

Introduction

Let us begin with one of the basic systems that enable life: the water system. Depending on who you are and where you are, the water system will be different. Billions of people every day access water through a complex network of pipes and filters and pumps, often connected to a centralized system of treatment plants and aquifers. For too many people, the system for providing water is inadequate, expensive, unsafe and unreliable, but it is still a system – even if it involves a family member taking buckets down to the river or a well.

We build, rebuild, repurpose and reimagine these water systems, and we do the same with other systems, such as those providing food, housing, healthcare, education, energy, waste disposal and so on. We do this because we rely on these systems. We rely on them not just to live, but in order to be able to act.

Philosophers call the capacity to act our ‘*agency*’. The first major argument of this book is that our agency is realized in systems we produce and reproduce. Being able to drink or bathe requires systems that provide water. The ability to cook requires systems that provide food, and often systems that provide fuel, stoves and water. The capacity to walk down the road does not just reside in our bodies. It is realized also in the roads we use when we walk down the road. These very roads also require further systems that produce and maintain them. This reliance on systems applies to most of the actions we take on a daily basis. We call all of the systems in which

human agency is realized – from the body to electrical grid – *reliance systems*.¹

You don't make your own reliance systems

Reliance systems are almost always collectively produced, meaning they are rarely provided solely by one person. For example, some of us build our own homes. Some of us grow our own food. Others have solar panels that generate more power than they consume. But even if you live on a farm, or in a self-built home, and so are more involved in producing reliance systems than those who do not live in these ways, this does not mean you made everything you used to build those systems.

After all, even if you built your house, did you harvest and mill the timber? Did you cast the toilets and construct the wind turbines? Did you mine the ore? If you live with a septic tank system instead of a sewer, did you dig the hole and design and construct the lining? Did you learn everything you needed to learn to accomplish these things just from figuring it out, or did you learn it from a family member? Or from books? Or from a school or an apprenticeship programme?

Even in communities where homes are 'self-built' and core reliance systems such as sewerage and water are hard to find, people don't entirely self-provision. Informal settlements are generally collectively built, with complex networks and markets for providing building materials. They too engage larger reliance systems for energy and communication, for food provision, for water and sanitation.² In short, people do not self-provision the reliance systems that give us our capacities. Reliance systems are instead collectively provisioned.

By collective we don't mean communal, or state-run, or any particular institutional form. You may be provisioned by your neighbour, your tribe, your local or national government, or by a local, regional or multinational corporation. As we will explain in Chapter 2, we explicitly argue against

associating ‘collective’ with any scale (i.e. local or regional or national) or any type of institutions (state, for-profit, non-profit). By collective we simply mean non-individualistic, bigger than individuals or even households. No matter how independent-minded a person may be, no matter how hard someone works, how much money they make or have, how able or capable they may be, their capacities are produced and reproduced collectively.³ This isn’t meant as a polemical statement, even if many will take it as one. It is simply meant as an important observation of how things actually operate.

Prioritizing reliance systems

If we accept that our agency is realized in reliance systems, and that most reliance systems are collectively produced for most people, we can start to examine the ways in which these systems bind us together. We may or may not enjoy talking to our neighbour, but collective provisioning of reliance systems is *why we have to*. This is true whether things are working or not, whether reliance systems are available to everyone or if some people are cut off, whether some are being exploited, or whether we are providing reliance systems in ways that stay within safe ecosystem limits.

Furthermore, the production and reproduction of reliance systems is not something that only happens in a distant factory or through a minority with specialized skills. To differing degrees depending on a wide range of factors, we are all involved, whether we realize it or not, in the processes by which reliance systems are produced and reproduced. Only at the cost of losing almost all our agency can we escape our *individual* and *collective* roles in the production of reliance systems.

Most reliance systems fit into a simpler term that has become more and more important in recent years: infrastructure. To some, this may mean that they do not belong

at the centre of an interesting or important politics. We need the trains to run on time and the water to be clean, but ‘real politics’ is supposedly about rights and power, sovereignty and global justice, markets and solidarity. Questions about infrastructure are important, but they are often seen as downstream from these issues, or as an input into supposedly more important things.⁴

Yet as a growing chorus of activists, scholars and even politicians are beginning to understand, infrastructure is both long overdue for deeper political attention, and inherently political.⁵ In a 2016 essay, the geographer Deb Cowen asks a vital question:

Could repairing infrastructure be a means of repairing political life more broadly? ... Infrastructure is necessary but the violence it enacts is not. Infrastructure enables all manner of things, and it can foster transformation as well as reproduction.⁶

Cowen is not the only scholar to chronicle how large-scale physical infrastructure, intricate social and legal infrastructure, complex logistics and supply chains, and myriad other components of material life – components of the larger set of structures we call reliance systems – have been at the centre of horrifyingly exploitative and unsustainable practices. Scholars such as Malini Ranganathan, Sapna Doshi, Rosalind Fredericks and many others have shown how infrastructure has been used to produce exploitation and corruption, power grabs and oppression, colonial settlement and racialized domination.⁷ Whether it is water systems in Flint or oil pipelines in the Dakotas, the electrical grid in India or food systems in Latin America, virtually every system that enables action and sustains life can *and has been* used to exploit, dominate or oppress.

Reliance systems are also often the source of outsized promises, of imaginations of modernity, progress and development. In their book *The Promise of Infrastructure*, the

anthropologists Nikhil Anand, Akhil Gupta and Hannah Appel argue that

On the one hand, governments and corporations point to infrastructural investment as a source of jobs, market access, capital accumulation, and public provision and safety. On the other hand, communities worldwide face ongoing problems of service delivery, ruination, and abandonment, and they use infrastructure as a site both to make and contest political claims. As the black cities of Michigan or the rubble in Palestine forcefully show, the material and political lives of infrastructure frequently undermine narratives of technological progress, liberal equality, and economic growth, revealing fragile and often violent relations between people, things, and the institutions that govern or provision them.⁸

Yet as Cowen herself points out, these systems can be transformative. In the same essay, she quotes the Ojibwe environmental and political activist Winona LaDuke in explaining her objection to the Dakota Access Pipeline Project, a massive set of pipelines designed to transport shale oil extracted in the Dakotas across the midwestern United States. LaDuke is clear that she is not opposed to pipelines, but simply to *these* pipelines. If the pipelines were being used to carry clean water to people in Flint, whose struggle with lead-tainted water is global news, or to shore up inadequate water and sewerage systems on many Native American reservations, it would be a different story.

The second major argument of this book is that the collective production of reliance systems must be seen as a primary purpose of politics. We use the term ‘reliance systems’ instead of infrastructure because it makes a more explicit connection between material systems and human agency, but otherwise we find common cause with many such as Cowen who see our political future as rooted in debates about these systems.⁹ After all, human agency – the capacity to live one’s life – is a matter of core political importance. It isn’t enough just to

recognize the link between reliance systems and agency, or to recognize the double-edged nature of these systems. If we are to produce a healthier politics, Cowen's first question, about whether reliance systems should be the centre of politics, must be answered, 'Yes.'

From reliance systems to the spatial contract

We call the politics of this relationship between collectively provisioned systems and human agency the *spatial contract*.¹⁰ A spatial contract is an informal or formal agreement governing the production and reproduction of reliance systems. Because these systems enable us to act, the spatial contract is a circular process – the capacities produced by these systems in turn are used to produce and reproduce these system.

There is no single spatial contract, only spatial contracts. Spatial contracts are geographically distinct: there is a spatial contract for transit in Detroit, there is a spatial contract for heat in Malmö, one for housing in Delhi and for telecommunications in Lagos. They are also historically distinct, and have existed for as long as human beings have laboured collectively in some form to produce basic systems. As we work to make clear in Chapter 2, spatial contracts also differ from system to system. Water is not heating, which is not housing, which is not telecommunications.

Our goal in naming spatial contract(s) is to draw attention to them, so that we can better understand them and ultimately build a principled politics around them. The quality of any given spatial contract depends on the terms of the deal. As we explain in more detail in Chapter 1, whether a spatial contract is healthy depends on certain principles. Is a spatial contract producing working and accessible reliance systems? Does it produce the types of capacities it is meant to produce? Is it making the reliance systems stronger? Is the spatial contract exploitative? Are the terms of the deal transparent to all parties? Is it operating within safe ecosystem limits?

This book is an attempt to see politics through the lens of spatial contracts, and to imagine ways to build healthier spatial contracts than those that currently exist in most places. As with any politics, the politics of the spatial contract must include space for resistance and contestation, protest and critical inquiry. The spatial contract must not only create capacities for expressing indignation and challenging the powerful; it must also create capacities for realizing one's more subjective goals, for leisure and fun, for art and aesthetic creation.¹¹ By focusing on the systems that enable human action, we orient the spatial contract around a *positive* politics of human capacities.

If the politics of the spatial contract is a politics of the provisioning of human agency, then this politics requires the adoption of a broad understanding of what it means for members of communities to be political. As many political theorists have argued, politics goes beyond the formal activity of voting or legislating or protesting, and includes everything from informal debates and discussions to practices of consumption and the mundane activities of everyday life.¹²

Why a spatial contract?

The term 'spatial contract' is a reference to one of the best-known concepts in Western political thought: the social contract. The philosophical notion of the social contract, which goes back at least to Thomas Hobbes, is a justification of political authority. The social contract understood in this tradition provides the moral and rational basis for a person to submit to governance by other persons.¹³ The animating idea of the philosophical notion of the social contract is that each individual is naturally free, and so ought to have a say about whether they are subject to any form of political domination. Consent to domination is supposed to make that domination morally unproblematic – at least so long as it does not exceed the terms of the agreement. When we extend this idea

to a group of people consenting to being governed by some institution, we then have a social contract. In theory, a social contract is a necessary, and according to some, a sufficient condition for any legitimate political order.

Another contemporary use of the term ‘social contract’ is rooted in mid-twentieth-century American labour relations. This approach focused on the ongoing conflict between capital – usually the owners of major corporations – and labour, primarily unions representing workers. The social contract, conceived this way, did not mean that capital and labour set aside their differences during this period, but instead that they developed an informal agreement that would produce labour peace. During this era wages rose, economic growth was consistent,¹⁴ and the United States developed a modern welfare state and saw major investment by the federal government in highways, mortgages and the infrastructure of suburbanization. This in turn helped to vault vast numbers of working-class white Americans into the middle class. This economic form of social contract was replicated across post-war Europe in different ways and to different degrees.

While very different, both of these notions of the social contract are fundamentally about negotiation and settlement, about effective agreements, both informal and formal. Neither tradition of the social contract, however, has been without major flaws and conflicts. Both struggle with issues of historical and geographical specificity, but in opposite ways. Both struggle with long legacies of colonialism, racism and sexism.

The philosophical notion of the social contract seems to require explicit, informed consent to the authority of not only the current government but also the whole existing constitutional order. But does anyone give something like informed consent to the political order in which they find themselves? And what is it to consent to the current government when one votes or protests against that government and its policies?¹⁵ Social contract theory on its own can be

abstract, dehistoricized and ageographical (i.e. utopian in the sense of ‘nowhere’). This abstraction, dehistoricization and elimination of geographical specificity in turn allows the philosophical notion of the social contract to serve as a rationalization, or worse justification, of the actions of imperialistic, colonizing, property-owning European men.¹⁶

The American economic form of social contract was similarly flawed. Despite its widespread adoption in Europe, it is a very historically and geographically specific model.¹⁷ Even more critically, the social contract between labour and capital in the US was tainted by its deeply racist and sexist foundations. African Americans, Latinx Americans and other racialized groups were largely excluded from the social contract, both politically and in terms of benefits. Both the US and European models depended on centuries of brutally violent colonialism.

On these grounds alone we have reason to move past the social contract tradition. Our notion of the spatial contract focuses specifically on developing a more historically, geographically and materially grounded politics, avoiding both philosophical abstraction and the fixation on the generalized economic programme of the post-war North Atlantic. Rather than ignore or rationalize inequalities of different kinds, as we explain in more detail in Chapter 4, our notion of the spatial contract explicitly confronts questions of exploitation and access.

What we do retain from the social contract tradition is the focus on formal and informal agreements as the basis for politics. This is something we have in common with the many contemporary thinkers from different political perspectives who call for a new social contract, or new systems of deliberative democracy.¹⁸ These calls come in the face of growing inequality, rising insecurity, ecological crises, pessimism about democracy and a host of other contemporary problems. For example, Jane Lubchenco, the former president of the American Association for the Advancement of Science, has called for a specific new social contract between

scientists and society as part of meeting twenty-first-century environmental challenges.¹⁹ The National Economic and Social Rights Initiative in the United States issued a 2018 call for a new social contract to target inequality that specifically examines local, small-scale and often community-based institutions.²⁰ In the business community, calls for a new social contract are made in the pages of the *Financial Times* or the conference rooms of the World Economic Forum in Davos.²¹ They are often rooted in the specific economic challenges of the digital age – the ‘gig economy’, automation – or emerge from the social and political challenges of Big Data, privacy, etc. Other versions specifically attempt to address the growing power of corporations, arguing for a new social contract that has three parties – citizens, the state and corporations – in many ways creating a hybrid between the two above understandings.²²

Other approaches to new social contracts are closer to ours. For example, a group of economists, whose focus is on what they call the ‘Foundational Economy’, argue specifically for more attention to be paid to the economies we rely on – health and care, electricity and water, the often overlooked ‘mundane’ economies that we need to survive but that aren’t seen to drive competitive economies.²³ In a series of publications, foundational economists have shown both how big and how important the foundational economy is, and how desperately we need a new approach to the political economy of these vital societal functions.²⁴ As foundational economists are a diverse bunch, their specific political approach varies, with some focused on more traditional citizen–state relations, and others taking a more multi-sectoral approach.

While drawing inspiration from many others who also embrace the importance of negotiating agreements as the basic architecture of good politics, we differ in one important way. Placing reliance systems at the heart of a new social contract demands a contract that is not only social or economic in nature. It must also be material, rooted in the actual systems that we rely upon to act. This material nature of any

new social contract is one of the reasons we term these politics the spatial contract.

Why a *spatial* contract?

We use the term ‘spatial contract’, as opposed to ‘new social contract’, to specifically combine the social and material nature of these politics.²⁵ This accomplishes three important and interrelated things. First, the ‘spatial’ in spatial contract signals our intent to develop a political framework that starts with the particular systems as they are found in the actual world, in a particular time and place, rather than with a preconceived political solution. As we have stated previously, reliance systems are not all the same. River basins, power grids, sewerage systems and transport networks must be grappled with on their own terms. Moreover, the same reliance system can be very different in different places. Housing in Delhi is not housing in Glasgow. Construction materials, supply chains, cultures of habitation, production techniques and more are diverse. Thinking in terms of a spatial contract, rather than simply a social contract, forces us to see both these material and geographical differences.

Second, recognizing the inherent spatiality of reliance systems helps us to see these systems in the actual world. As we develop more fully in Chapter 3, most reliance systems manifest themselves in the cities and towns and villages of varying sizes in which the overwhelming majority of people live. Not only are reliance systems found in these human settlements, in many ways our settlements *are* intricate assemblages of reliance systems. Reliance systems and human settlements are inseparable, and this point is critical for any potential new politics of reliance systems.

Finally, these two facts – the material and geographical specificity of each system, and the inherent relationship between systems and settlements – make it clear that a one-size-fits-all politics will not suffice. There is no generalized

political solution to the challenges of producing reliance systems. In one country, the nationalization of the energy system may be a good idea, whereas the nationalization of the transport system might be disastrous. Similarly, the privatization of the energy system in one city may be a good idea, but the privatization of the energy system in another city may be a disaster. A system of deliberative democracy in a low-density city with poor transit will be different than one in a high-density city with good transit. The material systems must be animating features of any new politics, not simply a postscript. Building a healthier spatial contract starts with a detailed understanding of the specific system in the specific place at a specific moment in history.

As we hope is clear at this point, our understanding of the spatial contract aims to resist certain totalizing political and economic ideologies. This includes both normative views of how to solve the world's problems and critical viewpoints that claim to identify the primary source of these problems. Both normative and critical ideologies have a tendency to fixate on certain objects, rather than approaching the system in question from the ground up.

This fixation takes three common forms, which we discuss in far more detail in Chapter 2. The first is the tendency to draw political lines around idealized institutions: the state or the market, the commons or private property, the individual or the collective. At other times it is a particular scale: the local or the global, the regional or the national. Sometimes it is to assume that a certain mode of production is the only way to advance human agency. What this reflects is a popular tendency to assume that certain institutions or certain scales or modes of production are inherently better at governing *all* systems in *all* places.²⁶ Totalizing ideologies can be extremely powerful – and far too tempting – but improving the actual politics of production and reproduction of reliance systems requires a more flexible approach.

One way of thinking about the limits of generalized political solutions is what economists Ben Fine, Kate Bayliss and

Mary Robertson call ‘horizontal’ approaches to systems. Horizontal approaches can be anything from a set of political economic frameworks (capitalism, socialism, neoliberalism, etc.) to cross-cutting social theories. These approaches are horizontal because they tend to apply their ideologies *across* all or most systems.

Fine, Bayliss and Robertson instead advocate for more ‘vertical’ approaches. A vertical approach examines systems

by looking at the full chain of activities underpinning the material production and cultural significance of different goods. As such, the approach avoids over-generalising the relevance of particular factors, instead recognising that any instance of consumption is shaped by a shifting array of context specific determinants.²⁷

This approach, known as ‘systems of provision’, is central to our understanding of spatial contracts. It forces us to recognize that any given spatial contract is unique, and forces us to determine which institution or scale is best for a reliance system by analysing the system itself.

Three interlocking frameworks

In the pages that follow, we work to further develop and explain the core ideas in our understanding of the spatial contract. Chapter 1 delves deeper into the relationship between reliance systems and agency, explaining in more detail how and why reliance systems enable us to act – and how this realizes a meaningful form of human freedom. This chapter also sets down some other important groundwork for the spatial contract. We explain why we believe in a political approach rooted in the idea of a contract, as opposed to other potential approaches focused on collective ownership, a right to the city, or deliberative democracy. We then explain what we mean by a healthy spatial contract, rooting it in six principles.

Chapter 2 is about learning to ‘see like a system’, stripping away ideological approaches to systems which may fixate on a particular institutional form, sector, scale or so on. We build a framework that highlights how each system is unique, part of our emphasis on system-centred politics, not politics-centred systems. We build this analytical framework using ideas from systems of provisions thinking, socio-technical system research, heterodox and neoclassical economics. We develop a partial set of questions and criteria for analysing different systems.

If Chapter 2 is a framework for pulling apart reliance systems and ‘seeing like a system’, Chapter 3 is about how and where they come together – in human settlements. ‘Seeing like a settlement’ is the first step in overcoming the very real political and cultural divisions around which people often assume that systems are divided: between the urban and rural, city and suburb, formal and informal. These political barriers are just as harmful to hopes for a healthier spatial contract as the ideologies discussed in Chapter 2.

Chapter 4 focuses on exploitation and inequality in the provision of reliance systems. We cannot propose a new politics of any kind – let alone a new politics centred in reliance systems – that is not based in acknowledging and overcoming the ways in which much of the world has either been denied access to adequate reliance systems or has had their reliance upon these systems exploited in different ways. Modifying Iris Marion Young’s five faces of oppression, we discuss how a healthy spatial contract must reckon with the forms of exploitation and oppression that are so prevalent across the globe.

In the conclusion, we briefly illustrate how using the spatial contract lens informs two important discussions in the contemporary world: the Green New Deal, a vision for combating climate change and economic inequality through a massive retrofit of energy and related systems, and Universal Basic Income, a set of proposals to provide a minimum salary to all persons. We also acknowledge the important and numerous

limitations of the book, limitations which point the way towards future interventions in the development of the spatial contract as a framework.

Seen together, this book offers three interlocking frameworks for a new politics of reliance systems. It is an intellectual framework which forces us to see that human agency depends upon material systems that human beings collectively produce and reproduce. It is an analytical framework which provides tools to understand the material and geographical specificity of the production of reliance systems. Finally, it is a political framework which proposes principles that should guide the production of reliance systems.

At the heart of this political argument is a belief that spatial contracts – the relationships between our capacity to act and the systems that realize those capacities – must increasingly become the centre of our politics. Collective provisioning of reliance systems is a fact, not a normative assumption or an ideological stance. As we stated at the outset, one may or may not want to talk to a neighbour or fellow citizen or fellow user of a system, but this is why we have to.

Notes

- 1 See M. N. Smith, 'Reliance structures: how urban public policy shapes human agency', in D. Boonin (ed.), *The Palgrave Handbook of Philosophy and Public Policy* (Basingstoke: Palgrave Macmillan, 2018), pp. 809–25. We use the term 'reliance systems' as opposed to infrastructure or other possible terms to emphasize the way in which the concept of reliance systems connects socio-technical systems to human action and agency. We explain reliance systems in more detail throughout this chapter and in Chapter 1, and further connect our work to the growing 'infrastructural turn' in the social sciences and public policy throughout the text.
- 2 See, for instance, recent work by Teresa Caldeira, AbdouMalik Simone and Edgar Pieterse for a clearer understanding of the complex and intertwined collective economies that produce

- self-built housing in cities in the Global South. T. P. Caldeira, 'Peripheral urbanization: autoconstruction, transversal logics, and politics in cities of the global south', *Environment and Planning D: Society and Space* 35.1 (2017), pp. 3–20; A. Simone and E. Pieterse, *New Urban Worlds: Inhabiting Dissonant Times* (Chichester: John Wiley & Sons, 2018).
- 3 Our notion of collectively produced reliance systems draws from many sources, but one of the most important is the vast literature on 'collective consumption', particularly the work of Jean Lojkine, Manuel Castells and Ray Paul. As explained by Ball, Lojkine's was one of two definitions of 'collective consumption', one that focused on the way in which a good was consumed, either individually or collectively (M. Ball, 'The built environment and the urban question', *Environment and Planning D: Society and Space* 4.4 [1986], pp. 447–64). Like our notion of reliance systems, Lojkine's definition of collective was expansive. In addition to parks, schools, hospitals, roads, public spaces – collective consumption owes its theoretical origins to public goods theory in economics – Lojkine saw housing as collective regardless of ownership or use, due to its embeddedness in the city, an object that could only be consumed collectively. But unlike the early collective consumptionists, our approach argues that it is not the act of consumption that is necessarily collective, but the act of production. Collective consumption in this vein should be the act of consuming necessary goods that must be collectively produced. As While, Jonas and Gibbs point out, collective provision would be more accurate – it is irrelevant whether we consume housing individually or collectively, what matters is the fact that in an increasingly urbanized world, housing must be collectively provisioned (A. While, A. E. Jonas and D. Gibbs, 'The environment and the entrepreneurial city: searching for the urban "sustainability fix" in Manchester and Leeds', *International Journal of Urban and Regional Research* 28.3 [2004], pp. 549–69). See M. Castells and A. Sheridan, 'The urban question: a Marxist approach', *Social Structure and Social Change* 1 (1977); M. Castells, *The City and the Grassroots: A Cross-cultural Theory of Urban Social Movements* (Berkeley, CA: University of California Press, 1983); J. Lojkine, 'Marxist theory of capitalist urbanization', *Estudios Sociales Centroamericanos* 5.15 (1976), pp. 53–78;

- B. Théret, 'Collective means of consumption, capital accumulation and the urban question: conceptual problems raised by Lojkin's work', *International Journal of Urban and Regional Research* 6.3 (1982), pp. 345–71.
- 4 As the political scientist Warren Magnusson points out, one of the grand challenges for reimagining politics is what he calls the 'ontology of the political', i.e. what people think constitutes politics. Since the days of the Greeks, politics has been increasingly seen through the lens of sovereignty and statecraft, of power and rule. For many people, politics means political parties, the state and nation, and anything else is either seen as a small piece of this larger whole, or simply marginalized by the obsessive focus on grander, 'high' politics. W. Magnussen, 'The symbiosis of the urban and the political', *International Journal of Urban and Regional Research* 38.5 (2014), pp. 1561–75 (p. 1562).
 - 5 Thirty-plus years of scholarship have made this clear. For an excellent review, see S. Wakefield, 'Infrastructures of liberal life: from modernity and progress to resilience and ruins', *Geography Compass* 12.7 (2018).
 - 6 D. Cowen, 'Infrastructures of empire and resistance', 25 January 2017, <https://www.versobooks.com/blogs/3067-infrastructures-of-empire-and-resistance> (accessed 17 October 2019).
 - 7 D. Cowen, *The Deadly Life of Logistics: Mapping Violence in Global Trade* (Minneapolis, MN: University of Minnesota Press, 2014); S. Doshi and M. Ranganathan, 'Contesting the unethical city: land dispossession and corruption narratives in urban India', *Annals of the American Association of Geographers* 107.1 (2017), pp. 183–99; R. Fredericks, *Garbage Citizenship: Vital Infrastructures of Labor in Dakar, Senegal* (Durham, NC: Duke University Press, 2018).
 - 8 N. Anand, A. Gupta and H. Appel (eds), *The Promise of Infrastructure* (Durham, NC: Duke University Press, 2018), p. 3.
 - 9 See also A. Amin and N. Thrift, *Seeing like a City* (Chichester: John Wiley & Sons, 2017).
 - 10 We are not the first to use the term spatial contract, and while we differ significantly in terms of what we mean, there are some key connections to other uses. In a series of publications, the geographer, film-maker and activist Antonis Vradis uses the

term to refer to an informal political agreement, in the tradition of the social contract. But his spatial contract is a very specific understanding in post-dictatorship Athens to allow ‘a certain level of rioting and other forms of street-based political contention’ in the neighbourhood of Exarcheia, provided that it did not spill into other parts of the city. The spatial contract for Vradis is a tacit understanding emanating from the state that allows a certain period and amount of dissent in certain places and not others, in part to alleviate contradictions or specific tensions. See A. Vradis, ‘Athens’ spatial contract and the neoliberal omni-present’, in M. Mayer, C. Thörn and H. Thörn (eds), *Urban Uprisings* (Basingstoke: Palgrave Macmillan, 2016), pp. 233–51; A. Vradis, ‘Terminating the spatial contract’, *Society + Space*, 25 June 2012, <http://societyandspace.org/2012/06/25/terminating-the-spatial-contract-antonis-vradis/> (accessed 17 October 2019). New Zealander geographers Nicolas Lewis and Warren Moran envision the spatial contract as a more spatialized version of the classic social contract, that is, in terms of relations between the state and its citizens, but with connotations of the post-war social contract. They use the term to describe a breakdown in the post-war, post-colonial social contract in New Zealand that had explicitly spatial principles, including a commitment to spatial equity. This contract broke down – or was broken down – during the neoliberal era, with significant spatial effects in communities across New Zealand. See N. Lewis and W. Moran, ‘Restructuring, democracy, and geography in New Zealand’, *Environment and Planning C: Government and Policy* 16.2 (1998), pp. 127–53; see also R. A. Kearns, N. Lewis, T. McCreanor and K. Witten, ‘The status quo is not an option: community impacts of school closure in South Taranaki, New Zealand’, *Journal of Rural Studies* 25.1 (2009), pp. 131–40 for this interpretation of Lewis and Moran. Housing scholars Rowland Atkinson and Sarah Blandy use the term in a way that also describes spatial inequalities, but with a different set of institutional actors at the centre. For Atkinson and Blandy, the spatial contract is an informal politics binding neighbourhoods of different social characteristics, mediated by central and local states, which is threatened by gating and the rise of new forms of income-based segregation. See R. Atkinson and S. Blandy, ‘Introduction: international perspectives on the

new enclavism and the rise of gated communities', *Housing Studies* 20.2 (2005), pp. 177–86. Quite clearly, all versions of both the spatial and social contract see the contract as both informal and negotiated. While our spatial contract is certainly about institutional relations, we don't focus on any particular sets of institutions, nor on any geographical scale or period in history. Perhaps the most critical aspect we share with prior uses is with Vradis's depiction of a spatial contract that is not necessarily a good thing. As we discuss above, for us the spatial contract is the specific politics of both the virtuous and vicious circle, about the way in which agency derived from reliance systems is used – for good or evil, for sustaining or exploiting, for inclusion or exclusion. The spatial contract is not inherently good, unlike the latter two uses above. The goal is what we call a healthier spatial contract, that is, one that is more virtuous than vicious in its circular nature.

- 11 The anthropologist James Ferguson asks 'What if politics is really not about expressing indignation or denouncing the powerful? What if it is, instead, about getting what you want?' (J. Ferguson, 'The uses of neoliberalism', *Antipode* 41 [2010], p. 167, quoted in Simone and Pieterse, *New Urban Worlds*, p. 56). The central project in political theory has, since its inception and without interruption, been the articulation and defence of ideal political orders. We can trace this tradition from Plato's *kallipolis* to John Rawls's two principles of justice and up until the present day. Nonetheless, political activity as it is often realized 'on the ground' takes the form of protest far more often than proposal. It is this feature of politics to which Ferguson objects.
- 12 H. Arendt, *The Human Condition* (Chicago: University of Chicago Press, 1958); J. Habermas, *The Structural Transformation of the Public Sphere*, trans. T. Berger and F. Lawrence (Cambridge, MA: MIT Press, 1989 [1962]); S. M. Okin, *Justice, Gender and the Family*, 3rd edn (New York: Basic Books, 1991).
- 13 The absence of a social contract is what Hobbes referred to as the 'state of nature', whereby, in his famous words, lives were 'solitary, poor, nasty, brutish and short'. Thomas Hobbes, *Leviathan*, ed. E. Curley (Indianapolis, IN: Hackett, 1994 [1651]), 13.9.

- 14 In the terms of Thomas Piketty, this was a period notable for having a smaller ratio between the returns to capital and the returns to labour. T. Piketty, *Capital in the Twenty-First Century* (Cambridge, MA: Harvard University Press, 2014).
- 15 The model of the social contract also assumes independence as our natural condition. The point of the social contract is to preserve and expand this independence through legitimate government. But are human beings really essentially independent creatures, since, after all, we appear to be far more like Aristotle's *zoon politikon* – political animals – than Locke's individuals in the state of nature?
- 16 For more, see C. Mills, *The Racial Contract* (Ithaca, NY: Cornell University Press, 1997); C. Pateman, *The Sexual Contract* (Stanford, CA: Stanford University Press, 1989); and C. Pateman and C. Mills, *Contract and Domination* (Stanford, CA: Polity Press, 2007).
- 17 Too often, the North Atlantic post-war experience is used uncritically as a model for development in the Global South. See, for example, J. Robinson, 'Global and world cities: a view from off the map', *International Journal of Urban and Regional Research* 26.3 (2002), pp. 531–54.
- 18 We also share a good deal in common with political economists and political theorists striving for justice, a right to the city, or what Peggy Kohn calls the 'urban commonwealth' (M. Kohn, *The Death and Life of the Urban Commonwealth* [Oxford: Oxford University Press, 2016]). We are fundamentally motivated by the same injustices, but see more potential in repurposing social contract ideas than other potential pathways. We explain in more detail in Chapter 1 why we favour a contract approach, as opposed to one focused on justice, rights or forms of democracy.
- 19 J. Lubchenco, 'Entering the century of the environment: a new social contract for science', *Science* 279.5350 (1998), pp. 491–7; K. O'Brien, B. Hayward and F. Berkes, 'Rethinking social contracts: building resilience in a changing climate', *Ecology and Society* 14.2 (2009), <http://www.ecologyandsociety.org/vol14/iss2/art12/> (accessed 17 October 2019).
- 20 'NESRI launches a new social contract promoting bold and transformative community-driven solutions to inequity', <https://>

www.nesri.org/news/2018/04/nesri-launches-a-new-social-contract (accessed 17 October 2019).

- 21 J. Hoffer Gittell and T. Kochan, 'A new social contract', Stanford University Press blog, 3 August 2016, <http://stanfordpress.typepad.com/blog/2016/08/a-new-social-contract.html> (accessed 17 October 2019); S. Burrow, 'It's time for a new social contract', World Economic Forum, 17 January 2018, <https://www.weforum.org/agenda/2018/01/time-new-social-contract-inequality-work-sharan-burrow/> (accessed 17 October 2019); K. Keith, 'We need to build a new social contract for the digital age', *The Guardian*, 4 April 2018, <https://www.theguardian.com/commentisfree/2018/apr/04/we-need-to-build-a-new-social-contract-for-the-digital-age> (accessed 17 October 2019).
- 22 A. White, 'Is it time to rewrite the social contract?', Business for Social Responsibility, April 2007, <http://www.tellus.org/pub/Is%20It%20Time%20to%20Rewrite%20the%20Social%20Contract.pdf> (accessed 17 October 2019).
- 23 The foundational economy is very similar to how we define and imagine reliance systems, and some of our earliest thinking on this issue is included as a working paper on the foundational economy website. See S. Hall and A. Schafran, 'From foundational economics and the grounded city to foundational urban systems', Foundational Economy Working Series paper no. 3, May 2017, <https://foundationaleconomycom.files.wordpress.com/2017/01/2foundational-urban-systems-for-mundane-economy-3-0213.pdf> (accessed 17 October 2019).
- 24 Foundational Economy Collective, *Foundational Economy. The Infrastructure of Everyday Life* (Manchester: Manchester University Press, 2019).
- 25 We do not use the term 'spatial' here to imply that the spatial is a substitute for the social in the larger sense, nor to suggest any specific spatial relationship between reliance systems and agency. The spatial is meant to give greater material, geographical and historical specificity to the contracts, but they remain inherently social. Geographers may find it surprising that a book with spatial in the title written by two geographers does not include spatial analysis. Spatial analysis is vital to understanding any given spatial contract, but developing a framework for this remains outside the purview of this book.

- 26 A. Schafran, 'Debating urban studies in 23 steps', *City* 18.3 (2014), pp. 321–30.
- 27 B. Fine, K. Bayliss and M. Robertson, 'The systems of provision approach to understanding consumption', in Olga Kravets, Pauline Maclaran, Steven Miles and Alladi Venkatesh (eds), *The SAGE Handbook of Consumer Culture* (London: Sage, 2018), pp. 27–40.