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Abstract

Cities of the Global South are infrastructurally diverse and entangled with multiple coexisting infrastructural formations, be they planned or unplanned. They offer unique opportunities to study, design, intervene in and develop systemic approaches related to infrastructural configurations encompassed by the processes and dynamics of urban infrastructuring. In this chapter, we draw from the contributions to this volume to propose that infrastructural scholarship and practice contribute to the production and reproduction of potentially violent forms of infrastructuring. Such infrastructuring carries implications for human health, human wellbeing and sustainability more broadly. We argue that whether and how infrastructuring can act to transform infrastructural configurations and entanglements towards greater sustainability is fundamentally an ethical question. We suggest that an ethico-politics of *care* should be embedded in systems approaches to infrastructuring in both research and practice. To become *sustainable,* infrastructuring (as a transformative process) must be aligned with the ethico-political position of caring.

19.1 Introduction

Caring is 'everything that we do to maintain, continue and repair "our world" so that we can live in it as well as possible. That world includes our bodies, ourselves, and our environment, all that we seek to interweave in a complex, life sustaining web' (Tronto, 1993, p. 103). In the closing chapter of this edited volume, we synthesise some of the main insights of the different chapters through the lens of systems thinking and the ethics of care to outline ways in which inquiries and interventions into infrastructuring (i.e. the thinking, planning, making and maintaining of heterogeneous infrastructural configurations as complex sociomaterial systems) can benefit from alignment with an ethico-political position of caring. We argue that sustainable infrastructuring is essentially an ethical problem and therefore requires merging the logic of care with a systemic thinking paradigm.

At a time when accustomed notions of stability, development and growth seem to be giving way to those of uncertainty, relatedness and precarity (Escobar, 1995; Tsing, 2015), the contributions to this edited volume on infrastructural reconfigurations and sustainability in cities of the Global South brought forward pressing questions around infrastructural knowledges, practices, transitions and futures. Contributions were loosely grouped in three interrelated parts. In the first part, *Infrastructural Entanglements,* chapters highlighted the diverse, often fragmented and entangled nature of infrastructural configurations (e.g., Karthe et al.; Valencio et al.; Lozano Lazo & Gasparatos). Contributions to the second part, *Infrastructuring (Unequal) Relationships*, discussed infrastructuring as a transformative process interwoven with the (re)production of socioecological injustices and inequalities (e.g., López-García; Makore; Shtanov & Iossifova; Dewoolkar). In the third and final part, *Infrastructuring Just Trajectories*, contributions proposed potential ways of thinking about and practising infrastructural interventions with care (e.g., Greed; Iossifova et al.; Chattopadhyay).

In this closing chapter, we attend to critical and complementary views on sustainability (Ehrenfeld, 2008; Escobar, 2018; Fry, 2014, 2017; Tonkinwise, 2015) and ask if adding 'sustainable' to the concept of 'development' in the context of infrastructural reconfigurations is enough to engender the kind of paradigmatic shift that may be necessary to transform prevailing forms of careless infrastructuring. We highlight the responsibilities inscribed in thinking, conceptualising and practising infrastructural reconfigurations in ways that are affective, ethical and political (Haraway, 1988; Latour, 2018; Puig de la Bellacasa, 2017). We call for infrastructural engagements to become actively entangled with both the responsibilities entailed in transitioning towards uncertain and heterogeneous futures, and a speculative and productive ethics of care.

What follows is divided into five brief and interrelated expositions. First, we highlight the significance of focusing on Global South infrastructural settings, especially in terms of enhancing systemic approaches to infrastructuring. Second, we emphasise that research on infrastructural heterogeneity and its inherent sociomaterial attributes (though illuminating in relation to processes of change, production and maintenance), often neglects to account for, and take a stance towards, infrastructural violence.[1] Next, we argue that the alternative view of celebrating infrastructural resilience through the responsibilisation of self-care in fragile communities and settings characterised by limited resources can be equally dangerous and violent, and may obscure institutional accountability. Fourth, we stress that the responsibility stemming from the interrelation between processes of infrastructuring and their respective imaginaries cannot be dissociated from the responsibility of knowledge (re)production. Finally, and drawing from the above, we conclude by proposing a feminist, systems theory-based stance of ethico-political caring towards infrastructural reconfigurations.

19.2 Systemic views on infrastructural configurations in cities of the Global South

The focus of this volume on Global South settings is quite deliberate. Rapid urban transformation in the Global South offers unique opportunities to design and develop systemic approaches to infrastructural configurations and entanglements, and to elucidate the processes and dynamics of urban infrastructuring. A practical analytical tool to facilitate and improve our systemic understanding of urban infrastructuring is the selection of empirical cases that include socio-spatially diverse and ideally co-located urban areas (Iossifova, 2013, 2019; McFarlane et al., 2014). Here, multiple and overlapping infrastructural configurations may serve the same distributional function (e.g., distribution of water through piped networks to the urban elite versus water wells or water kiosks for the urban poor); or they may serve different purposes (e.g., sanitation, transportation, energy) but be entangled through historical processes of co-evolution and co-dependency (Guma, 2020; also, Karthe et al, Valencio et al, Solomou et al, this volume). Urban conditions in Global South contexts make forcefully visible the intensities of the co-existence, co-dependence, co-production, and interrelatedness of infrastructural configurations. Yet, to date, we know little about the ways in which different infrastructural systems influence each other and their respective transition pathways (Geels, 2011; Köhler et al., 2019; Papachristos et al., 2013). In this sense, processes of infrastructural reconfigurations in cities of the Global South offer rewarding opportunities to examine coexisting infrastructural systems in order to understand how they interact with and influence each other as embedded, relational and co-evolving.

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[1] Violence in the context of this chapter refers primarily to 'concrete forms of structural violence' experienced as and embodied in the lack of critical infrastructure (Tyner & Inwood, 2014, p. 780). Structural violence is the social injustice that results from the withholding of resources (Galtung, 1969). See also Chapter 1, this volume.

19.2.1 Risky perspectives on heterogeneous infrastructure

Many contributions to this volume have hinted at the paradigms and processes through which infrastructuring (i.e., the practices of planning, implementing and maintaining infrastructural configurations) may intervene into the relational fabric of the city (e.g., Salia & Iossifova, Shtanov & Iossifova, Solomou et al, Iossifova et al, Lozano Lazo & Gasparatos, this volume). Infrastructuring acts to transform the objects, places, spaces, practices, lives and livelihoods embedded in cities as partial aggregates of dynamic and heterogeneous infrastructural formations. In reconfiguring relationships, infrastructuring displaces, replaces, dehumanises, commodifies and acts in a myriad of ways to transform infrastructural technologies and how they relate to changing socioecological landscapes (e.g., Chakrabarti; Dewoolkar; Ren et al, this volume). As part of often-gendered power relations, infrastructuring in ever-changing cities demands the constant acquisition of new and intimate infrastructural knowledges (Truelove, 2011; Truelove & O'Reilly, 2021; Truelove & Ruszczyk, 2021).

Recent debates in human geography, among other disciplinary domains, leave no doubt about the sociomaterial nature of infrastructural configurations (Amin, 2014; Graham & McFarlane, 2014; Lawhon et al., 2018). They may even prioritise and emphasise the social, political and economic aspects and relations in the production or maintenance of infrastructural formations over time (e.g., McFarlane & Silver, 2017; Santos, 1985). However, in so doing, such scholarship may run danger to render less visible the materiality of infrastructure and its distributional (if not life-sustaining) functions, and with them, the concrete implications for human and environmental health. Conceptualising infrastructure through notions of formations, entanglements, systems, dynamics and complexity runs the risk of tempting us to see the responsibility for the management and operation and provision of infrastructure as distributed evenly among different actors. These actors, besides the state, private organisations and individuals also include non-human entities such as resources, infrastructural networks or the technical objects of infrastructure. Such conceptual and analytical moves, shared among approaches in social studies of science and technology (STS), might distract from the intentionality of human agency and thereby gloss over their frequently violent processes and consequences (Suchman, 2007).

We, therefore, acknowledge that infrastructural scholarship runs the risk of becoming complacent or irrelevant at best and giving countenance to the production of infrastructural violence at worst. Responding to this risk may require uncovering and naming the precise moments, spaces and actors through which infrastructuring interventions could transform its machinations towards social, spatial and environmental justice. This may require revealing the precise human actors and their agency (through and from positions of power) in the production and reproduction of violent forms of infrastructuring.

19.2.2 Infrastructuring responsibilities

In many ways, the realisation of individual and collective rights to the city depends on the governance of urban infrastructural formations and their distributional function (Douglas, 1992; Santos, 1988). The state was traditionally mandated to provide and govern infrastructure as a function of the duty-of-care towards citizens. It is important to remind ourselves that the very emergence of urban infrastructural technology was once triggered by public health considerations (Siri & Capon, 2017). However, and due to global restructuring and urban development for the sake of unchecked economic growth and financial gain, public health provision has been abandoned as a key motive for infrastructural development in some parts of the Global South (Corburn, 2004; see also López-García, this volume). In some contexts, urban planning, design and governance are currently predominantly market-driven and product-oriented, rather than geared towards fulfilling

the mandate of care (Jabeen et al., 2021). They serve to splinter cities, rather than universalise public services (Graham & Marvin, 2001).

However, responses to public health and other emergencies in fragmented cities and densely populated urban settlements of the Global South rely to a high degree on the availability and accessibility of appropriate and functional infrastructural systems (Iossifova et al., 2020a, 2020b). What is appropriate in a particular context depends on resource availability, the everyday practices of users and local values, beliefs and norms (Iossifova, 2020b; Simone, 2004, 2014). Yet, even where well-managed infrastructural systems exist, they are required to work together seamlessly and synergistically to ensure a sustainable and well-functioning overall system (Goldbeck & Angeloudis, 2018; see Karthe et al, Valencio et al, Shtanov & Iossifova, this volume). Understanding the co-dependency of coexisting infrastructural systems is therefore critical in order to take advantage of, and subsequently enhance, the underlying sociomaterial dynamics under emergent conditions that require rapid systemic change (such as those experienced with the outbreak of the COVID-19 pandemic). The above further highlights the urgency in terms of (re-)asserting the state's duty-of-care towards its citizens and escalate public health as a key consideration in the planning and implementation of infrastructure (Bhide, 2020).

In our view, the occasional scholarly celebration of the fragile social infrastructures at work to compensate for the lack of provision of appropriate physical infrastructure and infrastructural services by the state is rather concerning (e.g., Amin, 2014). While citizens resort to practices of planning, building and maintaining infrastructural technology within their communities is often celebrated through the lens of resilience (Amin, 2014; Koolhaas et al., 2000; van der Haak, 2002), some of the broader outcomes of such informal infrastructural configurations can be detrimental to the health of the community as well as the wider socioecological environment (Welsh, 2014; see first case study in Ren et al, this volume). While the aforementioned scholarly celebration (coupled with the actual need due to infrastructural lack) may encourage and support 'informal' action through communities and individuals as the 'extended state' (Westall, 2021, p. 31), this responsibilisation to self-care of the individual or the community in limited-resource settings can exacerbate infrastructural violence and its effects. For instance, it can deprive communities of already precarious resources, including money and time (Chakrabarti, Dewoolkar, this volume). The state and/or service providers may even use service deprivation as a tool to prompt residents to vacate informal areas, to resort to makeshift self-built infrastructural provisions and reinforce already precarious conditions (Bremer & Bhuiyan, 2014).

Furthermore, the assumption that social infrastructure could effectively compensate for the failure of the state to provide and maintain functional infrastructural services is questionable (Amin, 2014). Questionable is also the assumption that it is – and can be – acceptable for some urban communities (in the Global South) to live in a state of permanent uncertainty due to unregulated or continuously failing infrastructural configurations (see Welsh, 2014). In fact, the perception of infrastructural lack, instability or uncertainty in the Global South as something ordinary (even *natural*) can, in itself, be considered a form of structural violence (Marcatelli & Büscher, 2019).

19.2.3 Complicit infrastructural knowledges

The production of infrastructure begins with the imagination (Humphrey, 2005; Kaika & Swyngedouw, 2000; Picon, 2018). Imaginations of infrastructural futures are intimately tied with developmental ideals and political ideologies that, as we have seen across several chapters in this volume (e.g., Shtanov and Iossifova, Dewoolkar, this volume), do not always correspond with or meet realities and needs in the contexts within which they are implemented. In some contexts, the

rapid and violent implementation of predominantly western-dominated infrastructural knowledges, technologies and practices may curtail traditional and potentially more sustainable infrastructural configurations (Bedi, 2019; Iossifova, 2020b; McLean, 2007). Moreover, their introduction in non-amenable contexts may result in their uncritical implementation and lead to dependency and infrastructural failures (Marshall & Farahbakhsh, 2013; Zohoori & Ghani, 2017). In this sense, globally circulating knowledges, resources and practices that are part of a global capitalist economy can replicate and reinstate potentially damaging ways of *doing* infrastructure (Harvey, 2008; Lesutis, 2019; Unnikrishnan et al., 2020; see also Shtanov & Iossifova, this volume).

We call for the critical questioning and careful, but urgent, reformulation of existing imaginations of infrastructure and infrastructural development to respond to the realities posed by the socioecological crisis of the 21st century. In our view, such reformulation must begin by rethinking the ethical grounds of development ideologies, particularly in terms of how they are operationalised through urban planning and design for infrastructure, as well as by re-evaluating the assumptions of infrastructural provision embedded within such disciplinary practices (e.g., Iossifova et al., this volume).

As discussed throughout this volume, current approaches to infrastructuring often push the implementation and imposition of centralised and networked infrastructural systems that essentially result in norm-linked, engineering-heavy and fragmented systems (e.g., López-García; Ren et al., Shtanov & Iossifova, this volume). In this context, it is important to recognise and unravel some of the underlying assumptions of the system of (re)production and circulation of infrastructural knowledges, technologies and practices. It is essential to acknowledge that they are often colonialist, imperialist, racist, gendered, ageist, ableist and otherwise skewed and discriminatory, as well as resting on the fundamentally flawed principles of expansionist growth (Federici, 2019; Graham & Marvin, 2001; Monstadt & Schramm, 2013, 2017; Okereke, 2007). This realisation leads us to conclude that engineers, architectural designers, planners, policy-makers and the large constellation of other urban practitioners cannot be viewed as innocent bystanders in the destructive processes of infrastructuring. Neither can the schools of architecture, planning or governance be viewed as innocent, as long as ideas and ideals of *careless* and *unethical* infrastructural development, as part of global urban futures, continue to be formulated, perpetuated and instilled.

Indeed, scholarship as knowledge (re)production is complicit in reinstating outdated infrastructuring agendas. The swift decolonisation of infrastructuring as unjust developmentalist ideology and violent transformative practice is necessary (and thankfully slowly beginning to emerge) amid this rapidly unfolding socioecological sustainability crisis. We argue that the mere application of infrastructural inversion (Bowker, 1994) as the foregrounding of infrastructural configurations in research across the now well-rehearsed canon of perspectives on infrastructural imaginaries, aesthetics, politics and materialities may need to be expanded to include concrete translations and propositions for transformative action. We may agree that infrastructuring produces and reproduces social, spatial and environmental injustices in many contexts of the Global South, but given the continued scale and pace at which infrastructuring transforms society, space and the environment, we risk complicity if we remain silent about the human agency and actors that imagine, implement and maintain infrastructuring through various operational mechanisms.

19.3 Towards infrastructuring as caring

We opened this chapter with Tronto's (1993, p. 103) generic definition of *caring* as '*everything that we do to maintain, continue and repair "our world" so that we can live in it as well as possible*'. This definition resonates, in so many ways, with the concept of sustainable development when defined

as *'development that meets the needs of the present without compromising the ability of future generations to meet their own needs'* (Brundtland, 1987). These statements, made at a time when humanity was slowly beginning to grapple with the extent of the now unfolding environmental and climate emergency, stem from very different traditions of thinking about and intervening in the world. The first one is rooted in feminist critical thinking, while the other stems from discursive formations appealing to politicians and associated political agendas. Both, however, are deeply concerned with the modes of violent and destructive doings on this planet and express deep concern and *care,* the latter being *'an affective state, a material vital doing, and an ethico-political obligation'* (Puig de la Bellacasa, 2011, p. 90). While these two concepts might seem difficult to reconcile and combine, some system thinkers have touched upon this linkage, by stating that living in a world of systems requires us to *'expand the boundary of caring'* and *'our full humanity – our rationality, our ability to sort out truth from falsehood, our intuition, our compassion, our vision and our morality'* (Meadows, 2008, p. 170). We suggest that both perspectives emerge from a worldview that can only be described as ontologically systemic.

We argue that at the core of infrastructuring should be a systemically positioned ethical framing. Thinking systemically poses that in the long-term, compromising the health and wellbeing of a social group (e.g. the urban poor) will ultimately affect the health and wellbeing of all social groups, and that the actions we take today may compromise the health and wellbeing of future generations. Systems thinking encourages us to expose our mental models and invite others to challenge these assumptions and include their own voices (Meadows, 2008). Infrastructural systems planned and implemented across multiple spatial scales drive and determine the extraction, distribution and use of critical resources, and are intimately entangled with the 'megatrends' shaping future development pathways including climate change, demographic shifts (e.g., population ageing), urbanisation, digital technologies and social inequalities (United Nations, 2020). We now know that unchecked resource extraction and wasteful use of scarce resources contribute to climate change (Goodbun et al., 2012); that ageing populations require carefully planned and designed infrastructures, posing both opportunities and challenges to meet the SDGs (Iossifova, 2020a; Jarzebski et al., 2021); that urbanisation is a key driver for infrastructuring in its most violent and exploitative forms (Graham, 2004; Pedrazzini et al., 2014); that digital technologies (and the infrastructures that facilitate them) can both support and hinder achieving sustainable development (Furlong, 2021; Sengupta et al., 2017); and that – as we have seen throughout the contributions to this edited volume – infrastructuring can serve to exacerbate existing or engender new inequalities along various lines of division.

Despite the contemporary realities of climate change, environmental degradation, and the acceleration of the megatrends listed above, we argue that there is space for successful intervention to enhance the sustainability of infrastructural systems (United Nations, 2020). Systems thinking poses that *'systems have a structural incompleteness that feeds their dynamics, connected to the environment in which the system is immersed'* (Ulivi, 2019, p. 69/70). In this reading, *incompleteness* (currently an en vogue notion in research on infrastructure; see Anand et al., 2018; Guma, 2020; Gupta, 2018) is understood to entail the possibility of intervening in sociomaterial and heterogeneous infrastructural systems, as well as progressing related knowledge. In this sense, the incompleteness of infrastructural systems makes them open to transformation – in particular, open to transformation towards greater sustainability. Here, we highlight parallels with Tronto's (1993) reading of the potential to harness incompleteness through caring as maintaining, continuing, repairing, and acknowledging the complexity of elements and relationships it entails.

We acknowledge that our synthesis may appear counterintuitive in bringing into conversation approaches from the feminist materialist tradition of critical thinking with systems thinking. However, this is not necessarily a unique proposition in the context of systems approaches, which have ranged from functionalist approaches to critical systems thinking (Jackson, 2001, 2007). For instance, Theories of Change have been characterized as '*a hybrid of systems thinking and emancipatory social theory*' (Mowles, 2014, p. 168). Here, however, we argue for the concept of care as an ethical basis. We see the possibility of an alternative infrastructuring that is not as inherently careless, destructive and violent as described in many of the contributions to this volume (e.g., López-García; Chakrabarti, Dewoolkar and other contributions to Part II). We see the possibility of an infrastructuring that could be motivated by the desire to repair, replace and rebuild according to the principles of care, including self-care, care towards others, and care towards 'the other', the more-than-human, and the environment. We argue that such an infrastructuring, both as research and practice, would require systemic thinking merged with an ethico-politics of care.

Care in infrastructuring research and practice should include not only capturing unheard voices, unseen sufferings and skewed power relations specific to each context, but also generating and fostering caring relations. In the discipline of architecture, for instance, the call is formulated in straightforward terms: 'all agents involved in the production of a building have to face up to their social responsibility because they are always tied into a temporal chain and so must always be alert to events further down the line over which they have some (but not total) influence' (Schneider & Till, 2009, p. 99). At the same time, Puig de la Bellacasa (2010, p. 152) develops a nuanced argument for the grounding of 'ethical obligation in concrete relationalities in the making rather than on moral norms'; that is, ethical obligations and commitments do not need to start from a 'normative morality' but may rather focus on 'everyday practices at the level of ordinary life'. In this sense, there is the intrinsic understanding that '*personal* practice is connected to a collective' (Puig de la Bellacasa, 2010, p. 152, emphasis in original). Federici (2019, p. 191) goes as far as suggesting that we are facing a 'crisis of reproduction' in everyday life that manifests in the collapse of relationships of care because of the devaluation of human life (or any life) under capitalist development. We have accepted technological innovation to be instrumental to our survival. The development of infrastructure as 'capitalist industrial technology' has led to the loss of our 'capacity to read the elements, to discover the medical properties of plants and flowers, to gain sustenance from the earth, to live in woods and forests, to be guided by the stars and winds on the roads and the seas'.

It is paradoxical that contemporary infrastructural technologies – the technological objects and networks arguably facilitating human interaction and connection with the collective and the environment in the first place – fall short of implementing critical and fundamental principles of care. Infrastructuring as a form of development practice (as described in the majority of contributions to this volume) is often driven by big politics, big money and big actions. This ranges from visioning to designing, implementing and maintaining infrastructures. At the same time, infrastructuring is entangled and entangling with everyday relations, desires, hopes and aspirations (Tozzi, 2021). We highlight that infrastructuring, and the unequal configurations and entanglements it produces, require us 'to pose questions in the face of (i) market extensions, (ii) currently pervasive discourses of personal responsibility (for poverty, inner city decline, unemployment, etc.), and (iii) the withdrawal of public support from many crucial arenas' (Lawson, 2007, p. 1). To this list, we add the ethico-political imperative to respond infrastructurally to unprecedented rural-to-urban and international migration from current and future social and environmental crises. This requires the infrastructural capacity to expand and accommodate an increasing number of users with different needs, whilst also being sustainable. To operationalise the '*feminist notion of care*' in researching and doing infrastructuring requires posing '*critical questions about who will do the work of care, as*

well as how to do it and for whom' (Puig de la Bellacasa, 2011, p. 91/92, emphasis in original). These questions are important because they make clear that caring is not singular or predefined; caring rather stems from the shifting of perspective.

There has been remarkable progress in the synthesis of previously disjointed approaches to research and practice related to infrastructural systems, signifying the emergence of new scientific domains. For instance, the interdisciplinary field of 'development engineering' applies human-centred design methods to create 'solutions that improve human development in low-resource settings at a scale for large positive impact' (Levine et al., 2016, p. 1396). Firmly rooted in the engineering sciences, the field makes an aspirational commitment to care in its effort to reveal and respond to the needs of marginalised groups. However, we argue that the ongoing disjoints between different types of knowledge and knowledge production between academic disciplines (e.g. from engineering, natural and social sciences, and humanities) as well as between academia and practice, continue to prevent the emergence of truly transformative approaches that would allow thinking and intervening through '*universes of care*' (Puig de la Bellacasa, 2011, p. 95). We suggest that the systemic paradigm, in thriving on ontological and epistemological pluralism, may help bridge such chasms and allow us to accept that different accounts and competing descriptions of reality coexist (Houghton, 2009).

Here, we join Puig de la Bellacasa (2017) in her argument that inequalities embedded in and resulting from the processes of infrastructuring are the (un)intentional transformation of the relational fabric of the city and can only be challenged from a position of ethical, political and affective practices of care as actively intervening and being present in the world. However, there are multiple hurdles to actualising affective scholarship or practice for infrastructuring. For instance, regardless of the many contributions that question and argue against its principles, the scientific method continues to persist in studies of infrastructuring through a perpetuated argument for affect-free research. The critical distance engendered in scholarly work, but also most work in industry, acts to transform '*the affective charge of things*' (Puig de la Bellacasa, 2011, p. 99). Although clearly entangled with research practices across the humanities, engineering, natural and social sciences, affective practices, including the display of or reporting on affect, continue to be frowned upon (de Sousa Santos, 1997). Yet, this objectification of knowledge, in the words of Despret (2004, p. 131), 'does not give us a more objective world, it just gives us a world "without us", and therefore without "them"'. It makes infrastructuring research, and ultimately, practice, careless. We echo de Sousa Santos (1997) in arguing that we need to replace the prevailing paradigm of critical distance in research (and practice) with that of critical proximity.

In closing this volume, we ask if infrastructuring as the practices of planning, implementing and maintaining infrastructural configurations can grow from an 'ethics of care … based on the perception that we are embedded in a web of complex relationships in which personal actions have consequences for more than ourselves and our kin' (Puig de la Bellacasa, 2010, p. 160). Our physical survival, as a species, depends on the reconfiguration of our relations with the collective and the environment, through infrastructures that are essentially technologies of resource extraction and distribution. What if we enacted infrastructuring with care? What if interventions into infrastructural configurations and entanglements generated care? If and how infrastructuring can act to transform such configurations and entanglements towards greater sustainability is, we argue, fundamentally an ethical question. We propose that if infrastructuring is to become sustainable as a transformative process, it must be aligned with the ethico-political position of caring.

Acknowledgements

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