Infrastructural Reparations: Reimagining Reparative Justice in Haiti and Puerto Rico

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Introduction

Infrastructural citizenship – the idea that there is a political relationship between people and those infrastructures that shape their lives, and that they, in turn, shape – is a key area of inquiry in contemporary infrastructure studies (Lemanski, 2019, 2020). For some groups the promise of infrastructural citizenship as an everyday claim upon the state is far more precarious than others: not only is access to infrastructure uncertain, but also the underlying promise of a functioning state and access to citizenship remains in question. Especially for those living in the wake of slavery, the violence and negation of the afterlives of slavery demands more than infrastructural repair to empower ‘living blackness’ within the ‘unfinished project of emancipation’ (Sharpe, 2016: 2, 5). This chapter will instead foreground infrastructural reparations, as a form of what Sharpe calls ‘wake work’ as a kind of ‘imagining otherwise’ and ‘hard insisting’ (Sharpe, 2016: 17–19, original emphasis). Reimagining infrastructural reparations calls into question the violence of anti-Blackness that underlies the ‘North Atlantic universals’ (Trouillot, 2021: 142) of the citizen, the state, the human, determining who has the right to live and who will be left to die. That is to say, insofar as White supremacy and coloniality exploit and dispose of Black bodies as infrastructure for White self-reproduction, the evident ideals of state, citizenship and infrastructural citizenship must themselves be pried open as analytical fictions through insistent projects of reparative infrastructural justice.
Infrastructure has an inherently uneven capacity to connect and to provide for some people certain goods and particular flows of information, while at the same time disenfranchising and dehumanizing other people through the very processes of (dis)connecting elements of the urban condition (including urbanization that extends beyond cities and encompasses offshore islands such as those in the Caribbean). Such (dis)connections are the subject of various tactics not simply of repair, but of infrastructural reparations that exceed the universal framework of states and citizenship. Reparative infrastructural justice insists on overturning the violence of the infrastructural dispositions that have long upheld White supremacy by dehumanizing Black, Brown and Indigenous people, and other people of colour. Existing studies of infrastructural citizenship have focused on physical infrastructure such as oil pipelines (Appel, 2019), water systems (De Coss-Corzo, 2021) and energy grids (Tormos-Aponte et al, 2021), as well as the labour-intensive reproductive work of care, social reproduction and ‘people as infrastructure’ (Simone, 2004). The design, the governance, the promise and the failings of infrastructure are all determined by, and determinative of, social relations of power and political agency (Anand et al, 2018). Yet beyond these political struggles to repair failing infrastructure, I seek to recognize a radical politics of infrastructural reparations that imagines infrastructure otherwise by disrupting or appropriating infrastructural (dis)connections.

As Anand (2015, 2017), Gandy (2008, 2014) and others have argued, the cities of the Global South are sites of fractured modernity, where infrastructure, risk and disease are distributed unequally, and where class and racial inequality follow lines of uneven water and sanitation access, and uneven access to energy grids and communications networks. There is an evident coloniality of uneven infrastructure that reproduces the global ‘color line’, as W.E.B. Dubois called it, i.e. ‘the relation of the darker to the lighter races of men in Asia and Africa, in America and the islands of the sea’ (Dubois, 1903: 10). The colour line is also an infrastructural chasm that divides the descendants of the White settler slaveholding regimes from those ‘wretched of the earth’ (Fanon, 1990) who were subjected to the system of slavery and now inhabit the ‘underdeveloped’ ‘shanty towns’ and ‘slums’ of the Global South as well as the ghettos, exurbs, prisons and migrant detention centres of the Global North (Wynter, 2003). The major global provision of infrastructure brings oil, water, gas and energy flowing into the privileged spaces and elite neighbourhoods of the Global North, the seats of colonial power, the imperial metropoles, the core of the world economy, and the preferred ‘liveable cities’ and suburbs of White gentrification. The same systems of infrastructural provision simultaneously extract from, pollute and foreshorten life in the global peripheries and racialized spaces of the disprivileged: the colonized, ‘dependent’, ‘underdeveloped’ (Rodney, [1972] 2018) peripheries and the brownfield, fenceline, sacrifice zones
foisted on Black, Brown and Indigenous neighbourhoods. These two systems are entangled and mutually constitutive, thus we cannot speak of infrastructure in cities of North America without considering their ‘global shadows’ (Ferguson, 2006) – shadows that may also fall closer to home in the racialized dispossession that punctures spaces of accumulation with zones of extraction and disposability. In the ‘otherwise modern’ AlterNative Americas where ‘North Atlantic universals’ do not hold (Trouillot, 2021: 142), the study of infrastructural citizenship remains incomplete if it does not grapple with the coloniality of citizenship, and the racialized populations relegated to second-class citizenship or non-citizenship and who hold a different relationship to infrastructural citizenship. Those with no claims upon the state to provide the basics of life – ‘with no state or nation to protect us, with no citizenship bound to be respected’ (Sharpe, 2016: 22) – must go beyond repair or maintenance, seeking instead infrastructural reparations and reparative justice as material conditions for living.

In addition to the contributions of radical Black thinkers such as DuBois, Rodney and Trouillot, and theorists of infrastructural repair in the Global South like Anand, Gandy, Simone and de Coss-Corzo, my approach builds on theories of ‘infrastructuring’ as an active practice, along with materialist approaches to media that emphasize the material geographies and dispositions of power embedded within communication infrastructures (Star, 1999; Parks and Schwoch, 2012; Parks, 2014). I understand infrastructure, following Heather Horst, as ‘a dynamic process that is simultaneously made and unmade’ (Horst, 2013: 151) and, we could add, that simultaneously connects and disconnects various users. Infrastructuring thus involves the daily struggle for patching together missed connections or creatively appropriating that which is available (de Souza e Silva et al, 2011). Such infrastructuring takes place both as strategies of the powerful to build infrastructural futures, and as tactical interventions ‘from below’ especially within the structures of coloniality and racial capitalism. More generally, though, these active processes also involve crossing over and through multiple kinds of infrastructure. Rather than a study of one or another system, for example water or electricity alone, I seek to show their entanglements with each other, and of the physical infrastructure with the digital, the communicational, the financial and the social infrastructures of reproduction, politics and migration.

**Beyond repair: conceptualizing infrastructural reparations**

In this chapter I will reflect on some of the tactics of flexible, provisional, infrastructural reparations that have emerged in the Caribbean, drawing on my work on Haiti and Puerto Rico in the wake of slavery, colonialism and climate disaster. My studies of historical popular democratic movements
and public claim-making in Jamaica and Haiti in the 19th century (Sheller, 2000, 2012) sensitize me to the subaltern politics of contesting exclusionary citizenship regimes in the post-slavery Caribbean. Likewise, wider work on the histories of US relations of extraction with the Caribbean region (Sheller, 2003, 2014) demonstrate the exploitation of Caribbean land and people for the benefit of the Global North. While Jamaica, Haiti, Puerto Rico, the Dominican Republic and Cuba have experienced very different forms of (dis)connectivity and incorporation into the international system, differing patterns of urbanization, and varied ways of building and governing infrastructure systems, in each case there have been struggles for radical reconstruction and reparations to address the deep-seated coloniality and denial of citizenship, including infrastructural citizenship.

Infrastructure space is an active form of organizing capacities for life (and death). Physical systems for water, sewage and energy, along with communication systems such as the undersea cable network, mobile phone masts, satellite transmission and the mobile internet form what Keller Easterling calls infrastructure space. Easterling describes the ‘political character of infrastructure space’ based on ‘accidental, covert, or stubborn forms of power’ that hide in its folds (Easterling, 2016: 73; and see Parks and Starosielski, 2015; Starosielski, 2015). Uneven (dis)connectivity is a key form that such power takes, that generates creative efforts at appropriation. Infrastructure space is not mere background but takes active forms, argues Easterling, through the organization of components into dynamic mechanisms. (Dis)connection is always an ongoing active process, an activity of simultaneous connection and disconnection, that occurs within the activation of dispositions within any infrastructure space. Racialization, I suggest, is a disposition of infrastructural (dis)connectivity that is one of the fundamental bases of White supremacy, grounded in indigenous genocide, transatlantic slavery and (neo)colonial extraction.

Incomplete and failing infrastructure is a constant reminder of the uneven temporalities of infrastructural building, maintenance and repair, which are always embedded in colonial relations and racialized global economies that etch ever more deeply the lines of life and death in the Anthropocene. Nikhil Anand’s chapter on Mumbai’s water supply and hydraulic publics in The Promise of Infrastructure (Anand et al, 2018), for example, depicts how citizenship is achieved transactionally and infrastructurally, as those on the margins demand access to water. Tormos-Aponte et al (2021) show how post-disaster restoration of power grids in Puerto Rico after Hurricane Maria was driven by clientelism and political affiliations, rather than need. Patrick Bigger and Nate Millington (this volume) show how the anticipations of new infrastructures is a relation of power in regard to who designs futures: who waits and for whom? Infrastructural injustices shape times, time horizons and life cycles. There is a lack of synchronicity in the time horizons of
durability, materiality, engineering and financialization of infrastructure versus the immediate needs of living people and communities – but there is also need for a longer time horizon that acknowledges the demand for historical reparations in addition to immediate needs.

Recent studies of infrastructure have highlighted practices of maintenance and repair, and one way to think about this is in terms of a patchwork construction. In a study of workers in the water system of Mexico City, Alejandro de Coss-Corzo develops the concept of patchwork: ‘I define patchwork as a repair practice, enabled by workers’ embodied expertise … and practical knowledge … as a repair logic, adaptive and improvisational; and as a socio–material form, related both to the materiality of infrastructure and to the relations that are enabled through it’ (de Coss-Corzo, 2021: 238).

Highlighting ‘improvisation, adaptation and incrementalism’ (de Coss-Corzo, 2021: 239) within repair practices, he argues that patchwork is a logic of infrastructural adaptation that allows for the endurance of urban modernity within contexts of austerity and socio–material change. De Coss-Corzo shows that repair practices ‘are always already political, entangled with the maintenance of relations of power and inequality across different scales and among different actors, including the state, informal neighborhoods, private providers, and international experts’ (de Coss-Corzo, 2021: 243). But what if ‘modern’ urban infrastructure is not yet there? And what if there is no state agency to engage in repair, public–private partnerships are failing and international experts are not helpful?

What I will call patching, in contrast, is not a question of repair of existing infrastructure, but rather an action of attracting, stealing or ‘patching into’ a partial infrastructure to which a community is not already connected, while simultaneously patching together a state that is not functioning and forms of citizenship that do not exist. Patching is a form of appropriation that may also intersect with forms of urban violence and extortion; infrastructure, in that sense, may be beyond repair, leading instead to efforts to patch together, steal or improvise autonomous ways of sustaining life. In those places and among those people who have been most subject to infrastructural (and state) neglect and disconnection, there arises of necessity alternative means of infrastructuring from below: seizing the means of connection, patching together systems of provision, appropriating the levers of infrastructural power, whether calling on the state or escaping its grip.

Building and maintaining infrastructure requires constant physical repair, especially following the cascades of natural disaster that have become so commonplace in the human–made climate disruption that some call the Anthropocene, but also in the slower disasters of developmental abandonment and toxic ‘territories of urban relegation’ (Wacquant, 2016: 1077; see also Auyero, 2012; Auyero and Swistun, 2009). As AbdouMaliq Simone puts it in
his now classic essay on Johannesburg, South Africa, this involves not only physical infrastructure but also human infrastructure as a platform of practices:

African cities are characterized by incessantly flexible, mobile, and provisional intersections of residents that operate without clearly delineated notions of how the city is to be inhabited and used. These intersections, particularly in the last two decades, have depended on the ability of residents to engage complex combinations of objects, spaces, persons, and practices. These conjunctions become an infrastructure—a platform providing for and reproducing life in the city. (Simone, 2004: 407–8)

Building on this notion of complex combinations of objects, spaces, persons and practices, I deploy the term ‘reparations’ in a multivalent way, including the histories of racialized exclusion and infrastructural neglect—indeed denial of access to life—that demand more explicit reparative justice. This ranges from reparations for slavery to the demand for climate reparations by small island states that contributed the least to greenhouse gas emissions but suffer the worst consequences of climate change. So infrastructural reparations are concerned with not only the immediacy of day-to-day needs for survival, but also organizing life differently in the wake of historical relegation. Infrastructural reparations might involve physical objects and systems, but also reorganize (or mobilize) diverse spaces, relations and practices in reparative ways.

In the following sections I will focus on two moments and tactics of infrastructural reparations—in de Certeau’s sense (1984) as also picked up by Simone (2004)—in Caribbean cities experiencing periods of natural disaster, political conflict and states of emergency: Port-au-Prince, Haiti, after the 2010 earthquake and ongoing political turbulence since; and San Juan, Puerto Rico, caught in both the sudden disaster of Hurricane Maria in 2017 and the ongoing slow disaster of coloniality, debt and austerity. Caribbean cities have deep ties to the Global North—indeed were central in the making of Northern urbanization (Sheller, 2003, 2014)—and I would argue cannot be thought of or theorized outside of the global infrastructures of (dis)connectivity. These include the background physical infrastructure of sea lanes, air space, fossil fuel and communication infrastructures such as undersea cables and satellites (all of which are ultimately subject to US military power in the Caribbean), as well as crucial financial infrastructures and software for internet connectivity used for ‘offshoring’ various kinds of data-based service work such as the offshore banking sector, call centres or internet-based services (Freeman, 2000; Lewis, 2020).

First, using the example of physical infrastructural repair in post-earthquake Haiti, I will show how the improvised patching of infrastructure (for
water, energy and communication) was always present there, yet became ever more of a necessity in the face of infrastructural collapse and state disappearance after the shock of the 2010 earthquake. Patching infrastructure became a means of dealing with this unliveable situation of an absent state, impunity for violence, endless insecurity, and rising costs of living that in 2021 culminated in the assassination of President Jovenel Moïse and a constitutional crisis (Katz, 2013; Beckett, 2019; Johnston, 2022), which has resulted in an ongoing infrastructural collapse today. Then, building on my earlier work on the ‘infrastructuring of imagined islands’ (Sheller, 2009a, 2009b), I will consider how the emergence of ‘encrypted geographies’ in the Caribbean (Simpson, 2021; Simpson and Sheller, 2022) leverages Puerto Rico for libertarian crypto-experimentation in new financial and political infrastructures based on blockchain technology. I seek to show how the connections between physical and digital infrastructure, real and imagined states and territories, sovereignty and non-sovereignty all suggest the ways in which our theoretical imaginaries of infrastructure must extend beyond liberal discourses of universal citizenship and progressive (but failing) narratives of inclusion and humanitarian repair, and move instead towards critical practices of radical reparations and reparative justice.

**Patching together life in post-earthquake Port-au-Prince, Haiti**

Infrastructure is at one and the same time a necessity for daily life’s social reproduction and an essential institution enmeshed in the exploitation and expropriation that are constitutive of global, racial capitalism. In Port-au-Prince, Haiti – a city named after its colonial port and those who controlled it – with a population of at least 2.8 million people, there is only partial provision of public infrastructure for water, energy, transport and communication. Self-provisioning and community-based tactics to access these basic life systems were intensified by the devastating impact of the 2010 earthquake and subsequent cholera epidemic, and the evident failure of the international ‘Build Back Better’ promise of post-earthquake reconstruction, which was never realized (Katz, 2013; Beckett, 2019; Sheller, 2020). Today, a political crisis has led to a complete collapse of the urban infrastructure, which has been blockaded by armed gangs.

The structural violence of Haitian urbanization was already deeply shaped by the US Occupation of 1915–34, the Duvalier Dictatorship that followed, the suppression of democratic movements and the imposition of neoliberal structural adjustment policies, all of which displaced rural communities and drove rapid urbanization and uncontrolled growth of Port-au-Prince since the 1980s (Arthur and Dash, 1999). This left the population dwelling in hastily built shanties with no public services especially vulnerable to the
earthquake, as well as to frequent flooding, hurricanes and droughts. When the 2010 earthquake wiped out many communal water standpipes that were the sole source of water, and people were displaced to temporary tent camps, water had to be trucked in and distributed by humanitarian organizations. Often they relied on women and children to do the work of provisioning water (see Figure 5.1).

Before the earthquake many communities in Haiti had (and continue to have) no piped water provision (nor sewage treatment). The majority purchased treated potable water by the sachet or bucket, or resorted to point-of-use purification with bleach. Middle-class neighbourhoods in Port-au-Prince were served by the public agency CAMEP [Centrale Autonome Métropolitaine d’Eau Potable] and later formed public–private partnerships that provide metered water in association with the national water agency DINEPA [Direction Nationale de l’Eau Potable et de l’Assainissement]. Poorer neighbourhoods organized Komite Dlo (water committees) that worked with DINEPA and with nongovernmental organizations (NGOs) to build and maintain communal standpipes or water kiosks. The water committees collected fees from users, paying some back to the public water authority while keeping some for maintaining the system, for the committee itself, or for community projects in some cases (Sheller et al, 2013). In

Figure 5.1: Children collecting water from a humanitarian distribution centre, Port-au-Prince, Haiti, 2010

Source: Mimi Sheller
the absence of an effective state, however, such community-controlled arrangements can come to resemble something more like strong-arm extortion by gangs who in some neighbourhoods have taken over policing functions. Patching together the promise of infrastructure thus draws on what Chelsey Kivland (2020) calls the ‘street sovereignty’ of the ‘makeshift state in urban Haiti’.

The latest crisis of reproduction of civil society and infrastructural citizenship in Haiti is marked by reverberating political crises, urban ensekirite [insecurity], and rampant kidnapping, leading finally to the assassination of President Jovenel Moïse in July 2021, followed by ongoing murky debates over the legitimacy of the current government led by Prime Minister Ariel Henry (Johnston, 2022). Today, some areas have access to the electric grid, but service is irregular and even in middle-class or better-off neighbourhoods many households must resort to diesel-power generators for electricity. Poorer ‘informal’ neighbourhoods seek to gain access to transformers connected to local substations and then wire in multiple illegal electrical hook-ups, often resulting in power overloads and fires (Kivland, 2020). It is a patchwork energy system, constantly breaking down, and it also requires an extensive infrastructure for the use of kerosene lamps and the production and delivery of charcoal for cooking. Diesel for generators and vehicles has also been a constant source of political conflict and high prices, especially following the demise of the Petrocaribe deal with Venezuela, which led to fuel shortages, soaring prices, investigations of government corruption and massive street protests in 2019. The blockade of fuel deliveries by armed gangs in 2022 led to calls for foreign intervention.

What does infrastructural repair look like in this context? In the years after the 2010 earthquake, the local and international response unfortunately consolidated the governmental and international NGO use of partial-access premium infrastructure for post-disaster logistics and communication, rather than supporting the building of broad public infrastructure (Sheller, 2013, 2019). The UN bases of so-called ‘peace-keeping’ forces, for example, built their own highly secured satellite communications towers that were not locally connected (see Figure 5.2). While military and humanitarian responders travelled from many countries and brought as much portable temporary infrastructure as they could, the reconstruction effort dismally failed to make any difference in building back infrastructure for those in the informal neighbourhoods of Port-au-Prince, who suffered an absence of housing and saw few improvements in public infrastructure for water, energy or communications (Katz, 2013; Sheller, 2020). Post-earthquake infrastructures of attempted connection and repair thus simultaneously entailed disconnectivity, political frustration and widespread despair (Beckett, 2019).
When existing infrastructures for transport and communication are disrupted by a disaster, people usually make efforts to reconnect, that is, by rebuilding roads, repairing pipes or installing powerlines or phone masts; but the installation of new infrastructure after a disruption may also lead to what Graham and Marvin (2001) refer to as ‘bypassing’ and ‘splintering’, in which some groups or regions are connected over, above, and at the expense of, others. Infrastructures of connection function as implicit geographies of disconnection in ways that usually reinforce existing structural exclusions and racialized inequities. This was very much the case in post-earthquake Haiti, where infrastructural reconstruction could never be separated from fierce competition for any connections to the local state, NGOs, to foreign aid contractors and to ‘street sovereigns’, all of whom could offer different possibilities for infrastructural connection, but always in fragmented and incomplete ways.

Furthermore, communication infrastructures and locational technologies are also enrolled into – indeed are the basis for – uneven global assemblages of power that have more, or less, democratizing effects depending on how they are performed. Digital connection also requires physical infrastructure such as mobile phones, phone masts, satellites, Wi-Fi, underground cables, phones and electricity; institutional infrastructure such as a network of services...
providers, government regulations, legal codes and engineering protocols; and *social infrastructure* such as literacy, numeracy and technical know-how. Emergency interventions following the earthquake brought new kinds of physical connectivity (such as satellite-based mobile communications systems) that bypassed national public infrastructure (such as Haiti’s national public telecom company, which was privatized and sold off to a Vietnamese company) and only extended connectivity to those empowered with privileged institutional and social infrastructure. Using temporary communication infrastructures to respond to disasters only works if there are communities organized to appropriate technology and adapt it to their needs in ways that can be extended into longer-term provision. Infrastructural access requires physically, institutionally *and* socially joining up connected locations where people and communities can maintain *ongoing access* to energy, water and communication systems. This requires not only repair or maintenance of community-based connectivity, but reparative justice to overcome historical exclusions.

Kivland (2020) describes how young men in the informal neighbourhood of Bel-Air in Port-au-Prince form organizations of ‘street sovereignty’, which attempt to stand in for the state and bring needed infrastructure to their neighbourhoods. Without public provision of infrastructure by the state, such groups refer to themselves not as gangs, but as *baz* [base], employing an infrastructural term for their own formation. The *baz* sought to call forth the state and seize the powers of the state, by bargaining with political candidates for their votes, or with NGOs to provide a workforce and grassroots legitimacy for their community-based projects. Yet the collapse of the state and its reliance on armed groups (known as *chimè*, or spooks) also brought waves of conflict, including gun violence, rape and kidnapping in poor neighbourhoods (which eventually spilled over into the middle-class neighbourhoods and the kidnapping of foreigners too). NGOs delivering free water, or installing electrical transformers in neighbourhoods without power, are also creating systems that are destined to fail unless they build human and social infrastructure too.

Some gang leaders emerged as politicians themselves, leveraging infrastructural citizenship to claim political leadership. The ‘G9 and Family’ gang controlled by former police officer Jimmy Chérizier, alias ‘Barbecue’, was closely allied with the ruling PHTK [Parti Haïtien Tête Kale], against the *baz* in Bel-Air, who were aligned with the Lavalas party. G9 and Family engaged in various forms of extortion, demanding payments from street vendors and public transportation drivers, as well as through kidnappings. They took control over local police forces and public services such as electricity and water provision for payment. The control of such infrastructure became a key form of political manoeuvring for legitimacy and mobilization of a political ‘base’. Although implicated in
numerous extrajudicial killings (including the infamous La Saline Massacre in which at least 71 people were killed), Chérizier began to style himself as a revolutionary leader of a popular political movement fighting for the poor and marginalized, issuing public proclamations and leading marches after the July 2021 assassination of his ally President Jovenel Moïse (Insight Caribbean, 2021). The state has effectively disappeared in Haiti (Beckett, 2019), yet the demand for infrastructural reparations remains.

These dynamic constellations of infrastructural politics can be imagined as patches of connectivity amid fields of disconnectivity. But infrastructural patching has its dangers, especially when it rests on threats and acts of violence from the baz. In the absence of state provision and the failures of transnational aid, democratizing infrastructure requires paying close attention to the demonstrated capabilities that communities already have for potential connection, but also awareness of the wider infrastructures of state violence in which poor communities are enmeshed, including state complicity in the illicit weapons and transnational drugs trade which run their own underground (and at sea) infrastructural channels through Central America and the Caribbean, with Haiti serving as a key node in the network. Protecting and expanding patchy forms of insurgent ‘connectivity from below’ demands that we ask how local appropriations of infrastructure might be built on in ways that strengthen local actors' autonomy and agency, allowing for reparations of everyday mizè (misery) without entrenching the use and abuse of armed coercion. Either way, it is clear that the makeshift anti-infrastructures of street sovereignty are not a glitch: they are a feature of violently won infrastructural futures.

While the strategy of patching is suggestive of scrappy underdogs configuring infrastructural resources from below within violent situations, another related tactic appropriates infrastructural reparations through the practice of the scam. Jovan Scott Lewis (2020) has shown how ‘scammers’ in Montego Bay, Jamaica, seized on the physical and human infrastructure of call centres as an opportunity to turn the tables on global capital accumulation. They leveraged enhanced connectivity to funnel money from North Americans back into their own pockets. If patching is about finding work-arounds to access infrastructures from which one is otherwise disconnected (by stitching together alternative makeshift infrastructures and leveraging elite alliances through force), scamming is about exploiting good infrastructural connectivity to reverse the flow of goods/services/money back towards one’s own location. Building on Lewis’s insights about this kind of reparative justice, I turn in the next section to the arrival of cryptocurrency entrepreneurs in Puerto Rico as another possible site for infrastructural reparations. For those who are not the protected infrastructural citizens of the imagined state, what expanded capacities might the new dispositions of digital infrastructure space afford?
Encrypting libertarian utopias in San Juan, Puerto Rico

After the destructive impacts of Hurricanes Irma and Maria in 2017, a group of cryptocurrency entrepreneurs landed in San Juan, Puerto Rico, with claims to restarting the economy and repairing the damaged island. In contrast to infrastructuring from below, these initiatives came from outside the region and are not associated with reparative justice. Yet they do suggest a continuation of tactics of piracy and exit from the nation-state system, which have long attracted Caribbean participants. Crypto-utopias play with Caribbean histories of ‘marronage’ and piracy that leverage interstitial island spaces to seize new possibilities. Here I focus on another tactic of infrastructural reparations related to the rise of ‘encrypted geographies’ (Simpson, 2021) in the Caribbean, built on the blockchain and leveraging the symbolism of ‘offshore’ tropical islands as sites of freedom, experimentation and escape from the state.

While digital divides have attracted much critical attention, more recently the increasing ‘datafication’ of society and algorithmic culture differentiates between ‘traditional digital inequalities’, or digital divide – access, usage, outcome – and ‘new digital inequalities’ (knowledge, database, treatment) that are forming an ‘algorithmic divide’ (Ragnedda 2020: 93-4). Data systems are implicated in the production of ‘code/space’ (Kitchen and Dodge, 2011; Kitchen et al, 2018) in ways that reinforce and reproduce mobility injustices (Sheller, 2018). Data justice approaches emphasize that infrastructure design and decision making are intrinsically bound up with data, algorithms and, increasingly, AI, with many inequitable results. Software-enabled tourism destinations and luxury architecture on private islands in the Caribbean, for example, have leveraged virtual cyber-technologies to support tourist mobility and accessibility, while marginalizing non-citizens such as Haitian migrants working in tourism-dependent economies across the Caribbean (Sheller, 2009a).

In reshaping forms of mobility, property, sovereignty and citizenship this software-supported tourist infrastructuring also leverages US military power to control the Caribbean (Sheller, 2021). Infrastructural studies therefore needs to join together earlier studies of splintered urbanism (Graham and Marvin, 2001) and code/space (Kitchen and Dodge, 2011) with the new transnational geographies of tourism, militarism, finance capital, offshore territoriality and fantasies of extraterritorial escape that have become so prominent within emerging new configurations of Web3 cyber-infrastructure, blockchain and ‘crypto-islands’.

Few studies of code/space foresaw the arrival of blockchain-based cryptocurrencies, non-fungible tokens (NFTs), and their potential for massive disruption of existing models not only of finance and banking, but
also of states, cities, citizenship and belonging. The arrival of blockchain
technologies takes the questions of agency, autonomy and democracy raised
in infrastructure studies, software studies and mobility studies to an entirely
new level. If traditional infrastructural connectivity was about centralized
public networks of connectivity, such systems were always in tension with
decentralization and local provision. Graham and Marvin (2001) noted
the splintering of once national aspirations for public infrastructures into
premium infrastructure space for the elite; yet the experience in the cities of
the Global South was more often that decentralization was the norm, in the
absence of centralized public infrastructures for water treatment or electricity
or communications. This made these locations especially susceptible to the
infiltration of ‘decentralized finance’ (defi) entrepreneurs.

Implicit in infrastructural reparations is not so much the demise and repair
of once centralized systems of infrastructural provision and control, but
rather as already described, the opportunities presented to improvise new
infrastructural connections by breaking into that which exists. It is less a
case of splintering what was once there, and more a case of fractalizing and
redistributing emerging infrastructural possibilities. This kind of inventiveness is
related to the ‘inventive political technologies’ of infrastructuring that Simone
describes for Jakarta, wherein ‘[i]nfrastructure exerts a force – not simply
in the materials and energies it avails, but also the way it attracts people,
draws them in, coalesces and expands their capacities’ (Simone, 2013: 243).
What forces and energies are coalescing around the capacities of crypto-
imaginaries generated by blockchain technologies and its imagined inventive
political technologies?

Libertarians, many on the right wing of the political spectrum, have
also embraced the demise of centralized power and political belonging
through their embrace of ‘start-up societies’ that exit from existing forms
of state and financial regulation and invent their own forms of horizontal
infrastructuring, in the form of ‘distributed autonomous organizations’ as a
kind of parallel universe built on the emerging blockchain technology. This
implicit fracturing of the state monopoly on territoriality and contract law
may come at a high cost to the public realm and citizenries – but might also
open new infrastructural affordances for the excluded denizens of the offshore
zones of coloniality and racialized exclusion. Some theorists of infrastructure
such as Dominic Boyer (in Anand et al, 2018) argue for a revolutionary
infrastructure that constructs a future of local development and decentralized
forms of power and political belonging. Many green energy advocates, for
example, call for distributed community-owned microgrids that can handle
multiple inputs of renewable energy. Such ideas of decentralization inspired
some of the claims being made by crypto-entrepreneurs in Puerto Rico;
however, it is not clear that such rhizomatic infrastructures will necessarily
bring forth a more sustainable and just future.
Isabelle Simpson has explored how the start-up societies imaginary is shaped both by blockchain technologies themselves, and by the discourses of decentralization, peer-to-peer network and ‘trustless’ governance used by developers and cryptocurrencies enthusiasts to describe and promote these technologies (Simpson, 2021). Together we have explored how islands, both natural and human-made, have become prime locations for experimentation with such ventures, which ‘often rely on technologies like blockchain and cryptocurrencies to raise capital, experiment with new governance models, attract investors and entrepreneurs, and entice governments with promises of breakthrough regulatory innovation and lucrative business opportunities’ (Simpson and Sheller, 2022). The promise of blockchain-based start-up societies is that they can free participants from states, banks and overbearing bureaucratic systems, including national citizenship and border control. They offer an alleged blank slate, within which people can build digitally mediated mechanisms of trust through encrypted and secure transactions kept in the permanent ledger of the blockchain. Yet the preferred location for such start-up societies has heavily leveraged the idea of the tropical paradise island-getaway, and in fact also involves ‘escape’ to actual islands in the Caribbean.

Several such start-up societies have been attracted to offshore island jurisdictions where there is low or no taxation, including Puerto Rico, and little government regulation, allowing them to experiment with ‘defi’ while defying state regulation. We argue that ‘islands are particularly attractive to proponents of start-up societies precisely because their imagined interstitiality … allows these would-be city-builders and political entrepreneurs to exploit island space and island imaginaries to “exit” and strategically position themselves as “outside” the reach of the state, but still advantageously within the global economy’ (Simpson and Sheller, 2022). Simpson (in Hagen and Diener, 2022; Simpson, 2021) develops the concept of ‘encrypted geographies’ to describe such hybrid spaces designed to provide an exit from the state and a path (supposedly) ‘beyond politics’ (Thiel, 2009). Moreover, the crypto-utopian vision claims that blockchain microtransactions will enable new forms of infrastructuring, by which services like water, electricity or data can be bought in small amounts, serving small consumers and informal neighbourhoods as much as the rich elite.

Following the decimation of several Caribbean islands by Hurricanes Irma and Maria in autumn 2017, technology, business and innovation leaders from outside the region stepped forward with ideas for reinventing Puerto Rico as a crypto-utopia. One such initiative, initially named Puertopia, but rebranded as Sol, consisted of a group of crypto-investors led by Brock Pierce, a former child actor, now a crypto-entrepreneur who also ran as independent for US president in 2020. They proposed using ‘blockchain infrastructure’ to renew urban development in Puerto Rico after Hurricane Maria (Bowles, 2018;
Dozens of crypto-entrepreneurs, attracted by Puerto Rico’s absence of federal personal income tax or capital gains tax, relocated themselves and their businesses to the island (Bowles, 2018; Klein, 2018). The group rented a four-star hotel called the Monastery and in March 2018 held a blockchain summit conference called Puerto Crypto.

Post-disaster Puerto Rico, where the energy grid had collapsed and would take years to repair, offered potentially fruitful opportunities for the creation of interstitial encrypted geographies. In May 2018, the Startup Societies Foundation also held its annual summit at George Mason University in Virginia, under the theme ‘Rebuild Puerto Rico’ and held a hackathon calling for ‘investors, blockchain entrepreneurs, policymakers, green infrastructure companies, real estate developers, NGOs, academics, Special Economic Zone experts, and exponential technology startups to form a consortium to rebuild Puerto Rico with sustainable startup cities’ (McKinney 2022). This was at the very moment that Puerto Ricans were not only recovering from Hurricane Maria but were fighting austerity measures associated with the PROMESA legislation (Puerto Rico Oversight, Management, and Economic Stability Act), which had forced cuts in education, pensions and healthcare, and the restructuring of the public electricity utility, known as PREPA. By leveraging the emergency situation, this kind of ‘disaster capitalism’ (Klein, 2018) reflects the highly unequal ‘accumulation by adaptation’ (Dawson, 2017: 65) that takes root after natural disasters. Here it could feed seamlessly into speculative crypto-capitalist investments and lucrative land dispossession, displacing Puerto Ricans through a kind of disaster gentrification (Murphy et al., 2022).

As Puerto Rican anthropologist Yarimar Bonilla (2018) explains, Act 20/22, originally passed in 2012 and subsequently modified, allowed wealthy investors who spent half the year in Puerto Rico to benefit from ‘exemptions from federal and local taxes, capital gains tax, and taxes on passive income until the year 2035’. This proved to be highly attractive:

Originally designed to attract wealthy financiers, the law has ended up luring tech entrepreneurs, cryptocurrency devotees, digital nomads, and tax dodgers who choose their countries of residence based on economic incentives, regulatory freedom, and ‘value opportunities’ – rather than on cultural or political ties. Puerto Rico’s status as an unincorporated US territory suits these untethered entrepreneurs. As neither a nation nor a US state, it allows arrivals to retain their US citizenship while benefitting from the legal ambiguities of territorial status. (Bonilla, 2018)

Post-Maria Puerto Rico offered an ideal context in which to experiment with technological and cyberlibertarian exit fantasies – as a new stateless
infrastructure – in part because of its heavy indebtedness and infrastructural collapse (not unlike Haiti, though positioned differently as a US territory that could attract capital investment). Purposely structured as an interstitial financial and political space where both crypto-secession and crypto-statecraft were possible, the island was especially vulnerable to infiltration, another kind of patching in this moment of emergency recovery.

Puertopians could virtually ‘exit’ the US and its fiscal regulations while keeping their American citizenship, and present themselves not as foreign colonizers, but as benevolent crypto-capitalists and technology evangelists coming to the rescue of their compatriots. As Bonilla and Klein explain, the crypto-entrepreneurs could tell themselves:

This is where we need to be, because we can operate within an ambiguous framework. Given Puerto Rico’s colonial relationship to the U.S., not all federal legislation applies. And not only that, but we can actually set the terms and create precedents, legislative precedents, of how blockchain and Bitcoin and all these kinds of new technologies are going to be applied. (Bonilla and Klein, 2018)

Thus, the financial infrastructure of the offshore tax-haven, along with the collapsing infrastructure of public provision of energy, water and communications, created the ideal conditions for libertarian experimentation with new forms of decentralized non-state infrastructuring. It was not so ideal, however, for Puerto Ricans.

As Keller Easterling argues, this reveals the kinds of dispositions that are ‘hiding in the folds of infrastructure space’ (2016: 73), shaping its political character through multiplier effects. The indeterminacy of the extra-state island-space as tax haven, Special Economic Zone and compromised sovereignty played into the hands of the Puertopians to accumulate capital and purchase prime real estate in San Juan, at the very moment that the Puerto Rican public sector was being slashed, and the people of Puerto Rico were being forced by a Congressionally appointed oversight committee to repay the illegitimate debt taken on by the state (Klein, 2018). As one critic argues: ‘Although there are no physical walls gating the crypto-utopia in San Juan, there are digital walls and gates that keep anyone out unless they are high net-worth ‘accredited investors’ … and on the inside in the “blockchain space”’ (Crandall, 2019: 286). Rather than providing infrastructure then, in the sense of public provision, the encrypted geography creates an anti-infrastructure that claims to lift infrastructure out of political space, yet potentially leaves the majority population outside the new emerging blockchain space.

In the midst of ruination, and in the absence of any kind of infrastructural reparations to actually provide public financing for water or electricity to the
Puerto Rican population, Puertopia quickly became a blueprint for other such start-up societies and crypto-secessionists, like Honduras Próspera Inc., a controversial charter city project launched in 2017 by a group of American venture capitalists and technology entrepreneurs on the touristic island of Roatán, in Honduras. ‘Honduras Próspera is described as a “platform”; both a space and a political and economic interface designed to facilitate economic development, attract investments, and encourage entrepreneurship’ (Simpson and Sheller, 2022). These new ‘platforms’ serve as infrastructures for experimentation in non-state organization and interstitial urbanization, within and beyond the grip of state power. For example, the youthful president of El Salvador, Nayib Bukele, made his country the first to declare Bitcoin the national legal tender, then announced plans to build the world’s first tax-free ‘Bitcoin City’, backed by Bitcoin bonds and powered by volcanic geothermal energy (Rentería, 2021).

The question remains whether such crypto-infrastructures will empower horizontal infrastructural reparations or reproduce the power hidden in its folds. Will Caribbean infrastructural crypto-entrepreneurs be able to leverage the blockchain to patch together encrypted geographies of reparative infrastructure, or will the absence of the state drive further insecurity and violence from what Haitians call the baz? Whether these crypto-geographies can ever support Black infrastructural resistance and creativity on a hostile terrain, forming a new kind of ‘demonic ground’ (McKittrick, 2006) of reparative justice, remains an open question.

Conclusion

Post-disaster reconstruction processes across the Greater Antilles have demonstrated the obduracy of the coloniality of power, its kinopolitical bases and the struggle for alternative futures of infrastructuring (Sheller, 2018, 2020). Tactics of patching, scamming and encrypting are each exemplary of wider ways in which infrastructural futures are being actively remade in experimental innovations of island urbanization that nevertheless build on the ruins of racial capitalism and colonialism. Although imagined as urban peripheries on offshore islands, Caribbean cities are closely connected to the uneven infrastructuring processes of the Global North, which are enmeshed in White supremacy and anti-Blackness. Arising as interstitial spaces of negotiation, appropriation and contestation – especially in the aftermath of disasters and emergencies – makeshift infrastructural futures are already taking shape within the folds and beneath the purview of the sovereign state and outside the realms of citizenship. Inhabiting these hybrid cities on the edges of the fraying international system of modern nation-states, existing without the idealized citizenries of infrastructural access, subaltern people across the Caribbean must seize their own infrastructural reparations for everyday survivance and revival of life in ruins.
Just as the runaway Maroons and pirates of the Caribbean disrupted the smooth operations of plantation space and the transatlantic system of slavery, every infrastructural system has its weak points. Maroons escaped into the interior of mountainous islands or swampy coastal lowlands, while pirates kept on the move, sailing from hidden coves, and hiding on remote islands such as Île de la Tortue off the north-west coast of Haiti. Both Maroons and pirates raided the more structured spaces of circulation that supported the slave plantation economy and spirited away the goods and people whose labour it required. This was a kind of reparative justice, too, but one that the dominant system would not tolerate. Either forced to sign treaties, deported to remote places or hunted out of existence, there was no room for such libertarian/liberationist experiments in the core of the colonial-racial capitalist infrastructure of slavery-based plantations, heavily armed sailing fleets and extractive global trade. Is there space for such experiments today?

I have argued that Caribbean practices of infrastructural reparations today go beyond simple concepts of repair insofar as they too turn the tables on the Global North and global capital by appropriating, infiltrating and profiting from infrastructural gaps in ways motivated by political claims for reparative justice. These same urban island spaces and actors now stand on the cusp of seizing encrypted geographies for disruptive infrastructuring that is horizontally distributed in the blockchain; but the dynamics of violence and insecurity do not bode well. In opening our imagination to wider meanings of reparative infrastructure, I hope to have suggested some ways in which reparations can be extracted in and through infrastructuring from below, which draws on creative agency, social infrastructure and digital as much as physical infrastructure to advance its claims. But this also comes with dangers.

Looming over all of this is the ongoing denial of infrastructural access – and life itself – to African Caribbean and other Caribbean populations in times of planetary climate crisis and global health emergency: stopped at the border, intercepted at sea, denationalized and deported despite the ravages of hurricanes, earthquakes or pandemics. Yet those who have claimed a hard insistence on life will not be snuffed out so easily. Caribbean tactics for infrastructural creativity persist in the wake of global racial capitalism with its unpayable debts, embargoes and extractive economies. Patching and scamming continue unabated and will probably soon be joined by encrypting-from-below, because these infrastructural practices of reparative justice enable people to chèch lavi (look for life) amid the ruins of the state, which never wanted them anyway, never cared for them and never provided them with infrastructure. Reparative infrastructural justice, ironically, may demand the demise of North Atlantic universal imaginaries of infrastructural citizenship through the dissolution of existing structures of exclusive
connectivity rather than their repair and maintenance. As the centre frays, the edges may prevail.

References


