazzioli, 2015). The autonomy of migration and refugee movements repeatedly presents itself as an obstreperous subjective force — indeed, a pronouncedly postcolonial reprise — enacting various configurations of human life in its active (productive) open-ended relation to the space of the planet and thereby reasserting the primacy of human life as a mobile constituent power in itself.

Thus, the European space of migration is also a platform of spatial experimentation and sociopolitical organizational innovation, above all distinguished by migrant productions of *differential spaces*. While accelerated

transnational migration has arisen as an effect of European integration, it also operates as a remarkable motor for further integration. In spite of the diverse historical particularities and local peculiarities of each instance of migrant productions of space, from one European country to the next, from one city to the next, there is a larger process that encompasses the space of Europe as a whole and indeed exceeds the conventionally understood borders of 'Europe' as such (De Genova, ed., 2017). Migrants and refugees develop unforeseen linkages between apparently disparate zones of transit and tentative destinations such as the migrant metropolises of Istanbul, Athens, Palermo, or Rome (in the ostensible borderlands) and the migrant metropolises further afield, such as London, Paris, Hamburg, or Stockholm (Osseiran, 2017a; 2017b; Picozza, 2017; 2019; Stierl, 2017). Elsewhere, from Lesvos to Calais, migrants and refugees gather in self-organized camps as staging grounds for the renewal of their border-crossing projects. Such camps eventually become semi-permanent spatial nodes in the extended geography of migration, particularly for rejected refugees whose abandonment and preemptive or de facto illegalization eventually re-distribute them to various far-flung European destinations. There are also the remarkable examples of migrant self-organization that, in their very names, invoke a counter-intuitive geography of global connections realized through the spatial practices of migrants, such as the Collective of Tunisians from Lampedusa in Paris (Sossi, 2013; Tazzioli, 2014) or Lampedusa in Hamburg (Meret and Rasmussen, 2014; Oliveri, 2016). These apparently European sites are not mere 'destinations' for migrants, not simply sites of migrant 'reception' and 'integration' and in no simple sense 'assimilation' machines. From these varied standpoints, we begin to appreciate how the extended and uneven urbanized social fabric of all of 'Europe' itself emerges as one single migrant metropolis (De Genova, 2015).

These incipient transnational migrant spatial formations radically destabilize and contradict the spatial premises and racial conceits of nationalism and Europeanism. Borders have imploded deep into the everyday life of Europe and are creating new social divisions, contradictions and conflicts. As a site for the veritable production of new formations of racialized difference and subordination, the space of Europe is an historically specific conjuncture of unresolved postcolonial tensions and conflicts, reconfigured as a tentative

and tenuous configuration of the politics of class, race and citizenship. These migrant and refugee spaces are inevitably generated within the territorial boundaries and jurisdictions of Europe and its constituent nation-states and in relation to the very palpable enforcement of EU-ropean and nation-state space through immigration law and border policing. They are also ever more frequently the targets of fascistic (extra-state) racial violence. Yet, the Europe of migrants and refugees has proliferated and flourished all the same.

Indeed, 'Europe' is confronted with repeated assertions of a migrant and refugee *politics of presence*, which I have previously characterized as a politics of incorrigibility (De Genova, 2010). Notably, beginning in October 2009, a wave of strikes by several thousand undocumented migrant workers demanding legal residence in France, articulated the themes of migrant presence and labor through their principal slogan: '*On bosse ici, on vit ici, on reste ici!* [We work here, we live here, we're staying here!]' (Barron et al. 2011). Similarly, in 2013, there emerged the Lampedusa in Hamburg collective, whose signature slogan has been: We Are Here to Stay (<http://www.lampedusa-in-hamburg.org/>; cf. Meret and Rasmussen, 2014; Oliveri, 2016), as well as the 'We Are Here' collective in Amsterdam (Amaya-Castro, 2015). These articulations of border struggles that erupt from deep within the ostensible 'interior' of Europe are evidently claims of *presence* — enunciating the simple but insistent affirmation, 'We are here' — but above all, they operate as claims to space. Precisely in the face of the threat of deportation, forcible expulsion from the space of the state, migrants intermittently but repeatedly proclaim: 'We are here and we will not be "removed"!'. And in this simple but defiant gesture, the very 'here' that migrants invoke is always-already a new and radically transformed one. Thus, despite the ugly paroxysms of its postcolonial racial reaction, the borders and boundaries of the 'European' problem are inexorably being unsettled and, potentially, undone.

What may often appear to be equivocal or ambivalent manifestations of migrants' unresolved waiting thereby reveal themselves to be practices of 'standby', with their own more profound logic. Being on standby, as an organizational form, signals an indeterminate and amorphous potentiality, a capacity to be activated (or indeed, a capacity for self-activation). This indeed is the ultimate postcolonial boomerang effect: despite the violent spasms of

its border regime, 'Europe' is already something profoundly new. And this remains true even when the subjective force of the autonomy of migration assumes forms that are less evidently distinguished by movement than of waiting and biding time — on standby, but tentatively and tactically gathering force, all the same.

What does this mean for the future of Europe? Evidently, it signals that the ever more trenchant devotion of the state powers and political authorities of 'Europe' to deploy violence against the postcolonial harvest of empire embodied in migrant and refugee movements is inherently reactionary and finally doomed. The self-organization and self-activation of migrant autonomies, however diminutive, presents these constituted powers with an incorrigible and indefatigable subversive force that is *objectively* political, regardless of any overt or explicit political articulations, inasmuch as they unrelentingly set out to disregard immigration and asylum law, defy border policing and subvert the larger immigration, asylum and border regimes of 'Europe'. Moreover, through their quotidian practices of appropriating mobility and making claims to space, migrant and refugee struggles exercise a freedom of movement that re-poses the very question of the relation of the human species to the space of the planet. The intrinsically postcolonial/ racial politics of this subversive subjective force — at least implicitly and increasingly explicitly — therefore are harbingers of a long overdue radical sociopolitical transformation and usher in, however agonistically, a new world — one in which 'Europe' as such may finally have no place.

references

- Amaya-Castro, J.M. (2015) 'Undocumented migrant activism and the political economy of visibility: *We Are Here!*', in Y. Jansen, R. Celikates and J. de Bloois (eds.) *The irregularization of migration in contemporary Europe: Detention, deportation, drowning*. London: Rowman & Littlefield.
- Antonakaki, M., B. Kasperek and G. Maniatis (2016) 'Counting heads and channelling bodies: The hotspot centre Vial in Chios, Greece', *Environment and Planning D: Society and Space* Online Forum (8 November) [<http://societyandspace.org/2016/11/29/counting-channelling-and-detaining-the-hotspot-center-vial-in-chios-greece/>]

- Ataç, I., S. Kron, S. Schilliger, H. Schwiertz and M. Stierl (2015) 'Struggles of migration as in-/visible politics', *Movements: Journal für kritische Migrations- und Grenzregimeforschung* [Journal for Critical Migration and Border Regime Research] 1(2) [<http://movements-journal.org/issues/02.kaempfe/01.atac,kron,schilliger,schwiertz,stierl--einleitung~en.html>]
- Balibar, É. (1992/2002) 'Is There Such a Thing as European Racism?', in É. Balibar (2002) *Politics and the other scene*. New York: Verso.
- Barron, P., A. Bory, L. Tourette, S. Chauvin and N. Jounin (2011) *On bosse ici, on reste ici ! La grève des sans-papiers : une aventure inédite*. Paris: Éditions La Découverte.
- Biehl, K.S. (2015) 'Governing through uncertainty: Experiences of being a refugee in Turkey as a country for temporary asylum', *Social Analysis* 59(1): 57-75.
- Bojadžijev M. and S. Mezzadra (2015) "'Refugee crisis" or crisis of European migration policies?', *FocaalBlog* (12 November) [www.focaalblog.com/2015/11/12/manuela-bojadzijeve-and-sandro-mezzadra-refugee-crisis-or-crisis-of-european-migration-policies/#sthash.lsTzWOl2.dpuf]
- Cabot, H. (2014) *On the doorstep of Europe: Asylum and citizenship in Greece*. Philadelphia: University of Pennsylvania Press.
- Carastathis, A., A. Spathopoulou and M. Tsilimpounidi (2018) 'Crisis, what crisis? Immigrants, refugees and invisible struggles', *Refuge* 34(1): 29-38.
- De Genova, N. (2010) 'The queer politics of migration: Reflections on "illegality" and incorrigibility', *Studies in Social Justice* 4(2): 101-126.
- De Genova, N. (2015) 'Border struggles in the migrant metropolis', *Nordic Journal of Migration Research* 5(1): 3-10.
- De Genova, N. (2016a) 'The "crisis" of the European border regime: Towards a Marxist theory of borders', *International Socialism* 150: 33-56 [<http://isj.org.uk/the-crisis-of-the-european-border-regime-towards-a-marxist-theory-of-borders/>]
- De Genova, N. (2016b) 'The European question: Migration, race and postcoloniality in Europe', *Social Text* #128: 75-102.

- De Genova, N. (2017) 'Introduction: The borders of "Europe" ... and the "European" question', in N. De Genova, ed. *The borders of 'Europe': Autonomy of migration, tactics of bordering*. Durham, NC: Duke University Press.
- De Genova, N. (2018) 'The "migrant crisis" as racial crisis: Do *Black Lives Matter* in Europe?', *Ethnic and Racial Studies* 41(10): 1765-82.
- De Genova, N. (ed.) (2017) *The borders of 'Europe': Autonomy of migration, tactics of bordering*. Durham, NC: Duke University Press.
- De Genova, N., G. Garelli and M. Tazzioli (2018) 'Autonomy of asylum? The autonomy of migration undoing the refugee crisis script', *SAQ: South Atlantic Quarterly* 117(2): 239-66.
- El-Shaarawi, N. and M. Razsa (2019) 'Movements upon movements: Refugee and activist struggles to open the Balkan route to Europe', *History and Anthropology* 30(1): 91-112.
- Erlanger, S. (2020) 'A balancing act for Europe: Stop the migrants, support Greece, assuage Turkey'. *New York Times*, 4 March [<https://www.nytimes.com/2020/03/04/world/europe/europe-migrants-turkey-greece.html>]
- Franck, A.K. (2017) 'Im/mobility and deportability in transit: Lesvos Island, Greece, June 2015', *Tijdschrift voor Economische en Sociale Geografie* 108(6): 879-84.
- Franck, A.K. (2018) 'The Lesvos refugee crisis as disaster capitalism', *Peace Review* 30(2): 199-205.
- Garelli, G. and M. Tazzioli (2013) 'Arab Springs making space: Territoriality and moral geographies for asylum seekers in Italy', *Environment and Planning D: Society and Space* 31(6): 1004-21.
- Garelli, G. and M. Tazzioli (2016a) 'Beyond detention: Spatial strategies of dispersal and channels of forced transfer', *Environment and Planning D: Society and Space* Online Forum (8 November) [<http://societyandspace.org/2016/11/08/hotspot-beyond-detention-spatial-strategy-of-dispersal-and-channels-of-forced-transfer/>]
- Garelli, G. and M. Tazzioli (2016b) 'The EU hotspot approach at Lampedusa', *openDemocracy* (26 February) [<https://www.opendemocracy.net/can-europe-make-it/glenda-garelli-martina-tazzioli/eu-hotspot-approach-at-lampedusa>]

- Garelli, G. and M. Tazzioli (2016c) *Tunisia as a revolutionized space of migration*. Basingstoke: Palgrave Macmillan.
- Garelli, G. and M. Tazzioli (2018) 'The EU humanitarian war against migrant smugglers at sea', *Antipode* 50(3): 685-703.
- Hess, S. and B. Kasperek (2017) 'Under control? or border (as) conflict: Reflections on the European border regime', *Social Inclusion* 5(3): 58-68.
- İşleyen, B. (2018) 'Turkey's governance of irregular migration at European Union borders: Emerging geographies of care and control', *Environment and Planning D: Society and Space* 36(5): 849-866.
- Jeandesboz, J. and P. Pallister-Wilkins (2016) 'Crisis, routine, consolidation: The politics of the Mediterranean migration crisis', *Mediterranean Politics* 21(2): 316-320.
- Kasperek, B. (2016) 'Routes, corridors and spaces of exception: Governing migration and Europe', *Near Futures Online* 1 (March) [<http://nearfuturesonline.org/routes-corridors-and-spaces-of-exception-governing-migration-and-europe/>]
- Kasperek, B. and M. Speer (2015) 'Of Hope: Hungary and the Long Summer of Migration', bordermonitoring.eu (9 September); [<http://bordermonitoring.eu/ungarn/2015/09/of-hope-en/>]
- Lafazani, O. (2018a) 'Homeplace Plaza: Challenging the border between host and hosted', *SAQ: South Atlantic Quarterly* 117 (4): 896-904.
- Lafazani, O. (2018b) 'Κρίση and Μετανάστευση in Greece: From illegal migrants to refugees', *Sociology* 52 (3): 619-625.
- Marx, K. and F. Engels (1848/1967) *The communist manifesto*. New York: Penguin Books.
- Meret, S. and J.B. Rasmussen (2014) "'We are here to stay and we won't shut up": Lampedusa in Hamburg's indomitable fight for rights', open Democracy (21 May) [<https://www.opendemocracy.net/can-europe-make-it/susi-meret-jeppe-blumensaat-rasmussen/we-are-here-to-stay-and-we-won-t-shut-up->]
- Mitchell, K. and M. Sparke (2018) 'Hotspot geopolitics versus geosocial solidarity: Contending constructions of safe space for migrants in Europe', *Environment and Planning D: Society and Space*. (Published online: August 21) [<https://doi.org/10.1177/0263775818793647>]

- Neocleous, M. and M. Kastrinou (2016) 'The EU hotspot: Police war against the migrant', *Radical Philosophy* 200: 3-9.
- New Keywords Collective (2016) 'Europe/ crisis: New keywords of "the crisis" in and of "Europe"', a collective writing project involving 15 co-authors, edited by N. De Genova and M. Tazzioli. *Near Futures Online*. New York: Zone Books [<http://nearfuturesonline.org/europecrisis-new-keywords-of-crisis-in-and-of-europe/>]
- No Border Pazarkule/ Edirne (2020) 'Pazarkule/ Evros'tan notlar, birinci gün / Notes from Pazarkule/ Evros', *Göçmen Dayanışması* [Migrant Solidarity] [<http://gocmendayanisma.com/2020/03/02/pazarkule-evrostan-notlar-birinci-gun-notes-from-pazarkule-evros-first-day/>]
- Oliveri, F. (2016) 'Struggles at the boundaries of neoliberal citizenship: Theorizing immigrant-led movements in contemporary Europe', in A. Amelina, K. Horvath and B. Meeus (eds.) *An anthology of migration and social transformation: European perspectives*. New York: IMISCOE Research Series/ Springer.
- Osseiran, S. (2017a) "'Europe" from "here": Syrian migrants/refugees in Istanbul and imagined migrations into and within "Europe"', in N. De Genova (ed.) *The borders of 'Europe': Autonomy of migration, tactics of bordering*. Durham, NC: Duke University Press.
- Osseiran, S. (2017b) 'Migration, waiting and uncertainty at the borders of Europe: Syrian migrants and refugees in Istanbul', Ph.D. dissertation, Department of Anthropology, Goldsmiths/ University of London.
- Papoutsi, A., J. Painter, E. Papada and A. Vradis (2018) 'The EC hotspot approach in Greece: Creating liminal EU territory', *Journal of Ethnic and Migration Studies* 45(12): 2200-12.
- Pezzani, L. and C. Heller (2013) 'A disobedient gaze: Strategic interventions in the knowledge(s) of maritime borders', *Postcolonial Studies* 16(3): 289-98.
- Picozza, F. (2017) "'Dubliners": Unthinking displacement, illegality and refugeeness within Europe's geographies of asylum', in N. De Genova (ed.) *The borders of 'Europe': Autonomy of migration, tactics of bordering*. Durham, NC: Duke University Press.

- Picozza, F. (2019) 'Tracing Europe's geographies of asylum: Coloniality, mobility and solidarity during and after the 2015 "refugee crisis"', Ph.D. dissertation, Department of Geography, King's College London.
- Razsa, M. and A. Kurnik (2014) 'Occupy Slovenia: How migrant movements contributed to new forms of direct democracy', in N. Naples and J. Mendez (eds.) *Border politics: Social movements, collective identity and globalization*. New York: New York University Press.
- Rigo, E. (2011) 'Citizens despite borders: Challenges to the territorial order of Europe', in V. Squire (ed.) *The contested politics of mobility: Borderzones and irregularity*. London and New York: Routledge.
- Scheel, S. (2017) "'The secret is to look good on paper": Appropriating mobility within and against a machine of illegalization', in N. De Genova (ed.) *The borders of 'Europe': Autonomy of migration, tactics of bordering*. Durham, NC: Duke University Press.
- Scheel, S. (2019) *Autonomy of migration? Appropriating mobility within biometric border regimes*. London and New York: Routledge.
- Sciurba, A. (2016) 'Hotspot system as a new device of clandestinisation: View from Sicily', *openDemocracy* (25 February) [<https://www.opendemocracy.net/can-europe-make-it/alessandra-sciurba/hotspot-system-as-new-device-of-clandestinisation-view-from-si>]
- Sossi, F. (2013) "'Here and there are the same": The upheavals of spaces and narratives', in G. Garelli, F. Sossi and M. Tazzioli (eds.) *Spaces in Migration: Postcards of a Revolution*. London: Pavement Books.
- Soto Bermant, L. (2017) 'The Mediterranean question: Europe and its predicament in the southern peripheries', in N. De Genova (ed.) *The borders of 'Europe': Autonomy of migration, tactics of bordering*. Durham, NC: Duke University Press.
- Spathopoulou, A. (2016) 'The ferry as a mobile hotspot: Migrants at the uneasy borderlands of Greece', *Environment and Planning D: Society and Space* Online Forum (8 November) [<http://societyandspace.org/2016/12/15/the-ferry-as-a-mobile-hotspot-migrants-at-the-uneasy-borderlands-of-greece/>]

- Spathopoulou, A. (2019) 'Performing the hotspot, embodying its violence: Migrants' uneven geographies within and against the hotspot regime governing Greece', PhD, dissertation. Department of Geography, King's College London.
- Spathopoulou, A. and A. Carastathis (2020) 'Hotspots of resistance in a bordered reality', *Environment and Planning D: Society and Space* (Published online: 5 March 5) [<https://doi.org/10.1177/0263775820906167>]
- Stavis-Gridneff, M. (2020a) 'Child dies at sea as Greece cracks down on migrants from Turkey', *New York Times* (2 March [<https://www.nytimes.com/2020/03/02/world/europe/migrant-death-greece.html>])
- Stavis-Gridneff, M. (2020b) 'Vigilantes in Greece say "No more" to migrants', *New York Times* (7 March) [<https://www.nytimes.com/2020/03/07/world/europe/greece-turkey-migrants.html>]
- Stavis-Gridneff, M. and C. Gall (2020) 'Erdogan says, "We opened the doors" and clashes erupt as migrants head for Europe', *New York Times* (29 February) [<https://www.nytimes.com/2020/02/29/world/europe/turkey-migrants-eu.html>]
- Stavis-Gridneff, M., P. Kingsley, H. Willis, S. Almukhtar and M. Browne (2020) "'We are like animals": Inside Greece's secret site for migrants', *New York Times* (10 March) [<https://www.nytimes.com/2020/03/10/world/europe/greece-migrants-secret-site.html>]
- Stierl, M. (2017) 'Excessive migration, excessive governance: Border entanglements in Greek EU-rope', in N. De Genova (ed.) *The borders of 'Europe': Autonomy of migration, tactics of bordering*. Durham, NC: Duke University Press.
- Stierl, M. (2019) *Migrant resistance in contemporary Europe*. London: Routledge.
- Tazzioli, M. (2014) *Spaces of governmentality: Autonomous migration and the Arab uprisings*. New York: Rowman and Littlefield.
- Tazzioli, M. (2015) 'Which Europe? Migrants' uneven geographies and counter-mapping at the limits of representation', *Movements: Journal für kritische Migrations- und Grenzregimeforschung* [Journal for Critical Migration and Border Regime Research] 1 (2) [<http://movements-journal.org/issues/02.kaempfe/04.tazzioli--europe-migrants-geographies-counter-mapping-representation.html>]

- Tazzioli, M. (2016) 'Identify, label and divide: The accelerated temporality of control and temporal borders in the hotspots', *Environment and Planning D: Society and Space* Online Forum (8 November) [<http://societyandspace.org/2016/11/22/identify-label-and-divide-the-temporality-of-control-and-temporal-borders-in-the-hotspots/>]
- Tazzioli, M. (2019a) *The making of migration: The biopolitics of mobility at Europe's borders*. London: Sage.
- Tazzioli, M. (2019b) 'The politics of migrant dispersal: Dividing and policing migrant multiplicities', *Migration Studies* (Published online: 13 February) [<https://doi.org/10.1093/migration/mnz003>]
- Tazzioli, M. and G. Garelli (2018) 'Containment beyond detention: The hotspot system and disrupted migration movements across Europe', *Environment and Planning D: Society and Space*. (Published online: February 19) [DOI: 10.1177/0263775818759335]
- Topak, O.E. (2014) 'The biopolitical border in practice: Surveillance and death at the Greece–Turkey borderzones', *Environment and Planning D: Society and Space* 32(5): 815–33.
- Vradis, A., E. Papada, J. Painter and A. Papoutsis (2019) *New borders: Hotspots and the European migration regime*. London: Pluto Press.

acknowledgements

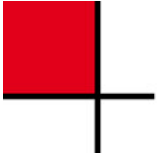
I am thankful to Cemile Gizem for alerting me to the day-by-day reporting from the Greek-Turkish borderzone by No Border Pazarkule/Edirne, published by Göçmen Dayanışması [Migrant Solidarity] <www.gocmendayanisma.com>.

the author

Nicholas De Genova is Professor and Chair of the Department of Comparative Cultural Studies at the University of Houston. He is the author of *Working the boundaries: Race, space, and "illegality" in Mexican Chicago* (2005), co-author of *Latino crossings: Mexicans, Puerto Ricans, and the politics of race and citizenship* (2003), editor of *Racial transformations: Latinos and Asians remaking the United States* (2006), co-editor of *The deportation regime: Sovereignty, space, and the freedom of movement* (2010), editor of *The borders of "Europe": Autonomy of migration, tactics of bordering* (2017), and co-editor of *Roma migrants in the European Union: Un/free mobility* (2019).

Email: n.degenova@gmail.com

Website: www.nicholasdegenova.com



#standby

Annika Kühn

abstract

This short film detaches and rearranges audio-visual material to explore the affectivity of cruise terminals in standby mode, thus reflecting how such a mode similarly runs through the filming process and the scenes that result from it. Visually, the film leads the viewer through a variety of motionless infrastructures – from an entry hall to gangways – creating a montage of fragmented images that radicalizes the sense of social detachment often ascribed to places of transition (Augé, 1995). Yet, although lingering on these infrastructural fragments, the camera captures and generates a pulsating tension: a humming that becomes almost painfully tangible and near unbearable. Noisy reminders of busier times, these tensions also point to the ephemerality of stillness and of standstill. Meanwhile, the film's soundtrack merges pollution data turned into music with the babbling voices of the privileged, a mix that signifies the political scope of cruising as a contested global practice. As the film ends, the soundtrack fades while the final image gives us another fleeting glimpse of transformation. While standby has a circular rhythm that constantly opens up for new beginnings, it also touches precarious ground: in pandemic times, the question 'what comes next' (Simone, 2017) haunts a hard-hit industry, revealing standing-by as an uncomfortable and hard-to-live with practice of enduring – sometimes longer than we can stand.

#standby was produced in collaboration with Berlin- and Hamburg-based video artists Friederike Güsefeld (director), Stefan Rosche (director of photography) and Iwan Schemet (sound), and with financial support from Hamburg University, Germany. The short version displayed at the *ephemera* website can be accessed here:

<http://www.ephemerajournal.org/contribution/standby>. The original film has been uploaded to <https://vimeo.com/318160606>.

references

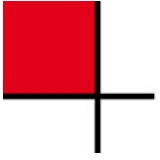
Augé, M. (1995) *Non-places: Introduction to an anthropology of supermodernity*. London/New York: Verso.

Simone, A. (2017) 'All over the place: The arts of standing still', paper presented at the Annual Meeting of the American Association of Geographers, Boston, United States, 9-11 April.

the author

Annika Kühn works as a researcher, writer and filmmaker in the fields of critical infrastructure studies and sustainable urban mobilities. She has organized international conference panels, screenings, and workshops on the affectivity, temporality and dis/connectivity of urban mobilities, and has explored infrastructural standby as a mundane mode of ordering in *Infrastructural standby: Caring for loose relations* (*ephemera*, forthcoming). This short film is part of Annika Kühn's PhD project 'In transition. On standby'.

Email: annika_kuehn@gmx.net



Talking photobooks: Standing by Kinshasa

Alexa Färber, Laura Kemmer, and AbdouMaliq Simone

abstract

While photobooks generally offer a relatively controlled way of urban imagineering in that they convey a specific visual narrative of the city's past, present, and future, Alexa Färber's format of 'talking photobooks' turns them into a resource for research and debate. Talking photobooks enable different positions on and readings of what a city has been and promises to be. In this conversation between Alexa Färber (Vienna), Laura Kemmer (Berlin) and AbdouMaliq Simone (Sheffield), three urban researchers discuss the acts of 'suturing the city' depicted in Filip DeBoeck's and Sammy Baloji's (2016) eponymous photobook – not as a form of repair, but as a sociomaterial mode of organizing provisional arrangements that remain provisional. We tackle the relation between city and standby from two directions. First, we discuss how photography articulates the disparate temporalities of urban promises, asking what DeBoeck and Baloji's work reveals about the 'urban now', a spatio-temporal and social configuration that is couched between the broken dreams of a better future and the 'not yet' of urban redemption. Next, we probe how *Suturing the city* exposes acts of 'standing by' these promises despite an ever-ubiquitous urban failure. Can photobooks re/activate modes of with-holding, dis-engaging, and out-living the city's essentially loose promises?

Link to trailer: <http://www.ephemerajournal.org/contribution/talking-photobooks-standing-kinshasa>

Full version: <https://www.talkingphotobooks.net/standingbykinshasa>.

Concept: Alexa Färber. Postproduction: Işıl Karataş.

reference

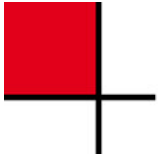
DeBoeck, F. and S. Baloji (2016) *Suturing the city: Living together in Congo's urban worlds*. London: Autograph ABP.

the authors

Alexa Färber is a professor at the Institute of European Ethnology, University of Vienna. Her research is situated at the intersection of the anthropology of knowledge, urban research, and audio-visual research. In addition to studying project-based representational work and the urban dimensions of thrift, she is currently exploring the notion of the city as 'promissory assemblage'. She recently published 'How does ANT help us to rethink the city and its promises?' in A. Blok, I. Farías and C. Roberts (eds.) (2019) *The Routledge companion to actor-network theory*. Email: alexa.farber@univie.ac.at

Laura Kemmer is a postdoctoral researcher at the Department for Human Geography, Humboldt-Universität zu Berlin, working on urban transitions, infrastructures and more-than-human collectivities. Together with AbdouMaliq Simone, she recently published a piece that inquires into tactics of 'standing by' urban promises in Rio and Jakarta, *Environment and Planning D: Society and Space* (January 2021, online first). Email: laura.kemmer@geo.hu-berlin.de

AbdouMaliq Simone is a senior professional fellow at the Urban Institute, University of Sheffield, and an honorary professor at the African Centre for Cities, University of Cape Town. He writes widely on issues of global urbanism, popular economies, urban racialism, and Islamic political practice. Most recently, he authored *Improvised lives: Rhythms of endurance in an urban South*, Polity Press (2019). Email: a.t.simone@sheffield.ac.uk



The foamy politics of surfing in Hawaii

Marie Lecuyer

review of

Ingersoll, K. A. (2016) *Waves of knowing: A seascape epistemology*. Durham: Duke University Press. (PB, pp 216, \$24.95, ISBN: 978-0-8223-6234-0).

In *Waves of knowing: A seascape epistemology*, Karin Ingersoll (2016) deploys a historical and ethnographic account of surfing as a practice both emerging along and against colonialism in Hawaii. Surfing, here, is not only a topic, it is a method and a analytic trope to apprehend colonialism from the perspective of the sea. By so doing, Ingersoll develops an ‘oceanic’ onto/epistemology that challenges land-centric concept of space and colonial perspectives on island life. Surfing and life by the sea are in fact apprehended by the author as aquatic modes of existence. More than an ethnography of surfing, Ingersoll proposes an ethnography carried *in* surfing and *in* water. In spite of it being a dry medium, the book incarnates the ocean’s wavy temporalities and reads like a swell, with the theme of liquidity keeping unfolding chapter after chapter like recurring foamy waves.

As a minor gesture adding onto the author's argument and her use of Heidegger, which has been criticized by Sloterdijk for being too earth-oriented (ten Bos, 2009), I'll suggest that Ingersoll's ethnography feels like what could be termed a 'foamy' politics of surfing situated at the intersection between land and ocean-based cosmogonies merging in the wake of colonialism. 'Foam', as the philosopher of spheres Sloterdijk (2004: 23) puts it, is 'air in an unexpected place' and refers to the merging of air and water composing a functional and semiotic associated milieu in which one becomes in relation to the medial environment. In this paper, I bring in Sloterdijk's concept of foam as an analytic to read through Ingersoll's book. The concept seems to me very much present yet only tangentially as it is never stated as such in the book. Foam speaks to a capacity to breath underwater as Ingersoll puts it. Foam refers, in the first part of this paper, to one's way of dwelling in water and becoming the wave. In the second part, the foam speaks to one's capacity to resist neocolonial strong currents washing out the island of Hawaii.

Dwelling in the fold of a wave: Foam as an associated milieu

In *Waves of Knowing*, Ingersoll apprehends the postcolonial politics of Hawaii through surfing and the concept of seascape, and by so doing, she does more than unmaking a water/land dichotomy. Whereas capitalism is a terrestrial or land-centric onto/epistemology that understands the world in terms of solid discrete entities easily set into dichotomies, a 'seascape' offers an amphibian and corporeal understanding of the environment. In a seascape epistemology, Ingersoll suggests, surf becomes a potential mean for re-imagining an amphibious relationship to the territory as being made of water as well as air or land. She thinks the two spaces relationally as an associated milieu where the sea is a lived and inhabited place rather than an empty space distinct from earth. For an island society, the ocean is the continuity of land. On that conception of smooth territory, Ingersoll quotes Kanaka poet, artist and fisherman Imaikalani Kalahale: 'For me, the Pacific is our back yard (...) We don't have fences between us and our cousins in Samoa, we just have really long back yards' [Provenzano, 2007 in Ingersoll, 2016: 179]. It is a long garden without fences and simply made of a different materiality. It is thus not a mere space but a life support system, what Ingersoll calls a mode of dwelling in

Heidegger's term, in which people associate functionally and semiotically to an environment.

Rather than something to be mastered and discovered, as a colonial ideology of the wave holds, a seascape ontology considers one's relationship to the ocean as a becoming where 'ocean and surrounding islands [are] imagined extensions of self' [145]. This becoming is what the author calls the 'ocean-body assemblage' where the body becomes the wave. The ocean-body is thus a foamy associated milieu formed by the environment and ocean-based human techniques, a complex assemblage from which meaning emerges, giving the sea and the people inhabiting it a particular form of existence. The ocean becomes a meaningful milieu for who knows how to pay attention and read its movements. In her book, Ingersoll speaks for example of the surfer who knows how to read a wave, its beginnings and ends and knows how the wave is to unfold. Surfing is an onto/epistemic practice whereby one can become attuned to and literate in the textures of the sea. The body becomes the main medium for an oceanic literacy based on the kinetics and sensorial affinities of the surfer or sailor in relationship to water. The ocean and its literacy continually de- and reterritorializes striated lines of the jetty made of concrete as well as static coordinates framing one's relationship to the territory. The surfer or sailor of such onto/epistemology does not vectorize herself through metrics of longitude and latitude but figures her location indexically.

This oceanic literacy gives way to a form of dwelling where the ocean is an inhabited place that makes sense to the people engaging with it. The ocean informs a fluid identity, grounded yet in movement. This liquid situatedness, or identity multisitedness in both land and sea, is what Ingersoll refers to in native Hawaiian language or language of the sea, as the 'mana' of an ocean-body assemblage that allows one to be 'rooted while finding routes' as the author says, borrowing the expression from James Clifford [105]. This 'foamy' identity in-between land and sea, air and water, is not only situated in a moving and heterogenous continuous space (which thus becomes place), it is also situated in liquid time where one is always caught in simultaneously occurring temporalities. Identity is here a shape-shifting concept, shifting along different temporalities. It encompasses multiple modes of being in time, whether it be what the author refers to as capital time of 'waiting in line

at Starbucks' [114] merging with 'the national time as [she] put quarters into a state-erected parking meter' [115]. These linear chronological times differ from a non-quantitative indigenous time when the surfer enters the water. This latter time is one of duration stretching or contracting in relation to the surfer's experience to the milieu, and which reenacts and honours Hawaiian ontology and epistemology. By paying attention to the liquidity and merging of different ways of being happening simultaneously, Ingersoll moves beyond reproducing another dichotomy of pitting colonized and colonizer against one another. Ingersoll looks rather for what she calls an 'autonomous identity' that thrives in spite of a colonial pressure. Surf, as an ontological posture that informs a way of being, resists dichotomies of a land-centric regime of power and engages in decolonial politics.

Surfing the colonial tide: Foam as resistance

Ingersoll states that the onto-epistemic practice of surf was first (imperfectly) washed away by colonialism and Victorianism and is now still being undermined by the surf industry which began in the 1940s. Colonial rule and Victorian mores of the turning of the 20th century first pushed out of the water the surfing practice in Hawaii. Activities relating to water and involving nudity were considered immoral by missionaries. Moreover, missionary politics abolished Kanaka (native hawaiian) sacred practices of surfing. In fact, 'with surf chants and board construction rites, sport gods, and other sacred elements removed, the once ornate sport of surfing was stripped of much to its cultural plumage' [Finney and Houston, 1996 in Ingersoll, 2016: 48]. After WWII, surfing took off as a tourist industry, but rather than reviving a practice that has always been alive on the island, surf tourism fed neocolonialism. Ingersoll shows how surf tourism came with an infrastructure that affects life on the island whether it be because of constructions on the beach, surf schools and too many surfers monopolizing space, as well as because of a Western and colonial ideology of discovery and conquest of the 'perfect' wave. This ideology of domestication of the 'wild' relies on the assumption that the ocean is an alien and empty space to be tamed, and contribute to washing out and erasing locals' presence from the sea and landscape.

Despite colonialism, Ingersoll argues that surf as an onto-epistemic practice has always survived. Even within the strong rolls of the colonial and neocolonial wave, pockets of resistance, like bubbles of air, emerge. She speaks for example of famous Hawaiian paddler Kanuha visiting Pele, a volcano goddess in lava, and whose performance, although mediated in Western media, enacted a Kanaka ontology. The author recognizes the permeability of air and water as much as spaces both Indigenous and modern, both spiritual and capitalist. The foam can be found in Ingersoll's book in the kind of associated milieu mentioned earlier, but foam is also read as resistance, that is as pockets of air that remain available inside's the surfer's lungs when she is crushed under the wave of colonialism. Throughout the text, Ingersoll injects such bubbles with Hawaiian terms increasingly present as one reads. By doing so, the author incarnates the seascape she depicts of Hawaii. She performatively offers a postcolonial point of view by pointing at the practices of those who continually live and resist within, or in fact surf the wave of colonialism. By mixing English with vernacular terms, the author and surfer also signifies her position in the middle of a colonial history she cannot escape but can only move through, moving in fact between temporalities pertaining at times to land centric and water durations.

Reading Ingersoll's account of surfing raises the question of how to resist strong currents without exhaustion? How to surf a neocolonial regime of accumulation? To surf neocolonialism, Ingersoll proposes a foamy kind of education where students learn about and practice native and modern modes of navigation, mixing experience-based mode of knowing like surfing, learning of oral stories and star mapping, to be weaved with modern knowledge such as physics of the wave. The political resistance is to be corporeally enacted through other means than solely cognitive ways of knowing. This kind of politics as experience rather than state-based politics, she argues, can further decolonize knowledge and science and foment sustainable modes of existence. This foamy mode of knowing is also found in the methodology of the book, which moves between land-based forms of knowing like archive and ocean-based experience of surf and sailing.

The politics of water that she addresses are decolonial politics precisely by the fact that the concept is not narrowly circumscribed to the realm of the state. Rather, politics is understood as ethics and aesthetics located in the body and

its extensions. The ocean-body incarnates a potential for de- and reterritorializing a state-striated territory. This potential for reterritorialization lies in the production of indigenous literary forms portraying the sea relationally. It also lies in the surfer's corporeal knowledge and capacity to think outside of the state's mindset to embody the navigation, to think like the ocean and envision her destination synaesthetically. Ingersoll speaks about Nainoa Thompson's experience as a sailor finding her way at sea through the sensation of wind and wave as well as light from the moon. This kind of intuitive corporeal knowledge challenges cognitive/analytic knowledge. It is a speculative epistemology whereby the 'body-ocean' is not relating to space in terms of metrics but does so by paying attention to material indices, an attention that is possible if one can let go of a state mindset and becomes the wave.

Surfing, as a mode of existence, is a mode of resistance and resilience that is made possible by learning how to 'breath' underwater while ducking underneath the wave to re-emerge after it. Surf becomes a fruitful metaphor to think a postcolonial politics of how to navigate turbulent waters, how to resist without exhaustion, and how to reroute the wave's potential to one's advantage without being crushed by it, that is using the wave's force to propel new becomings.

The 'oceanic' turn Ingersoll's proposes with her book will be inspiring to anyone working on island habitats, matter at sea and of postcoloniality. Ingersoll's proposition to think 'amphibiously' is an invitation to take into consideration the materiality of the milieu to think notions of situatedness and more-than-human agency in non-striated ways. Along but also beyond De Certeau's notion of tactics, what I take from the book is a kind of speculative mode of resistance in a constantly moving and shifting reality. Ingersoll's book is in fact a forceful invitation that I gladly take on to think the permeability of milieu, identities and epistemologies.

references

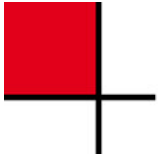
- ten Bos, R. (2009) 'Towards an amphibious anthropology: Water and Peter Sloterdijk', *Environment and Planning D: Society and Space*, 27(1): 73–86.

Sloterdijk, P. (2004) *Écumes: Sphères III*. Paris: Pluriel.

the author

Marie Lecuyer is a PhD candidate in Social and Cultural Analysis at Concordia University, Montreal. Her research is situated between anthropology and media studies and focuses on more-than-human after life trajectories.

Email: marie.lecuyer@mail.concordia.ca



Moving and mapping (with) Actor-Network Theory

Milena D. Bister

review of

Blok, A., Farías, I., & Roberts, C. (eds) (2019) *The Routledge Companion to Actor-Network Theory*, London: Routledge.
(HC, pp. 458, \$245, ISBN 9781315111667)

Reading the introduction to the recent Routledge Companion to Actor-Network Theory reminded me of the famous phrase ‘The king is dead, long live the king’. The editors, Anders Blok, Ignacio Farías and Celia Roberts, begin by declaring that, after its heyday in the 1990s, ANT is now in danger of becoming irrelevant because it has been taken up by an increasing number of scholars with backgrounds in a wide range of disciplines. Its popularization, then, is depicted as compromising its analytical force. At the same time, the editors affirm that ANT continues to develop as an intellectual wellspring. Unlike in a kingdom and with kings, however, there is no rule that keeps ANT in circulation in the field of academia. Rather, and one could say *contrary* to many academic rules and traditional infrastructures of academic disciplines,

ANT prevails and spreads because its basic principles and sensitivities continue to inspire the articulation of research questions, methodological approaches and conceptual work in a wide range of disciplines. With 38 contributions, this book offers many intriguing examples of precisely how this is happening and how, in reality, ANT is itself challenged and transformed in these analytical encounters.

In the introduction, the editorial trio stresses that the purpose of the Companion is neither to develop a canonical version of contemporary ANT nor to provide a collection of current research that might suggest some sort of a 'genuine' way of doing ANT. Rather, and following in the footsteps of the most influential ANT thinkers, including Bruno Latour, Michel Callon, Annemarie Mol and John Law, they assert that ANT is neither a theory nor a method, it is instead an intellectual practice that requires constant re-examination and reinvention. The editors invite the readers to engage with ANT, take it as a companion, or choose to accompany it on its intellectual journeys, and to put its resources to work in their own research enterprises. Referring to the conceptual work of sociologist and urbanist AbdouMalik Simone (2014), who advocates the figure of the 'near South' to reframe standard geopolitical notions of 'North' and 'South', they term this proposed relation to ANT as 'modes of thinking and speaking *near* ANT', that is, not simply deploying the existing ANT canon of concepts, research strategies and writing experiments, but keeping them near as a source of questions, problems and inspiration' [xxii, *italics added*]. In this sense, the Companion is meant as much to probe future trajectories of ANT as it is to encourage their development and proliferation.

The book is divided into six sections, each carefully introduced by the editors. As they state in the introduction, they deliberately excluded the best-known luminaries of ANT as potential authors, approaching instead colleagues in their direct and distant research networks with questions about ANT in relation to specific issues and concerns. The result is a range of authors from Europe and indeed beyond, most academics with a background in anthropology or sociology, all committed to transcending disciplinary boundaries, who deliver concise yet elaborate statements. Below I review the Companion and its sections.

Refining ANT as a research paradigm

The chapters in the opening section discuss and suggest how ANT scholarship and its modes of inquiry can be built on to refine ANT as a research paradigm in the sense of Thomas Kuhn. In the first chapter, for instance, Daniel López-Gómez challenges the so-called ‘agnostic ANT repertoire’, in which ANT researchers limit themselves to problematising sociotechnical arrangements. In its place he advocates instead increased implementation of a ‘repertoire of care’. Tracing the pragmatic differences of the two repertoires, and building on recent debates on care in science and technology studies, he argues that a care repertoire would enable researchers to transform research situations of disconcertment into productive moments, not only for the purpose of developing concepts and methods further, but also for taking research as an opportunity to reshape the (perhaps otherwise neglected) arrangements of those involved in our studies. The second chapter, by Adrian Mackenzie, turns to the practices of making ANT concepts, presenting a rigorous meta-analysis of how such concepts are generally made to impact worlds and problems. By proposing the ‘conceptant’, a term that reveals concepts as actors, Mackenzie invites us, surprisingly, to compare the agency of ANT concepts with marmalade, seams, code repositories and backflips, in terms of their stickiness, empirical tightness, referentiality and mobility. Next, Brit Ross Winthereik enquires into the agency of concepts by advising their deliberate use as significant research participants or, employing Donna Haraway’s terminology, as ‘companion concepts’. Drawing on her fieldwork at an Energy Fair, Winthereik provides examples of how her research challenged the concepts of network and infrastructure and argues that such challenges of concepts should be used as a resource for the analysis, and should be subject to much the same scrutiny as the moves of other actors. In the next chapter, Atsuro Morita elaborates that ANT analysis might also profit from second order observation, by juxtaposing the researcher’s ways of drawing comparisons on those of the research participants. ‘Lateral comparison’, which is what he calls this analytical process, would serve to test ANT concepts and support the analysts in their quest to remain true to the multiplicity of knowledge practices.

The concluding three contributions in the section discuss the intellectual positioning of ANT projects. First, building on Michel Callon’s ANT studies on

markets, José Ossandón engages with the ways in which social theories instruct the researchers that take them up. He argues that there are mainly three different characters, or personae, of how to write after Callon's performativity theory, each taking different stances in relation to empirical inquiry: the 'performative-detective', the 'philosophical-ethnographer' and the 'market-reformist'. According to him, these characters do not resemble individual authors, rather they indicate the most central intellectual stances advanced by ANT scholars in the field of market studies and beyond. Subsequently, and with references to the intellectual positions of Callon and Bruno Latour, Fabián Muniesa takes up the question whether or not ANT can be a critique of capital. If we shift the research focus from capitalism to the various practices of capitalisation, as Muniesa argues, ANT certainly has much to contribute and further research is required to develop its critical potential. The last chapter, by Michael Guggenheim, might support this goal, as it further illuminates the relationship between ANT, critical theory and critique. Taking critique to be a situational achievement, Guggenheim makes a case for inventive and speculative methods within ANT. As tools for generative interventions, these methods can be regarded tools of critique because they enable us to engage in experimental modifications of the practices we study.

Acknowledging giant partners of ANT

Section 2 discusses, through seven contributions, some of the philosophies and academic currents most relevant to the shaping of ANT's past and present, and elaborates on their potential to shape future ANT research. Casper Bruun Jensen explores Gilles Deleuze's rhizomes, Alvise Mattozzi Charles Peirce's semiotic theory, Jérôme D. Pontille Jack Goody's seminal work in the anthropology of writing, Noortje Marres American Pragmatism, Ericka Johnson the oeuvre of Donna Haraway, Michael Schillmeier Alfred North Whitehead's philosophy and, last but not least, Martin Savransky enquires into divergences between ANT and the philosophy of Isabelle Stengers. All chapters demonstrate that the encounter between these academic currents and ANT is far from completed. Nortje Marres, for instance, demonstrates how the engagement with pragmatist philosophy can still inspire the recomposition of ANT, especially in relation to themes and

categories that have already been widely perceived as obsolete or outdated within ANT debate, including interpretation, society and epistemology. As these themes continue to re-surface empirically and as problems for research, Marres asserts, it is they who seriously challenge ANT today and, at the same time, offer the potential to reform it experimentally.

Extending the scope of ANT

Section 3 builds on the opening section, delving into the agencies of ANT research by reconsidering (some of) the limits arising from (some parts of) the approach, while making suggestions about how to break new ground to overcome them. The section begins with one of the prevailing concerns within ANT, which is the mutual enactments of non-humans and humans. In his chapter, Nigel Clark cautions that ANT's symmetry principle could lead to neglecting the analytical value of processes largely dominated by non-humans, such as the global climate regime. The more-than-human also features in the two subsequent contributions: first, Kane Race elaborates on the value of weaving bodily becomings and affectivities into ANT analyses, and next, Derek P. McCormack demonstrates the ways in which ANT accounts can benefit from the affective turn. Drawing on feminist science and technology studies and returning to the debate on care started by López-Gómez in the first section, in her chapter, Sonja Jerak-Zuiderent illustrates how moments of disconcertment during fieldwork can be purposefully deployed for ethical and political re-imaginings of the worlds we study. Next, Francis Halsall's chapter revisits ANT as a form of contemporary art practice, arguing critically that ANT's analytical focus on fragmenting subjects and objects is best understood as effects of late capitalism. In a seemingly contradictory movement, Marcelo C. Rosa develops the argument that, in revisiting the limitations of Western ontologies in academic sociology, ANT can serve as a partner of Southern social theories. The section concludes with a chapter by Wen-Yuan Lin on how ANT might improve its analytical repertoire and naturalized understanding of 'the empirical' through taking challenges of equivocation from outside the dominant Western tradition seriously. For this, Lin introduces the example of divergent modes of doing difference in Chinese medicine and explores how ANT's ontology of difference could gain from these articulations.

Tackling less explored regions

Section 4 discusses, as already posed in the title of Section 3, ‘trading zones’, the tackling of issues and regions less explored by ANT scholars while simultaneously providing productive incentives for conceptual refinement. The authors attend, fairly explicitly, to reciprocities of absences and presences in the enactments of concepts, artefacts, practices and realities. For example, the first chapter by Amade M’charek and Irene van Oorschot begins with an exploration of the societal doings of race and the production of difference enabled through practices of population genetics and forensic science. ANT sensitivities are applied to disentangle the relations that *do* race as much as the relations that *are done* by racial categorisations. The authors show that an occupation with race challenges ‘presentist’ tendencies within ANT and alerts us to engaging with the temporalities of absent presences, such as the seemingly forgotten or continuously erased. Uli Beisel similarly calls for taking absences into account when she discusses the assemblages of science, economy and ecology in global health. Taking the development of an anti-malaria vaccine as an example, she emphasizes that, in our world with alarming climate and health disasters, it is increasingly necessary for ANT scholars committed to the study of health to learn from the effects of vulnerabilities and uncertainties around the globe, and to explore those processes that remain unconsidered, discouraged or unfunded. The remaining chapters in the section discuss the impact of ANT on the study of economic expertise (Liliana Doganova), urban life (Alexa Färber), subjectivity (Arthur Arruda Leal Ferreira), and maintenance and repair (David J. Denis), and invite ANT scholars to expand the analytical scope to that which is considered invaluable, promised, marginalized or disregarded.

Scales, sites and place-making within ANT inquiry

Section 5 begins with three contributions debating what a site or place of inquiry is or can be for and in ANT research. The first chapter, by Endre Dányi, attends to the question of whether or not parliaments are still privileged sites for studying liberal democracy. Dányi contends that, in an ANT tradition, parliaments are best studied as ‘meta-sites’ that bring together, shape and transform modes of doing democratic politics across broader places and

practices. Next, Albena Yaneva and Brett Mommersteeg assert that ‘sites’ (in architectural processes and beyond) can also be analysed as practices, as processes of ‘site-ing’, a linguistic twist that allows studying them ethnographically as (temporal) achievements and simultaneously accounts for the performativity of the emerging ethnographic composition. Finally, Robert Oppenheim takes up ANT to address conflicting assemblages of a city and, more specifically, certain places in a city. Oppenheim suggests scrutinizing how these are related through ‘circulating normativities’, themselves approached as artefacts involved in place-making. By highlighting potentiality and desirability as essential elements of normativities, his chapter, in accordance with Färber’s in Section 4, points out the need to extend the methodological ANT principle of ‘follow the actor’ to the sites and registers of the anticipated. The next chapter, by Gregg Hetherington, introduces the site of the courtroom and reconsiders ANT’s productivity in engaging with and facilitating a politics of environmental harm. Drawing on Jacques Rancière’s philosophy of the political, Hetherington encourages ‘subtle’ research that attends to and amplifies existing and developing political disruptions. The final two chapters discuss the limits and potentialities of ANT inquiry into and beyond the sites and scales where politics of nature (Kristin Asdal) and automated digital platform engagement (Carolyn Gerlitz and Esther Weltevrede) are done. Gerlitz and Weltevrede thus intriguingly demonstrate the methodological limits of the ‘follow the actor’ approach when it comes to the analysis of automated digital relations.

Extending classical modes of doing ANT research

The final section of the Companion is devoted to the potentialities of ANT in ‘public-professional engagement’, the term the editors use in the title of the section. Even though previous contributions also pay attention to collaborative knowledge making between ANT scholars and engaged publics, this section deals particularly with questions of how ANT analysts can extend their modes of doing research beyond description towards activism (Tomás Sánchez Criado and Israel Rodríguez-Giralt), experimental forms of collaboration (Shuhei Kimura and Kohei Inose) and participation (Emma Cardwell and Claire Waterton), speculative constructivism (Alex Wilkie) or non-academic work practices (Yuri Carvajal Bañados). The authors of the

chapters make clear that what is at stake here is the active shaping and enabling of (more-than-human) relation-making processes that constitute the core of democratic communities. In this regard, Criado and Rodríguez-Giralt draw on research activism performed as part of the Spanish ‘15-M’ (May 15th) movement and display ethnographic practices of ‘joint problem-making’ as a way of involving ANT research in the ongoing production of common worlds. In the following contribution, based on imaginative research activities after the earthquake, tsunami and Fukushima nuclear accident, Kimura and Inose recount how public anthropologists can employ ANT to engage with shaken realities in the midst of a disaster. In their case, inventive strategies of getting involved in the activities of fact-making about the aftermath of the disaster alongside and together with affected locals, activists and other professionals made ANT research part of the efforts that rendered life possible under devastating circumstances.

Getting involved with ANT in science and society ‘in-the-making’ is also central to the final three chapters, which explore how ANT research can be activated (a) to engage silenced and vulnerable actors, whether human or non-human, into processes of world-making (Cardwell and Waterton); (b) to develop ‘procompositional practices’ generative of novel and speculative ways of thinking, doing and assembling (Wilkie); and, finally, (c) to run public institutions and implement heterogenous connections in our spheres of influence that reach beyond academia (Carvajal Bañados).

Wayfaring through the open terrain of ANT

In summary, most of the Companion’s contributions can be said to centrally engage with the agencies assembled by ANT sensibilities and concepts. At the same time, the collection demonstrates a variety of non-canonical options for recomposing ANT in order to make it a rewarding future travel companion on less frequented or even abandoned analytical paths. Bruno Latour is, unquestionably, quoted most in references to classical ANT. The selection of key intellectual partners of ANT, as discussed in Section 2, remains necessarily partial, as the editors themselves acknowledge. Other critical influences, rarely mentioned in the book as a whole, could of course also have been considered, including the impact of Harold Garfinkel’s

ethnomethodological approach, the oeuvres of Michel Foucault and Judith Butler or the significance of postcolonial theories pioneered by Homi K. Bhabha or Gayatri C. Spivak, to name but a few. Speaking of absences, I notice that the Companion keeps a discussion of the regimes of academic knowledge production largely implicit, even though the further development of the ANT paradigm cannot really be viewed in isolation from them.¹

Finally, let me address the editors' consideration of whether or not the book is suitable as a map through the universe of ANT, and for whom. In terms of Tim Ingold's (2000: 219-242) argument about the differences between wayfinding and navigation, the Companion can certainly be considered a sincere effort to map some of the most intriguing contemporary intellectual places of ANT. Still, as the editors declare in their introduction, the book is not a representational map for navigating the terrain of ANT. Rather, it invites the readers to join the Companion's movements of wayfinding, and to take, at will, inspiration for their own multiple formations of knowledge, whether within, 'near', or with cross-reference to ANT. Readers seeking an introduction to ANT will find here not an applicable canon, but extensive references to both classical ANT work and recent analytical movements with considerable linkages to ANT. As the Companion covers a wide range of topics such as urban life, dis/ability, ecological crisis, democracy, race or digital practices, it can also be recommended as an entry point for those seeking ANT-informed approaches to specific research questions and fields. Of course, in this sense, it also suits already established ANT proponents. As sorting is contingent, with the result that many contributions speak to more than one of the sections' topics, and the chapter titles are formulated in questions, a quick overview of the book's coverage is difficult, so the index provides a particularly valuable entry point.

In conclusion, I commend the editors' and authors' extraordinary success in bringing together and articulating a wide range of vibrant debates on the existing and future potentials of engaging with ANT. In the end, and from an ANT-informed intellectual stance, it is indeed less important whether the

¹ For an exception see the concluding remarks on academic writing infrastructures in Jérôme D. Pontille's chapter and Färber (2014).

approach itself will live on: far more important is the extent to which ANT continues to provide inspiration and support for the challenging practices of world-making in which we all are inevitably implied.

references

Färber, A. (2014) 'Potenziale freisetzen: Akteur-Netzwerk-Theorie und Assemblageforschung in der interdisziplinären kritischen Stadtforschung [Releasing potential: Actor-Network theory and assemblage research in the field of interdisciplinary critical urban studies]', *sub\urban* 2(1): 95-103.

Ingold, T. (2000) *The perception of the environment. Essays in livelihood, dwelling and skill*. London/New York: Routledge.

Simone, A. (2014) *Jakarta, Drawing the city near*. Minneapolis: University of Minnesota Press.

the author

Milena D. Bister is a postdoc member of the Laboratory: Anthropology of Environment | Human Relations at the Institute of European Ethnology, Humboldt University Berlin, and lecturer in European Ethnology at the University of Vienna. milena.bister@staff.hu-berlin.de