Exploring America's Water Crisis: Austerity Urbanism and Narratives of the Financialization of Black-Majority Cities

By

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Abstract

Exploring America's Water Crisis: Austerity Urbanism and Narratives of the Financialization of Black-Majority Cities, investigates the relationship between municipal finance, governance, and uneven racialized development across and within U.S cities. Through a comparative analysis of Baltimore, Detroit, and St. Louis, I employ qualitative methods to examine how the emergence of financialized austerity urbanism as a mode of governance magnifies racialized patterns of uneven development, particularly regarding the United States' ageing urban water and sewerage systems. The project combines qualitative methods of household narrative interviews, semi-structured expert interviews, and participant observation to explore each city's effort to finance a court-ordered Environmental Protection Agency consent decree on their abating infrastructure. My qualitative analysis demonstrates that Black-majority U.S cities have become more reliant on the financialization of debt to finance water and sewer infrastructure following the decline of federal funding beginning in 1977 and deregulation of large parts of the financial industry in 2000. One of the consequences of this is that Black-majority cities employ disciplinary financial rules and routines around debt collection when issuing loans in the bond market, a process which has led to infrastructure inequalities through mass water shut offs. Field research reveals that Black-majority cities under austerity encounter complex financial arrangements in their search for infrastructural funding that has produced a crisis of water affordability and water insecurity. In this dissertation, I also show the innerworkings of the racialization of municipal finance through the speculative financing tools each city uses, the politics of municipal bond market around debt collection practices and the everyday experiences of water and sewerage disparities. In doing so, I present emerging ways in which financialized austerity governance is rearticulating racial hierarchies in the form of infrastructure inequalities. Austerity urbanism, I argue, is motivated by logics of financialization – which is both a mode of accumulation, and significantly, works through urban geographies of racial capitalism. My research demonstrates an important comparative approach for working across and through the fields of urban studies, political economy, and geographies of race and racialization.

Keywords: austerity urbanism; financialization; racial capitalism; infrastructures

COVID-19 Impact Statement

Due to the ongoing pandemic beginning in March 2020, my dissertation was impacted in several ways. Firstly, many of the policy documents and other organizational reports collected during fieldwork remained at my office in which I was unable to access for a year due to campus closures. This made it increasingly difficult to disseminate my findings with key information missing. In addition, because of my chronic asthma I was considered “high-risk” which meant that self-isolating at home lasted much longer than most people and I was unable to work from other workspaces. This put on a strain on my ability to work regularly on my dissertation. Lastly, as a trans person, issues around access to hormone therapy became a critical issue for several months as doctors were unable to use their services for trans patients as they were prioritizing COVID care. This had an impact on my mental and physical health affecting my work productivity.

Declaration

No portion of the work referred to in the thesis has been submitted in support of an application for another degree or qualification of this or any other university or other institute of learning.

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Chapter 1

Introduction

Racism, specifically, is the state-sanctioned or extralegal production and exploitation of group-differentiated vulnerability to premature death.

Ruth Wilson Gilmore (2007)

Water is essential to life: we use it to drink, cook food, and clean our bodies and homes, among other basic needs. In recent years following the 2008 financial crisis, stories of water crises in the United States have made international headlines, particularly to the ever-growing problem of water affordability generated through austere conditions. Between 2010 and 2015, water and wastewater costs rose 41 percent, nearly five times the rate of inflation over that same period (Jones and Moulton, 2015: 1). Considering the United States does not include the affordability of water and sanitation for the lowest-income residents in its laws or regulations, water insecurity has reached a crisis level in many Black-majority U.S communities, most evidently in Flint and Detroit, Michigan, where lead poisoning and mass shutoffs have left thousands without safe and reliable water (Shah, 2020). This has sparked national and local debates regarding the challenges to a human right to water in the United States. This dissertation is interested in the governance, finance and racial structures shaping water affordability and water security in Black-majority U.S cities.

This study builds from an urban political economy approach to focus on the connections between the financialization of municipal services and state-restructuring in the United States. Using water and sewerage as an empirical focal point, I follow the unfolding challenges of each city in their attempt to invest in, maintain and repair combined sewer overflow (CSOs) systems. These are known as outdated sewer systems designed to collect rainwater runoff, domestic sewage, and industrial wastewater in the same pipe. For this reason, combined sewer systems are designed to overflow occasionally and discharge excess wastewater directly to nearby streams, rivers, or other water bodies. Climate change has exacerbated floods and the overflowing of these systems due to heavy rainfalls. These overflows contain not only storm water but also untreated human and industrial waste, toxic materials, and debris (EPA, 2021).

The decline of federal funds and ongoing austere conditions have created the conditions for cities to pursue risky financial deals to upgrade their sewerage systems, all of which were subject to federal consent decrees (a form of legal settlement in the United States). Since the 1990s, U.S. cities with ageing water sewer systems have become legally intertwined with EPA-enforced federal regulations aiming to make water systems more adaptable to climate change. However, cities face steep fines for being in violation of current national regulations. Importantly, however, they are unfunded mandates. The federal Environmental Protection Agency (EPA) is legally requiring infrastructure changes but provides very minimal financial support to local governments to replace CSOs.

In this context, my work examines how the 2008 economic crisis reshaped the finances and governance of Black-majority U.S cities to demonstrate the deep interconnectedness of urban processes in the context of financialization (Peck, 2017a; Tonkiss, 2013; Tabb, 2014). My aim is to show how financialization alters the relationship between how municipal governments pay for infrastructure and who gets access to these services by revealing how debt and financial logics works through complicated geographies of uneven racialized development within and between U.S cities. More centrally, this work investigates the practices at work in the reproduction of racial capitalism through infrastructure that is a salient predictor of infrastructure inequality (Deitz & Meehan, 2019) This project is interested in both the racialization of financing and funding of U.S water and sewer systems where finance is understood as the upfront capital costs from the private or public sector to raise debt to pay for infrastructure. Conversely, the funding of an infrastructure project is understood as a question of who pays for these systems and debt incurred over the long-term through taxes or user fees (O'Brien and Pike, 2015). This work is framed around the notion of infrastructure as a connective tissue anchored in urban life. I understand infrastructure in both physical terms (reticulated systems of highways, pipes, wires, or cables) and also through forms of social relations (a combination of people, care, labour, and networks) that highlights the practice of connecting people and things in socio-material relations that sustain the social reproduction of economic life (Silver and McFarlane, 2019).

The global financial crisis is now over ten years old. I argue that the economic recovery policy of austerity and the racialization of municipal finance has been linked to a series of infrastructural crises disproportionately impacting Black-majority cities, specifically their municipal water and sewer systems. To prolong these connections, I address the racialized nature of austerity urbanism and its social, economic, and political implications. In doing so, this dissertation draws on critical geographies of race, that includes scholarship in Black geographies and those writing on racial capitalism, to inform the spatial expressions of racialization working through finance and governance to better understand how racialized difference is reconstructed and reproduced within financialized neoliberal governance across multiple urban worlds. For over a century, urban geographers have attempted to disentangle the role race and class in shaping cities and urban lives (Jackson, 1987, Dwyer, 1997). However, more recent scholars have challenged this dichotomy, arguing race and class are mutually constituted forms of exploitation (Kobayashi, 2014; McKittrick, 2011; McKittrick and Woods, 2007; Peake and Schein, 2000; Price, 2010). In his book, *Black Marxism*, Cedric J. Robinson argues racism was fundamental to the feudal order of early capitalism and has remained foundational in all constructions of class. Seminal works like W.E.B. Du Bois' (1935) *Black Reconstruction* and more recent books like Keeanga-Yamahtta Taylor's (2019) *Race for Profit* echo Robinson's approach arguing economic value is derived from the racialization of labor and property (see Bonds, 2019; Rodriguez, 2021; Fields and Raymond, 2021). Yet, urban geography has not fully explored how racial capitalism changes and reshapes our core theoretical approaches to the funding and financing of cities (see Lewis, 2020; Ponder, 2021). By exploring how economic value is determined relationally through race and how this valuation is geographically specific, this can reveal the raced expressions of municipal finance and the forces that work to dispossess lives through creditworthiness in the municipal bond market. This dissertation investigates *whether and how* value is derived from the racialization of people and places in Black-majority U.S cities and what can this reveal about the racialization of municipal finance and urban governance as vital to racial capitalism as an enabling force.

Framing Black-majority cities

I define "Black-majority" cities where greater than 50 percent of the American Community Survey (ACS) respondents are "Black or African American; alone or in combination with one of more other races" within a designated municipality (U.S Census Bureau, 2020). There are wider political, economic, and social forces that have transformed the demographic make-up of Black-majority cities over the last century. Post-industrial, Black-majority cities such as Baltimore, Detroit, and St. Louis, can be understood as liminal urban spaces – as they have moved through a transitional process of once a major seat of power within the Fordist cluster of developed cities in the Global North, now occupy a place in the shadows of declining cities (see Gordon, 2008; Sugrue, 1996 (2014); Vicino, 2008)

The Great Migration between 1910 to 1970 involved millions of African Americans fleeing poor economic conditions of the Jim Crow South to industrial and manufacturing urban centers in the Northeast and Midwest (Gregory, 2005; Bouston, 2016). However, even during this period, industrial cities still inhabited large populations of white residents. For instance, in the 1950s, 84% of Detroit's population was still white. As of 2019, this figure now stands at 14% (U.S Census Bureau, 2019). Similar trends exist in Baltimore and St. Louis over these same periods. In the years following 1970, there was an out-migration of white residents away from the inner city into the suburbs, a process referred to as "white flight," due to post-war suburbanization, coupled with urban divestment and deindustrialization. While white residents moved into outer suburbs, the ratio of Black to white populations, particularly in Midwest and Northeast cities, grew significantly. In 1970, there were 460 Black-majority cities (which includes cities, towns, and other census designated places) and in 2010, that increased to 1,148. As of 2017, there are now 1,262 Black-majority cities (Harshbarger and Perry, 2019). Post-industrial cities like Detroit, Baltimore and St. Louis are still coping with the racialized legacies of segregation and urban planning exclusion that have impacted these cities' development trajectories, municipal finance, and ability to deliver adequate city services. In many ways, urban decline and suburbanization can be read as processes of racialization that characterize many Black-majority cities in the Midwest and Northeast today.

Austerity, in post-industrial, Black-majority cities, has been a familiar and on-going condition for many decades through living under a normalized environment of fiscal tensions due to tax revenue shortfalls shaped by suburbanization, white flight, deindustrialization and economic decline. It is therefore no surprise that following the 2008 financial crisis, Black-majority cities were particularly hit hard – finding themselves implementing new rounds of austerity measures and adding to harsher urban realities for everyday lives. In this dissertation, I draw on neoliberal state-restructuring transformations as a means of tracing processes of the racialization of municipal finance and post-crisis governance strategies throughout Black-majority cities in the U.S. My aim is to understand the making and remaking of the financialization of the urban in this post-crisis moment and how the spatialization of financial relations works through the collateralization of racialized spaces and lives (see Chakravartty and Da Silva, 2012).

Geographies of racial capitalism

A body of work focusing on critical theories of race and Black geographies has interrogated the spatialized dimensions of blackness and whiteness (Jackson and Smith, 1981; Delaney, 2002; McKittrick and Woods, 2007; McKittrick, 2011), as well as the urban expressions of racial capitalism (Bonds, 2019; Danewid, 2019; Jenkins, 2020, Jenkins and Leroy, 2021; McClintock; Ranganathan, 2016; Pulido, 2016, 2017; Ponder, 2017; Ponder and Omstedt, 2019) to make sense of racialized urban inequalities and underdevelopment. This includes work on topics of environmental racism in New York City through green bonds (Bigger and Millington, 2019), and through water poisoning in Flint, Michigan (see Pulido, 2016), housing, white flight and police violence in Milwaukee, Wisconsin (see Bonds, 2019), as well as topics of social reproduction, such as work on urban agriculture and racialized labour in Portland, Oregon (see McClintock, 2016).

In this way, scholars have helped link racialized social relations both conceptually and historically to the spatial expansion of capital and economic processes. Work on geographies of race and racial capitalism can help inform understandings of the racialization of municipal finance and urban governance in U.S cities, demonstrating that the imposition of financial logics is not simply an economic phenomenon but are social–spatial processes to which racism/racialization, historical and contemporary, are inextricably linked (Kish and Leroy, 2015).

Robinson (2000) and Lowe (2015) elaborate on different historical forms of racial capitalism that includes: setter colonialism, imperialism, and slavery. More recently, scholars such as Jenkins (2021), Ponder (2017) and Wang (2018) use racial capitalism to describe forms of racial warfare that work through present financialized logics in cities. Racial capitalism suggests that capital only realizes its value when it is producing and working through social relations of inequality, and these forms of accumulation require systems of dispossession, disposability, and unequal divisions of human value (Robinson, 2000; Gilmore, 2002; Lowe, 2015). Special attention has been placed on deciphering the historical relationship between racialization and accumulation. In narrowing-in on the urban, work in Black geographies has interpreted patterns of urban development as unfolding relationally vis-a-vis Black and white spaces in the U.S (Purifoy and Seamster, 2021; Bledsoe and Wright, 2019). White urban and suburban places have developed through the devaluation of Black spaces through seemingly race neutral structures of property ownerships and public finance (Delaney, 2010; Taylor, 2019). Purifoy and Seamster (2021) discuss the "creation" of white development through the persistent predation of Black spaces through complex forms of local governance, special districts, urban planning, and rules of legal jurisdiction (52). Racialized underdevelopment is a key dimension of racial capitalism (Robinson, 1983), whereby value for white spaces is predicated on the devaluation and unmaking of Black places.

This dissertation is interested in the contemporary dynamics of racial capitalism, where race and space are embedded in the extraction of urban infrastructures that are unfolding along different terrains of finance and governance. Value is created for investors in municipal finance is created through the devaluation of Black spaces. The devaluation of Black spaces leads to higher costs of borrowing to access finance to pay for day-to-day local services as poorer Black cities and neighbourhoods are viewed as a higher investment risk. Rather than exclusion, financial inclusion in the municipal bond market becomes an extractive tool to reproduce racialized uneven development.

The logics of racial capitalism serve as a powerful tool to locate connections between austerity and the raced expressions of geographies of financialized capital. Focusing on the racialization of municipal finance in Black-majority cities as an enabling force of racial capitalism, this study is organized around the on-going economic restructuring of cities since the 1970s, and the post-2008 austerity urbanism moment. This means rearticulating how processes of racialization are being baked into the social and material workings of capitalism itself, and how state-restructuring regimes and financialization of cities facilitate capital accumulation in ways that perpetuate racial hierarchies (Hankins, 2012, et al: 382). Understanding such correlation cannot be fully grasped by simply examining austerity urbanism as reduced only to class relations, but instead, urban state restructuring needs to be understood as operating on and within socio-spatial terrains of racialization and racial capitalism. Narrowing-in on what this means for delivery and affordability of public goods and services in the case of water and sewer systems is one way to reveal how municipal finance and debt operate through complicated legacies of uneven racialized geographies based on cities are assigned value and assigned financial risk, by being rated as either speculative-grade or investment-grade in the municipal bond market.

Ongoing state-restructuring: thinking in terms of scale and relationality

There have been different ways in which scholars across disciplines have delineated and described neoliberalism and its dynamics. For instance, scholars in political science, such as Van Apeldorn and Overbeek (2012:4) describe it as ‘a political project aimed to restore capitalist class power in the aftermath of the economic and social crises of the 1970s.” Others, such as Loic Wacquant, argues that neoliberalism involves the growth and glorification of the penal wing of the state (Wacquant 2012). In geography and urban studies, rather than treating neoliberalism as a singular doctrine emanating for one force, most scholars identify and trace its contingent, mutating, and context-specific variations. This is known as the governmentality approach where neoliberalism is understood as a decentered phenomenon that ‘can only exist in messy hybrids’ (Peck, 2010: 7).

Theodore and Brenner (2012) for example, treat neoliberal practice as uneven, spatially, and temporally variegated, rather than as a unified or universal 'theory.' Similarly, Davies and Blanco (2017: 1519) problematize "totalizing claims about neoliberalism", and rather, shed light on the complexity of the relationship between neoliberalism and shifts in urban governance by recognizing the neoliberalization as a variegated process. In this way, human geographers have determined that concrete neoliberal reforms do not conform to a simple model of liberalization and market rule with predictable implications. Rather, these transformations are shaped by "national, regional, and local contexts defined by the legacies of inherited institutional frameworks, policy regimes, regulatory practices, and political struggles" (Brenner and Theodore, 2002). Scholars argue that neoliberalism, rarely, if ever, is actualized in pure form, meaning immanent laws of neoliberalism do not materialize in the same way at various scales and spaces (Jessop, 2002). What we experience are multiple "hybrid" forms and mutations that take shape as neoliberalism is expressed in specific domains and spaces. Recent urban scholarship on neoliberalism rejects the 'dominant meta-logic' of neoliberalism as a totalizing, hegemonic project, and have been highly sensitive to its geo-political multiplicity (Davies and Banco, 2017: 1518), which is captured in the notion of 'variegated neoliberalization' developed by Peck et al. (2013) or "actually-existing neoliberalism" that emphasizes the contextual embeddedness of neoliberal restructuring projects as they are being produced within different contexts. This means neoliberalism works through multiple nodes of governing networks. In a similar tone, scholarship on geographies of racial capitalism have highlighted how race is a structuring logic by which capital produce a variegated landscape for extracting value (see Vasudevan and Smith, 2020). Neely and Samura (2011) argue that race and space are contested categories that have historical legacies but are constantly being re-articulated through the contextualized encounters and interactions of individuals, groups, and institutions.

Although literature on the restructuring and rescaling of the state is not new (Jessop, 1990; Labao et al., 2009; Peck, 2001) there has been recent debates on important changes in the institutional relationship between local and central government since the onset of austerity following 2008. This includes work on the devolution of fiscal responsibilities onto local governments across the U.S, UK and Europe focusing on municipal services or case studies (Davies and Blanco, 2017; Davidson and Ward, 2018; Gray, 2018; Hastings et al., 2017; Peck, 2015). Some draw on post-crisis urban issues on fiscal stress of pension obligations (Kass, Forthcoming), the restructuring of urban real estate and property markets (Baker, 2019; Fields, 2017), and forms of infrastructure neglect and environmental violence under austerity (Pulido, 2016; Silver, 2019; Wright, 2021).

Much of the work in human geography exploring on-going neoliberal state-restructuring has been shaped by Massey's (1984, 2005) use of relationality to conceptualize space (i.e relations, types of connection or association between entities). Space, according to Massey, is constituted through relations. Such thinking has reinvented critical interrogation of state-restructuring as processes and dynamics that are inextricably linked to social relations and space. Massey's use of relationality has been critical to work on neoliberalization that is theorized as an open, uneven, and contested process of restructuring, as opposed to an end state order, i.e neoliberalism (Massey, 2011). Arguments about neoliberal 'variegation" drew explicitly on some of those same lines of relational thinking of space, in which 'the local' is not a mere synonym for the particular or the concrete or bounded territories, but rather a unique site of configuration and (re)production (see Peck and Theodore 2007).

The body of work that I draw on for this dissertation is from those who conceptualize austerity as a process of ongoing state restructuring, theorizing cities as central sites of the uneven advancement of neoliberal restructuring projects (Brenner, 2005).. The connections between urban transformations and neoliberalization have led to new departures on the analyses of urban politics that include the emergence of neoliberal urbanism as a framework to understand the production of cities under neoliberalism. Neoliberal urbanism is theorized as a new regime of urban governance, described as a moment where neoliberal restructuring has been unfolding in North American and European cities beginning in the early 1980s during Keynesian welfare state retrenchments (Peck, et al, 2009: 63). Urban scholars make the case that cities are central targets and experimental grounds for a range of neoliberal policy experiments, restructuring innovations, and political projects (Benner and Theodore, 2002; Theodore, et al, 2011: 25; Peck, et al., 2013). The production of the city as a critical driving force behind capital accumulation, within the framework of neoliberal urbanism, has contributed to new understandings of spatial, social and, power relations. These relations have been materialized through processes like urban entrepreneurial governance and more recently, austerity urbanism. Shifts in urban governance from the ‘welfare city’ to the ‘entrepreneurial city’ to the current ‘austere city’ are understood as symptoms of a wider process of Western governments’ neoliberalization (Brenner and Theodore, 2002; Peck, Theodore & Brenner, 2010, 2013).

State-restructuring literature draws upon and extends geographers’ ongoing conceptualization of scale as relational, interconnected, and socially constructed (Martson, 2000; Peck, 2014; Peck, 2017). From this perspective, the national scale is no longer viewed as agents facilitating capital accumulation to support urban scales. Under neoliberalism, individual places, particularly cities, are privileged sites of capital accumulation, and political transformations (Brenner and Theodore 2002; Harvey 1982; Peck and Tickell 2002) and, as a result, urban, economic, and political geographers have maintained a call for both territorial and relational analyses that are sensitive to the inter-scalar conditioning of governance and policy that has been termed ‘inter-urban competition’ (Brenner and Theodore 2002; Peck and Tickell 2002; Harvey, 1989). State-restructuring literature is important to help historize shifts in urban governance and to reveal a relational understanding of the origins of austerity urbanism that include not just vertically (top-down rescaling) but also horizontally (‘race to the bottom’ war between cities) (Davidson and Ward, 2017). The importance of scale, thinking about the variegated and relationally constituted-nature of state-restructuring, is a fundamental dimension to understanding austerity as a longer-term urban condition in the U.S (Davidson and Ward, 2017: 7). However, in the same way urban geographic difference is a driving force of capitalist development (Harvey, 2007) capitalist exploitation also depends on racism and racial hierarchies to construct a difference in human value (Melamed, 2015: 76). Thus, the interconnected relationship between racialization, capital accumulation, and the production of space is thus inherently both dialectical and geographical (McKittrick and Woods, 2007: 8; Neely & Samura, 2011).

Financialized urban austerity

Neoliberalisms’ strength comes from its ability to adjust itself and bring forth institutional and policy changes to curbs or displace the current economic crisis caused by market failures related to the financialization of our world economy (Peck, et al., 2001: 58). The historic financial vulnerability of cities is the result of decades of global economic and state restructuring, and financialization under capitalism that was fully realized after the 2008 financial crisis. Due to the deregulation of financial markets, the creation of synthetic financial instruments fuelled the infamous ‘private credit-led speculative boom’ (Boyer 2012: 285) known as subprime mortgage lending that inevitability crashed. The impact of local housing and mortgage markets after 2008 was a global phenomenon in scope and greatly impacted other credit markets - including the municipal bond market and cities ability to finance services (Aalbers, 2009: 35). This crisis launched a period of austerity where policymakers believe that deficit reduction and cuts to social spending will restore market confidence and competitiveness (Davidson and Ward, 2017: 10; Davidson and Kutz, 2015 :1441). However, austerity measures– are typically framed as the consequence of out-of-hand state spending rather than as the result of states salvaging irresponsible financial institutions (Bassel and Emejulu, 2017: 11).

Urban governance has been financialized in more profound ways than ever before as is reflected by the increasing growth of the municipal bond market since the deregulation of the financial sector in 2000; budgetary crises through credit market dependency; a subordination to bond market logics, disciplines, and rationalities due to credit rating procedures; and the financialization of public infrastructure (Weber, 2010; Ponder, 2017; Peck and Whiteside, 2019). Although there is disagreement in the literature on whether urban governments have been captured by finance, or whether urban governments have actively sought to financialize their operations for their own interests (Sbragia, 1996; Aalbers, 2019). Theorized through the lens of neoliberal urbanism, that is, previous forms of entrepreneurial governance (Harvey, 1989; Davidson & Ward, 2014), high-risk, financialized growth strategies left cities exposed to the volatility of the financial and housing markets (Davidson & Ward, 2014).

In a more recent attempt to draw out nuances of urban governance since the financial crisis, austerity has been translated into urban policies that a more recent scholarship has labelled “austerity urbanism,” (Davidson & Ward, 2014; Tabb, 2014; Donald, et al 2014; Peck, 2012) that has been characterized in specific ways, differing from previous rounds of neoliberal urban governance rationalities in that this round of austerity measures is distinctively *local* in nature, where national government were “ultimately concerned with offloading costs, displacing responsibility” (Peck, 2012: 632) onto local spheres that has impacted those most marginalized, specifically racialized minorities (Bassel and Emejulu, 2017; Ponder, 2017; Ali and Whitham, 2020; Danewid, 2020). This dissertation understands *austerity* and *austerity urbanism* as two distinct conditions. Austerity urbanism is defined as a form of 'scalar dumping' of debt and fiscal stress one in which cities are confronted with devolved and enhanced government responsibilities amidst budget cutting and public service retrenchment (Peck, 2012). Whereas austerity itself, is characterized through "fiscal constraint," "deficit reduction" and "shrinking government via privatization" that have long been recurrent conditions under neoliberal governance since the 1980s (Peck, 2015: 4-5; Davidson and Ward, 2017: 8).

Austerity urbanism therefore represents a distinctive emergent phenomenon to describe the post-2008 fiscal crisis local governments are experiencing and newly reconfigured limits and possibilities of urban governance today that is directly tied to financial markets. This body of work theorizes austerity urbanism as a "relational strategy," that involves devolved budgetary repression and fiscal disciplining through the downloading of fiscal costs onto lower levels of government thereby transforming a sovereign debt crisis into a municipal debt crisis in the United States (Ponder, 2020: 1). This is further intensifying local public service retrenchment and having a profound effect on "the dispossessed, the disenfranchised, and the disempowered" (Peck, 2015: 7). Taking state measures to cut budgets and employment to restore capital due to the volatility and consequences of financialization has resulted in the current severity of fiscal crises' in cities (Tabb, 2014: 88). So, why did we end up with austerity urbanism as a post-crisis economic recovery strategy of financial markets?

The answer to this, this dissertation argues, is rooted in the current capital accumulation era of financialization as a method of value production. This is what I describe as a current moment of *financialized urban austerity* in the U.S. Austerity urbanism, I argue, is the post-crisis governance strategy of "good governance" which is categorised as restoring financial markets and renewing the value production cycle of financialization by imposing debt burdens on the public sector who bear the costs of financial recessions. What we are currently witnessing, even after financialization created the conditions of the global economic crisis, is a further financial deepening of cities under austerity (Theodore, 2020). This is understood by the tightening grip of bondholder value rationalities, such as municipal governments' increased dependency on municipal bond markets and an emergence of gatekeeping bond practice surveillance and other risk management and monitoring roles of credit-rating agencies through debt collection practices.

This has had consequences for the governance of municipal borrowing costs, risk assessments and access to municipal finance (Peck, 2017: xvi). What makes this round of austerity unique in Black-majority cities in comparison to other cities is through processes of local state-restructuring that are operating on already convoluted and uneven urban geographies of race, and "under historically and geographically distinctive conditions and in the context of already neoliberalized configurations of (local) state power and (urban) politics" (Peck, 2015: 2). Put in another way, when austerity touches down on everyday lives in and across cities – it is never equal. Narrowing-in on austerity urbanism in Black-majority cities can explicate its racialized dimensions. Below, I explain my research objectives and questions, the conceptual framework that guides this project, and the empirical and conceptual contributions of this research.

Research Objectives

In this dissertation, I am interested in the racialization of municipal finance and how municipal debt crises in Black-majority U.S cities are a condition of racial capitalism. My main objectives are as follows:

1. To examine how uneven geographies of racial capitalism can inform processes of financialized urban austerity to understand infrastructure inequality

2. To build a more grounded empirical base on austerity urbanism by examining new and emerging financialized urban governance practices in post-industrial, Black-majority cities, accounting for lived and on-the-ground experiences.

An urban relational approach

The questions motivating this dissertation correspond to broader theoretical debates about the racial and spatial unevenness of austerity and how financialization operates through and acts upon sociospatial relations of race. The purpose of this research is to investigate the structural origins and mechanisms of racialized austerity urbanism. The goal of this research is to understand the mechanisms by which austerity is inherently racialized by tracing how austerity policies are differentially enacted across three U.S cities.

In following Ward (2010), Hart (2016) and Robinson (2016), I employed a relational urban comparison of multiple 'sites' to explore various interactions of racialized austerity in the context of municipal finance and urban water and sewer infrastructure. This approach recognizes "the urban" as not a fixed entity that is constructed merely though territorialized processes. But rather, the urban is conceptualized as a relational assemblage of people, capital processes, and ideas (McCann & Ward, 2012). This means examining the "relational situatedness" (McCann & Ward, 2012) of cities under similar political and economic pressures. In this way, my research seeks to develop a relational understanding of the governing and financing of water and sewer services in Black-majority cities under austerity post-2008.

Empirically, this study contributes to the knowledge base on urban and economic geographies of austerity; it responds to the need for critical attention to examining the current local practices of financialized, state restructuring and its everyday materiality in cities. It does this by conducting a relational urban comparison of Black-majority, post-industrial cities to conceptualize local outcomes of state-restructuring as expressions of globally relational and interconnected trends. This includes examining similar experiences of access to water occurring within different cities that can be traced to the financialization of local urban infrastructure (i.e city formation by way of extra urban relationships and disciplines) that include: the innerworkings of municipal bonds and speculative financing, bondholder and municipal of debt-collection procedures, systemic public sector austerity, and the everyday experiences of water insecurity.

This dissertation provides insight into how local, state, and federal governance arrangements engage with problems associated with water infrastructure and services, and into how civil society interacts with stakeholders to affect policy change. It also provides a series of insights into the everyday experiences of households coping with austerity policies, and the financialized, predatory debt collection methods used to "make people pay," revealing the regressive politics of austerity that are intertwined with distant finance-market interests and how it impacts people's lives. Lastly, it broadens the geographical literature on austerity to show that new mechanisms of post-crisis urban governance strategies are not only an adaptation of financialization but are also the social reproductive mechanisms of racial capitalism.

Dissertation structure

I present the findings and interpretations from this dissertation in three manuscripts intended for publication in peer-reviewed journals. Each manuscript contains a discussion of the literature most relevant to the main themes of the chapter. Each chapter is meant to be a standalone piece and thus, the three manuscripts overlap somewhat, primarily in giving details of processes of municipal financialization and racialized austerity impacting local water and sewer services around which the larger study is structured. The second chapter details my methodology. The third chapter outlines the urban geographies of race and austerity. Its aim is to trace the epistemological roots, different approaches to how race and racialization have been theorized in geography and offer critiques of austerity urbanism literature which has not developed a sophisticated analysis of the racialized dimensions of austerity in U.S cities. This work has been published in the peer-reviewed journal *Geography Compass.* The fourth chapter is under revision in *Environment and Planning A: Economy and Space* and focuses on the economic and political imperatives regarding the financialization of water and sewer infrastructure and how this emerges because of the decline of federal and state funding since 1977. This chapter draws on the challenges of financing combined sewer overflows under the U.S Environmental Protection Agency (EPA) consent decrees using speculative municipal bonds. I argue that the decay of water and sewer infrastructure is pivotal for understanding the relationship between decline and race in post-industrial, Black majority cities. In preparation for submission to *Urban Geography*, the fifth chapter explores the policing of water and sewer debt in Black-majority cities by municipal actors and the growing relevance and institutionalization of disciplinary financial rules and routines around debt collection demanded by investors as leverage. Moreover, it examines how these configurations serve as preconditions to issuing municipal bonds by being presented as impartial calculative technologies by financial actors. This chapter highlights increasing household water bill debt and the rolling-out of new local practices of predatory finance in the form of mass water shut offs, housing tax auctions and wage garnishments, used as revenue-generating machines. The sixth chapter demonstrates the deeply racialized consequences of processes of urban financialization and austere governance and considers how such processes become “lived out” in these cities and work through the collateralization of racialized spaces and people. This chapter presents findings on the everyday experiences of Black households experiencing water shut offs and highlight how urban marginality and the informality of infrastructures is being produced and how such analyses can reinvent new ways of approaching how we can understand and examine everyday urban life across the North-South divide. In the final chapter, I offer some concluding thoughts on the strengths and limitations of this project and highlight the main research contributions of this thesis to the study of urban austerity. Finally, I outline potential considerations for further research related to this project.

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Chapter 2

Research Methodology: Unpacking the Black-Majority City

Relational Urban Comparison

With this research I seek to operationalize key strands of the vibrant, ongoing discussion surrounding the epistemological status of comparison in urban studies today (Robinson, 2016; Peck, 2014; Hart, 2016). In following Robinson (2005), Ward (2010) and Hart's (2018) model of relational comparison, this research begins from different nodes where ''critical ethnography and spatio-historical analysis of conjunctures and interconnections'' (Hart, 2018: 389), rather than bounded geographic entities, can highlight shared and relational processes of the financialization of Black-majority U.S cities. The relational comparison approach understands the urban as a relational assemblage of people, capital processes, and ideas (McCann & Ward, 2012). Considering this, the goal of this research is to discern how austerity and financialization interact on and through uneven and unequal socio-spatial terrains of racial capitalism to make sense of how these interactions are reshaping urban water and sewer infrastructures and its impact on everyday lives. Thus, I employed a relational comparison of multiple 'sites' that include government offices, community spaces and households across three cities, to explore various interactions of racialized debt, municipal finance, and the environment, working through the spaces and peoples these processes affect. In doing this, I examined the "relational situatedness" (McCann & Ward, 2012) of Black-majority cities under similar economic, social political pressures to stress their interconnected trajectories. By understanding the city as a dynamically evolving scale (Ward, 2010), I traced the financialization of infrastructure from different vantage points stemming from the macro-level to the micro-level. I examined the variegated assemblages of bond market actors and institutions, federal, state, and municipal levels of governance, and lastly, community spaces, and people. The terms "austerity" and "financialization" are given shape through their emergence in Black-majority U.S cities that methodologically highlights a need for an urban relational approach to analyze their contextual embeddedness.

The first section of this chapter will outline my research design of a multiple case studies approach and provides details on my case study selection. The second section will provide a thorough analysis of each method used and elaborates on how each method answered my proposed research questions and objectives. The third section is a discussion around reflexivity, my position as a researcher, and questions of ethics during the research process. The fourth section provides a full breakdown of my data collection and my approach for analyzing different sources of data. The final section provides some concluding thoughts.

Multiple Case Studies Approach

This project uses a multiples case studies approach across Baltimore, Detroit, and St. Louis. Stake's (1995, 2005) work has been particularly influential in defining the case study approach to social science research. He has helpfully characterised three main types of case study: *intrinsic*, *instrumental*, and *collective.* This project uses a *collective or multiples* case studies approach that involves studying multiple cases simultaneously or sequentially to generate a broader understanding of a particular issue. Such approach offers the advantage of allowing comparisons to be made across several cases and/or replication.

Case studies can also be categorized according to their relations to the conceptual framework. For instance, Babbie (2004) discussed two kinds of case studies – those that aim to verify, modify, and redefine existing theories and those that aim to develop new concepts. In contrast to theory verifying case studies, whose objective is to discover flaws in existing theorizations, which rather aim to enhance a stand-alone understanding of the case and which are conducted on the basis of pre-defined concepts and research questions, theory-building case studies constitute the basis for the development of more general nomothetic theories and are seldom based on pre-defined theorisations (see Babbie 2004, Burawoy 1991, Gillham 2000, Stake 1995, 2005). This research constitutes a theory-verifying case study. The main objective of using a comparative case study approach was not to describe and explain each case but to "confine the attention on those aspects that are relevant to the research problem" (Stake, 1988: 258). These case studies have been conducted based on developing a substantial body of observations and data to identify causal mechanisms among evidence. In doing so, my research has treated concepts of austerity, financialization and racial capitalism as a “rolling conversation” (Peck and Theodore, 2015: 5) rather than a coherent paradigm (see Boyer, 2006). This means thinking about theories as in constant motion, and in continuous transformation and mutation that is also contextually sensitive. The goal of comparative urban research on the post-crisis restructuring of water and sewer services is to bring attention to the common roots and shared features of financialized austerity operating in Black-majority U.S cities. This follows what Castree (2005) understands as examining cases in its context or in the same “framework conditions” where comparisons between cases must be processual rather than categorical (543).

My justification for comparing three cities draws from Jacobs (2012) work on comparative urbanism that calls for using multiple case studies and sites to adequately examine patterns of repetition, to understand not a convergent end state but, “in the direction of emergence and becoming” (905). This means examining multiple sites to understand connections and commonalities between cities, and local variations of post-crisis water and sewer service restructuring, that speak to transnational processes of financialization. Understanding repetition and difference of cities that are connected transnationally can be best researched by utilizing the multiple case studies approach (i.e. 3 or more sites of study). Multiple case studies for Jacobs (2012), “offer the possibility for us to grasp the complex, distributed, and emergent ways in which “urban-ness” circulates, mutates, embeds and disembeds, differentiates and repeats, creates convergences or generates difference” (911). In this way, such approach has allowed me to think about how to study and how to understand repeated instances of phenomena: the relationship between the financialization and austerity urbanism in majority-Black cities post-2008. This had led me to consider the importance of tracing certain “genetics” of the racialization of municipal finance processes as Robinson (2016) puts, which consists of assemblages of flows and connections, processes, and practices, to understand the emergence of such urban phenomena across several cities. phenomena across several cities.

City Selection

Typically for comparative case studies, it is argued that “nothing is more important than making a representative selection of cases” (Stake 2005: 442), and that the most important task in developing the research strategy was the selection of case studies. The selection process was conducted according to the rules of "purposive" sampling (i.e. choosing those case studies which best illustrate the processes that the research is looking to address) and "theoretical sampling" (i.e. purposive sampling where the purpose of the sampling is theoretically defined) (Silverman 2005: 129-130).

The sampling process was based on a two-part criterion. The first assessment involved the selection of a mid to large Black-majority city (with a population over 100, 000)[1] as a case study that was based on local austerity responses, such as budget cutting, and/or privatizing, outsourcing water and sewerage services, increasing water and sewer rates and cities who have been experiencing high degrees of fiscal stress since 2008 and have been experimenting with speculative financing arrangements in the bond market to fund their water and sewer services.

The second assessment involved selecting three cities to compare that have implemented a water shut-off program or other debt collection method since 2008. This is important to examine the local differences of debt collection methods to help to narrow-in on the lived experiences of broader processes of financialization shaping urban governance. Focusing on comparing urban governance of the same 'units', such as internal local government polices/programs, is referred to as the "formal equivalence" approach in comparative urban studies (Ward, 2010: 475). Using this approach to select each city for comparison based on local water and sewer restructuring programs under austerity urbanism has meant that this project has focused on the *similarities* of governance strategies reshaping Black-majority U.S cities post-2008. However, the objective was not to simply compare individual water-shut off programs per se but to examine their situatedness within global processes of financialized austerity and urban geographies of racial capitalism.

[1] This project defines "Black-majority" cities where greater than 50 percent of the American Community Survey (ACS) data in 2017 when this project started where respondents answered that they are "Black or African-American; alone or in combination with one of more other races." Data indicated that starting in 2018, the City of St Louis Black or African-American population has decreased slightly and ceased to be a Black-majorty city where as of 2019, just over 48% are Black or African-American; alone or in combination with one of more other races. (see: Charles Jaco: St. Louis is no longer a majority black city. What's next?).

Table 2.1: City Selection Summary

Black-majority City	First Criteria: Longer-term austere conditions and the fiscal impacts of the 2008 financial crisis on city budgets	Second Criteria: Water Shut Off Policy
Detroit Baltimore St. Louis	• Deindustrialization and capital flight • suburbanization via white flight • decline in tax revenues via housing foreclosures due to subprime mortgage lending • decline of federal and state revenue sharing • privatization and outsourcing. of water and sewerage services • use of speculative financial tools (such as interest rate swaps, tax incremental financing) to fund water and sewerage infrastructure • increasing long-term debt outstanding via infrastructure led development	• Mass water shut off programs following 2008 • Increasing water and sewer rates • Criminal convictions for those illegally turning on water that had been shut off (in the case of Detroit) • Foreclosing on homes due to unpaid water bills (in the case of Baltimore) • Enforcing court orders to garnish wages for water and sewer debt (in the case of St. Louis)

Although all three cities differ in respect to political, socio-economic, and cultural histories, they face similar demographic trends of white flight contributing to the contemporary production of majority-Black urban space (Hashbarger and Perry, 2019). Other structural dynamics include high poverty levels for racial minority groups (U.S Census Bureau, 2017a), and per capita incomes that fall well below the national average (U.S Census Bureau, 2017b) that can be attributed to job losses and housing foreclosures following the 2008 economic crisis. All three points indicate that each city has been operating in an environment of low and volatile tax bases prior to 2008 and have been experiencing an intensification of fiscal distress.

Studying urban geographies of racial capitalism to examine Black-majority cities can reveal the historical and contemporary racialization of space made through shared economic, financial, and political forces. Doing so, can inform the complicated legacies reproducing and deepening racial hierarchies within and between U.S cities. For studying the racialization of municipal finance, its influence on urban governance, and how this has impacted municipal water and sewer services, analytical frameworks, most notably from work in Black geographies operationalizing concepts on racial capitalism, have been imperative to work on urban austerity and race in two ways (see Pulido, 2016; Ponder and Omstedt, 2019; Bigger and Millington, 2019; Danewid, 2019; Wright, 2021).

Firstly, by operationalizing how the social construction of race becomes spatialized and the financial mechanisms by which racial capitalism extracts value from these racialized spaces and people in the urban. The logics of racial capitalism, such as how capital realizes its value through racialized means, i.e. dispossession, disposability and devaluation, serve as analytical tools to understand the raced expressions of urban geographies of financialized capital in Black-majority U.S cities. More generally, such work demonstrates the importance of understanding racial capitalism as geographically contingent and constituted (Bledsoe and Wright, 2019). Using water affordability and insecurity as case studies have shown the interconnections and more importantly, the relationality of racialized capitalism to post-crisis austerity governance, and how historical racial processes have played a role in determining access to financial markets, thereby reshaping urban development patterns and who gets access to municipal services today.

Secondly, this work reveals how processes of financialized capital accumulation rely on race/racialization/racism to produce the marginality and exploitability of Black lives that capital needs to accumulate. By examining the municipal financing of water and sewer infrastructure in Black-majority cities, I show how water shut offs and increasing water services is being used to extract revenue to make up for budget shortfalls under austerity urbanism that is dispossessing Black lives from access to water. This project shows the relevance in bringing attention to how race-making practices of debtor discipline and the policing of Black debt are the product of financialized capital and how this is reshaping everyday lives at the urban margins by further entrenching racial inequalities in the United States.

Methods

I completed seven months of research in Washington, D.C, Baltimore, Detroit, and St. Louis for this project. I spent one month in Washington, D.C, and two months, respectively, in each other city. Based in an expansive understanding of urban governance being reshaped through neoliberal restructuring and a commitment to seeing the urban environment as always mediated through political processes, this project employed a mixed methodological approach that combined interviews and ethnographic observation with extensive documentary analysis. Specifically, the methods for this project included semi-structured expert interviews with key informants, narrative interviews with households, and participant observation.

I conducted interviews with key informants, that included city employees, state and federal bureaucrats, other policy professionals, local activists, and community organizations. Finally, I used narrative interviews with key informants that included households experiencing water affordability and insecurity issues. In total, I conducted 62 semi-structured and narrative interviews (see breakdown below). This also included some participant-observation of two local water justice meetings held by organizations working against water shut offs. These primary data were supported by secondary data analysis on external reports as well as recently published local newspaper articles on water shut offs and water affordability crises, along with financial statements on bonds illustrating the financialization of water and sewer infrastructure. I also filed FOIA (Freedom of Information Requests) to get access to city-level water shut off data from 2008-2018. This quantitative data was used to track changes in water shut offs over time across each city.

To analyze the data, I triangulated these methods. The purpose of triangulation is not only to cross-validate the data, but to capture different dimensions of the same phenomenon: how austerity, urban geographies of financialization, and race are working in unison and at times, against eachother. I have used triangulation to go beyond confirming the reliability and validity of the data by corroboration with other data, but also to provide a comprehensive and systematization of different perspectives on the financialization of urban infrastructures operating in Black-majority cities and being reflexive in modifying different theories accordingly. The objective of using triangulation has enriched the process of inquiry to allow multiple perspectives to emerge from contradictions, and to make sense of such differences (Stake, 2005). Triangulating the data has provided a much clearer insight of the overall context, rather than relying on one single method to provide this.

Below I discuss each of these methods:

Table 2.2: Methods Summary

Semi-Structured Interview	**Documentary Analysis**	**Participant Observation**
Bureaucrats (Federal, State, Municipal)	Policies	Policy/Activist Organising Meetings
Policy advocates	Financial statements	Social media platforms
Activists	News articles	
Politicians	Research reports	
Lawyers	City level water shut off data	
Households/Families		

The following table shows each method and the subsequent research questions that it addressed. My research questions seek to interrogate racial capitalism and processes of financialization as working through the logics and dynamics of austerity urbanism. A main aim of this research project is to examine the conjunctural conditions of austerity urbanism at the local level and imperative forms of public service restructuring post-2008.

1. What does financialization mean in the context of racial capitalism?
2. How has financialization reshaped the policies, politics, and practices of urban austerity in Black-majority cities?
3. How are post-financial crisis governance strategies reworking urban water and sewer infrastructures in Black-majority cities?

4. How does austere measures towards water and sewer services affect urban households in Black-majority cities?

Table 2.3: Research Questions and Methods

Research Questions Addressed	**Methods**
1, 2, 3	Document Analysis
2, 3, 4	Semi-Structured Interviews
3, 4	Participant Observation
4	Narrative Interviews

Documentary analysis

The main objective of my research is to better understand the restructuring of water services at various government scales and how this has shaped the funding/financing of water services and infrastructure at the municipal level. To understand changes, and the justifications for certain policies changes, I conducted a document analysis of policies, reports, and media articles. Examining official policy documents illustrated important features of austerity urbanism in relation to municipal finance, in addition to the discourses being used by policymakers. Analyzing policy documents allowed me to understand the policy and financial arrangements between the federal, state, and municipal governments in terms of their funding responsibilities and how policies and programs are employed at different government scales, and across different geographic scales.

By utilizing document analysis of policies at different levels of government, I was able to address my first three research questions. The restructuring of water and sewer services, which includes the financialization of infrastructure at the municipal level, is in response to changes to federal and state funding arrangements over the last several decades. Therefore, examining the historical shifts of water policy in the U.S, providing an overview of federal involvement, current programs and mechanism of funding, and debates about funding needs from reports is critical to understanding bureaucratic decision-making justifications. It also served to examine key challenges proposed by policy makers when it comes to urban water infrastructure. From my findings, this included: how cities are dealing with ageing water infrastructure, the financial strain that has been placed on municipalities in providing water and sewerage services, and lastly, how this has impacted the affordability of these services. Although documentary analysis is an indirect technique of data collection and therefore has some disadvantages (see Punch 1998 and Robson 1993), it has multiple advantages which this project capitalised. The most important ones included the possibility of re-analysis deriving from the permanent nature of written sources and low cost of the data collection process (Robson, 1993). For instance, I was able to analyze documentary data, such as government reports, before interviews were conducted, and then re-analyze these documents and interpreting these documents with new data gathered through interviews.

In addition, a media analysis surrounding the financialization of water services, water affordability, and water shut offs, was conducted. Such media analysis allows further insight into my last two questions involving an in-depth assessment of water affordability crises emerging throughout each city, how municipalities are rolling out debt-collection programs, such as water shut offs, and the everyday experiences of families coping with cuts to services, increasing water bills, and subsequent debt-collection practices leaving families without water.

Following Kvale and Brinkmann (2009), who argued that in a mixed-method approach, interviews can be efficiently used in conjunction with any other method, and Berg (2004) who pointed out that interviews and documentary analysis are one of the most used pairs of methods in a case study strategy, the role of documentary analysis is to compliment and verify the data obtained during the interviews. The first stage of research documentary analysis played an exploratory role that was mostly policy analysis focused. Its objective was to establish the necessary foundations before proceeding with interviews (i.e. to clarify the issues to be discussed during the interviews and to specific the directions to be followed) to answer the research questions. Thus, doing documentary analysis has ensured the validity of findings within both series of case studies through the process of triangulation with other methods, such as participant observation and interviews.

Policy analysis of different government sources and grey literature have revealed that water and sewerage government responsibilities have been downloaded onto local governments over the last 40 years under the Safe Drinking Water and Clean Water Act. In addition, limits to the financing of water and sewer structure at the federal level have placed a financial strain on local governments' budgets. This has been a particularly important issue for older, post-industrial cities who have been facing an imminent threat of deteriorating water and sewerage infrastructure. Such findings shaped this project's interviews to focus on how Black-majority cities are coping with downloaded fiscal responsibilities and what this means for the affordability and insecurity of water.

Semi-structured expert interviews

The main data collection process took place using semi-structured interviews and the objective was to get a sense of policy processes, but also meaning of such processes, and experiences. Interviews are considered processes of knowledge creation that require a structured yet flexible approach (Crabtree and Miller 1999: 91). Using a semi-structured model of interview design, interviews followed a pre-determined set of questions while allowing for flexibility within the interview itself.

The main role was to access "people's perceptions, meanings, definitions of situations, and constructions of reality" (Punch 1998: 174), to understand a diversity of local contexts and to access contextual knowledge that existed in the relationship between interviewed people and their environments. Expert or elite interviews generally involve those holding expert knowledge. Meuser and Nagel (2009: 18) define an expert in two ways. Firstly, as a "person who is responsible for the development, implementation, or control of solutions/strategies/policies", and secondly, as a 'person who has privileged access to information about groups of persons or decision processes." In other words, expert interviews serve to gather data from a person who has exclusive knowledge on a societal issue or topic (Doringer 2020: 20.) In the context of this work, this project follows Baker et al (2020) in framing the status of experts or elites in a way that is context specific. This means categorizing people in positions of relative power based on political authority, money, knowledge, and social connections in their ability inform policies. This means moving away from focusing on the role of elites as solely operating in state institutions and maintaining a form of political power, or possessing an economic or intellectual resource, such as academics or consultants (Baker et al, 2020: 132). Rather, this project draws on work that theorizes "ordinary civil society actors" as experts based on their situated experience (see Baker and McCann 2018; McCann, 2011; McCann & Temenos, 2015; Temenos, 2017).

Conducting expert interviews with key informants (as listed above) involved state-elites as well as ordinary elites, that includes activists, residents, and community organizations to provide an in-depth picture into the financialization of Black-majority cities and how local governments are responding to state and federal direct subsidies cuts following the 2008 financial crisis. More specifically, these expert interviews provided insight into how water services are being restructured under austerity agendas, and what have been the everyday experiences of families who are bearing the consequences of financialization.

Semi-structured expert interviews answered the entirety of my research questions with different groups of interviewees being targeted to address each research question. For instance, interviews with policymakers, such as experts in the field, along with state and government officials, answered questions pertaining to broader changes in policy towards the financialization of water infrastructure, and about cuts to funding from the federal and state level. Municipal government officials, lawyers, and activists were asked questions pertaining to the municipal restructuring of water services. Finally, other activists and local organizations were asked questions related to their everyday experiences of coping with water insecurity. The aim was to gain a diversity of perspectives and opinions on these key issues, and more importantly, to gather differing subjective meanings from each group interviewed that related to their understandings of austerity governance and the financing of local water services. Such views are then meant to complement each other to lead to a fuller picture of the problem being researched.

Narrative interviews

Interviews also involved unstructured narrative interviews with households to build knowledge on how the financialization of water is "lived out" in cities by exploring the everyday realities of people struggling with water affordability issues and living without water. A narrative interview consists of the researcher asking an open-ended question that invites the interviewee to respond in a narrative form (i.e.through story-telling and retelling experiences of events as they happened) (Enosh and Buchbinder, 2005). Researchers using narrative interview techniques do not set out with a fixed agenda, rather they tend to let the interviewee control the direction, content, and pace of the interview (Jovchelovitch and Bauer, 2000).

Narrative interviews are used mostly when research involves asking participants to tell their stories on potentially sensitive and emotional topics (Guenette and Marshall 2009). Rather than assert or announce a series of questions, narrative interviews allow for more exploration and engagement by encouraging participants to engage with their stories on their own terms and giving them an “epistolary voice” to create new meaning and understandings (Guenette and Marshall, 2009: 86). Asking participants for a response that describes their experience - in which they are the "i" or narrator - helps to deconstruct power relations between the researcher and participant, and places situated knowledges at the forefront of the research agenda. In my work, conversations began with an open-ended interview question which led to participants telling their story and sharing their personal experiences of living without water and how this has affected their everyday lives. Questions about the participants, and questions related to water affordability were first asked to build a demographic picture of those experiencing water affordability issues across all three cities.

All participants were contacted through publicly available contact information, and snowball sampling. All interviews were voluntary. Informed consent forms were given to all participants and reiterated verbally. All identities were kept anonymous unless individuals explicitly stated their identity could be used. Most people contacted to take part chose to participate. I felt a near complete view of the financialization of water services was attained after 62 interviews as my interview questions were adequately addressed by all range of actors in detail providing a wide range of data and differing perspectives. The interviews ran from thirty minutes to two hours, but the majority generally lasted forty-five minutes. Most interviews were conducted in-person. When in-person interviews were not possible, Skype or phone interviews were conducted. Data collected ended after a period of one year when a saturation point had been reached. I conducted and transcribed all interviews (see Table 3 for a complete breakdown of different groups interviewed and the method of interview used).

Ethnographic observation/participant observation

By using a multi-sited approach across three cities to examine the urban geographies of financialization in Black-majority cities, I used ethnographic observational methods, such as participant observation. This method allowed me to address the last two research questions. Field notes were taken during and after visits to each site. Throughout my fieldwork and developing relationships with activists and organizations for several months, I was invited to observe local organizational water service delivery sites and attend two water justice organising events where I was granted permission to observe and take part in the meeting. There were a few reasons to take part in these meetings as a participant observer. One reason was to gain a better understanding of knowledge production and informal ways of doing things in the context of what is happening "on the ground" in terms of the affordability and accessibility of water, and how local community organizations are contesting these spaces through aiding families and using advocacy to create policy changes.

Second, this also served to build trust and gain access to families to interview through the relationships I developed by working with activists and organisations. The purpose of participant observation for my research was to identify and guide relationships with informants, such as activists and organizations. Moreover, it served to familiarize myself with the community, build trust, and be able to involve myself in 'sensitive' activities which would not have been possible otherwise, especially in the context of discussing "race" to a white researcher in an interview setting. As Skovdal and Cornish (2015) describe, "direct access to behaviour in its natural context is the most highly prized strength of participant observation research" (78). Participant observation in meetings I attended with majority-Black participants meant that discussions about 'race' was freely and more keenly discussed with other organization and community members and participants fully engaged with their thoughts and perspectives in comparison to one-on-one interviews.

Positionality, reflexivity and ethics

Research is relational, a process that consists of dynamics of trust and relationship-building. The positionality of researchers within broader dynamics of identity and power matters and can determine both what sorts of research possibilities are available and what sorts of conclusions are developed. Research in Black-majority cities – in which racial differences and dynamics -- can be profound. This is especially true given the long histories of racist research and exploitation throughout the social sciences when researching Black populations in American cities. According to Berger (2015: 220) a reflexive research practice is commonly viewed as the process of continuous internal dialogue and critical self-evaluation of researcher's positionality as well as active acknowledgement and explicit recognition that this position may aid and hinder the research process. Engagement with reflexivity is important for thinking through what sorts of research possibilities were available to me and what access I had based on who I was. The positionality of the researcher therefore directly affects fieldwork, the research process, and what types of data we can gain access to since "the everyday lives of the researched are doubly mediated by our presence and their response to our presence" (England.1994: 248). Since fieldwork can never be separate from our positionality, it is therefore always personal and subjective (England.1994: 248). Therefore, reflexive research is important for considering its complex meanings and contribution to the understanding of social phenomena and of the process involved in knowledge production (Berger, 2015: 221). According to Russel and Kelly (2002: 37), the absence of reflexivity may lead to acceptance of an "apparent linearity" that can obscure unexpected research possibilities and lead to misrepresentation of data. However, as England (1994) rightfully agues, although reflexivity can make us as researchers more aware of unequal power relations during fieldwork and exploitative relationships between the researcher and participants, it cannot remove but only minimize them (250).

My position as a white graduate student gave me privileged access to the research process and enabled me to engage to with different research participants across levels of profession. This was especially true regarding interviews with government bureaucrats, where my positionality gave me access that others may not have had. In addition, I was often given access to documents that were not publicly accessible. As such, my research benefitted from my relationship to a UK university. Municipal, state, and federal government officials typically understood me to be on “their side” and therefore, were more willing to discuss and go into detail when answering questions. This has offered insights into the institutions through which policymaking is produced. The role that I played due to being seen as a professional ‘elite’ through my academic status was embedded in a specific network that allowed me to gain access to information by other elite bureaucrats who understood me be within their network. This is referred to by Kuus (2020) as a “transnational elite field” that “flatten formal hierarchies and hybridize forms of expertise” (8). Therefore, I became part of a network and space associated with the production of professional expertise through my position as an academic. In this sense, my role as an interviewer varied within different contexts and different actors that I was engaged with. questions. This has offered insights into the institutions through which policymaking is produced.

The issue of power is perhaps of greatest importance in relation to my narrative interviews with residents at the periphery who were experiencing water shut offs or other water affordability issues. In this case, my positionality as a white researcher in Black communities created tensions – and therefore, the research process in these instances was focused on building solidarities and relationships, rather than about the direct politics of expertise as was the case with my semi-structured expert interviews. This required sustained relationship building over several weeks, even months. I met with organizations several times outlining my research and introducing myself to members in the community before beginning research. This also included ethnographic observation with water justice organizations to build trust with each household before conducting interviews. Acknowledging my privileged position and that a segment of the research will be conducted within a position of unequal power between a white researcher and low-income, Black households experiencing water insecurity, I used narrative interviews to be more participatory in my methods to allow participant to control the knowledge production of the interview and share their experiences on their own terms. Thus, attention was paid to not engage in processes that will circumvent misinterpretations, misinformation, and misrepresentations of individuals, communities, institutions, and systems (Milner, 2007: 388). As Milner (2007) proposes, “when researchers are not mindful of the role of their own and others’ racialized positionality and cultural ways of knowing, the results can be dangerous to communities and individuals of color" (388). The cumulative effect of all the conversations and encounters I had over the course of seven months in each city is this dissertation.

The research process was conducted with full observance of ethical norms and rules. Attention paid to all possible ethical issues was largely dictated by the research strategy adopted. As Stake (2005) put it, "case studies often deal with matters that are of public interest but for which there is neither public nor scholarly right to know" (459). Thus, regarding the analysis of different written sources, all the documents were quoted accordingly, and attempts were made not to misinterpret any piece of data. Similarly, ethical norms were considered during the interviewing process. No interview was made and recorded without prior consent of the interviewee. All interviewees were informed about the objective and details of the project and about the way the obtained data will be used. The transcribing process was conducted as faithfully as possible. By the same token, all efforts were put in ensuring that the analysis would avoid any misinterpretations. Every interviewee who wanted to authorize the interview before its use has been provided with the transcription by email. The ethical responsibility was also explained in each case, if necessary. Each interviewee was guaranteed confidentiality, the findings were communicated in a form that was ethically sound and all potential consequences of the research for all subjects involved was considered.

Data Collection and Analysis

This research project was conducted in three separate phases to complement different methods and to specify, confirm, and correct my findings through the research process. The first phase consisted of a preliminary research and comprehensive scoping project. This involved a policy and media analysis to gather information and data on water affordability issues and the financing of water and sewer services across Black-majority U.S cities. Two policy reports that were pivotal to preliminary data collection included: 1) A 2016 report from the U.S Government Accountability Office (GAO) about the state of financing of water infrastructure in post-industrial U.S cities and 2) A 2012 report from the American Water Works Association (AWWA) on the dire need to replace the nation's ageing water and sewer systems that is reported to cost $1 trillion over the next 25 years, and lastly, the affordability issues this may pose.

This phase also entailed identifying key actors to interview based on specific groups of people targeted. Some were visible due to their public presence online, however others, such as households, were invisible at first. This required continuous relationship-building in the community to be able to identify. This was done through spending time over several months in each community, introducing myself at community meetings to different people, and setting up pre-interview meetings. The second phase consisted of fieldwork and 62 semi-structured and narrative interviews with key figures and participant observation of water justice organizational sites and meetings to gain an in-depth understanding of how communities are contesting water crises in their city and the everyday impacts of water insecurity (see Table 3 for breakdown of interviews). The third phase involved the transcription of interviews, data analysis, and the dissertation write-up.

Phase 1: Preliminary Research and Scoping

The first phase involved a comprehensive scoping project. The goal was to gain an understanding of the financialization of water and sewer services and urban austerity in Black-majority U.S cities. Particular attention was given to scoping and selecting each city to compare and identifying key actors to interview. I began by examining grey literature and policy documents relating to the municipal, state, and federal funding of water and sewer services. This also included looking at various policies, programs, and practices related to water affordability in each city through examining local government websites and their related local ordinances and financial deals with bondholders on water affordability and payments plans, debt collection practices, and how they are enforced.

Phase 2: Fieldwork Data Collection

Through policy documents and media articles, online public sources, and snowball sampling, key actors were identified across each city. A total of sixty-two semi-structured expert and narrative interviews were conducted during the span of seven months. One month was spent in Washington, D.C conducting interviews with federal level bureaucrats in the U.S Environmental Protection Agency, the U.S Government of Accounting Office, and the U.S Congressional Budget Office. A subsequent two months was spent in each city interviewing local and state government officials, lawyers, policy advocates, activists, and households. The aim of interviews was to collect qualitative data to access "people's perceptions, meanings, definitions of situations, and constructions of reality" (Punch 1998: 174), to understand a diversity of local contexts and to access contextual knowledge that existed in the relationship between interviewed people and their environments. Topics included: "What are the biggest challenges facing [this city] when it comes to the funding and servicing of water and sewerage services?; How has debt and financing to pay for operations and capital investment impacted water service provision and affordability?" (See Appendix A for a full list of sample interview questions).

Data analysis entailed transcription of interview recordings. The transcribing was done verbatim to ensure the highest possible level of validity and reliability (Kvale and Brinkmann 2009). The analysis of interviews was conducted according to what is known as the Miles and Huberman framework for qualitative data analysis, where the objective is to outline "lawful and stable relationships among social phenomena, based on regularities and sequences that link these phenomena" (Miles and Huberman 1994: 4). Thus, interviews were coded using both inductive and deductive themes.

Table 2.4: Breakdown of Interviews

Participant Groups	In-person interviews	Video call interviews	Phone interviews
Elected government officials and bureaucrats (municipal, state, federal)	17	2	1
Policy advocates/consultants	5	2	0
Lawyers	4	0	0
Local activists	8	0	0

Community organization staff/front-line workers	8	1	0
Media reporters	3	0	2
Residents/households experiencing water shut offs or water insecurity	8	0	1

Providing that the documentary analysis focuses on various types of sources and that the interviewees represent different groups of interest; data was triangulated with field notes from participant observation and documentary analysis. The purpose of triangulation was not only to cross-validate the data, but to capture different dimensions of financialization, austerity urbanism, and access to water. The logic behind triangulation was corroborative (Mathison, 1988) where findings are expected to converge to be validated. However, under this strategy contradictory and inconsistent data can pose a serious issue when employing several methods that may result in opposing views. I was able to deal with contradictions by looking for theoretical and/or empirical explanations for contradictions amongst different sources of data. The way I used triangulation was to go beyond using this method to simply confirm the reliability and validity of the data by corroboration with other data, but also to provide a comprehensive picture of each case study. The goal of triangulation was to enrich the process of inquiry and to allow multiple perspectives to emerge from contradictions, and to make sense of such differences.

Direct participant observation of community organizations working on water justice issues was also a key method that was used in combination with interviews. This involved attending policy and planning meetings and direct service delivery meetings. I used field notes that primarily focused on: (1) the nature of policies, programs and practices being discussed; (2)

the types of direct service delivery and programs employed in the community; (3) interactions between community organizational members and residents' experiences water affordability issues.

Conclusion

In this chapter, I have set out the methodology upon which the rest of this project will proceed and have justified the case study strategy and the qualitative methods were effective to answer the research questions at hand. I have argued for a model of relational urban comparison for understanding specific urban developments as evidence of contextual variation within wider interconnected processes of finance, governance, and the workings of racial capitalism. This means thinking comparatively with connections and considering the relational processes that shape cities while also attending to variations (Robinson, 2016). It is in the U.S Black-majority cities of Baltimore, Detroit, and St. Louis that I identify as practicable sites for research based on similar uneven racialized development trajectories and fiscal pressures of local water and sewer restructuring following 2008.

The bulk of the data was collected using semi-structured expert interviews. Rather than focusing on solely policy actors as experts (see Legrand, 2012), this project also incorporated activists and community organization workers as expert actors on the topic of urban austerity and its impact on water and sewer services. The community mobilization and experiences of "ordinary people" (Baker, et al, 2020) have been actively involved in contesting and shaping policy when it comes to water affordability, and thus, this research has been enriched by attending to these civil society actors.

While understanding the broader political economic and financial dynamics with government and financial sector informants was a relatively straightforward process, apprehending the lived dimension of the financialization of water was much more complex. This complexity necessitates a deeper immersion through participant observation and narrative interviews where theoretical, political, and ethical dimensions were outlined and justified. Being sensitive and reflexive to the nature of power relations when researching marginalized groups is important, but this research taught me that it does not remove them. Future research would be strengthened by adopting a more participatory, less hierarchal, and reciprocal research alliance between the researcher and the researched to counterbalance this inevitability. The next chapter now turns to elaborating on my theoretical framework for analysis in subsequent empirical chapters.

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Chapter 3

Rethinking geographies of race and austerity urbanism

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Introduction

Following the 2008 economic crisis, trillions of private banking debt have been offloaded to the public sphere in which the consequences are being measured in terms of a deeply embedded fiscal crisis of the state (see Blyth, 2013; Peck, 2015). Since then, the cost-savings logic of neoliberal regulation has advanced policies of austerity. Extreme budget cuts and resulting deterioration of the welfare state have been justified in the name of bailing out banks and investors. In the fields of geography, political science, and sociology, austerity policies have become a key consideration for studying ongoing state restructuring of the urban and the socio spatial repercussions. The debate on contemporary austerity tends to highlight that fiscal retrenchment goes past the management of the financial crisis and is rather a fundamental aspect of a longer-term neoliberal project which aims to redefine and reinvent the state at the local level (Donald, Glasmeier, Gray, & Laboa, 2014; Krugman, 2012; Peck, 2012). The pattern of "rolling back" the state to facilitate the privatization of the urban has become a key feature of neoliberalism. The examination of this concern is most recently discussed in the literature on austerity urbanism, characterized as disempowering and dismantling systems of social protection; restructuring, rescaling, and downsizing the state; and shifting the locus of risk and responsibility on to the public and to the poor and marginalized, in particular.

In this paper, I argue that there is a lack of engagement with topics of race and austerity urbanism that conceptualize such processes as interconnected through historical and contemporary economic processes of uneven racialized development. What I am proposing is that austerity is always racialized, and thus, more research in geography is needed to examine the variegated interactions of racialized austerity to reveal that such policies do not govern in a homogenous manner but rather operate on historically and geographically distinctive terrains of racial domination and empire. Such absence of analysis has limited how we understand state restructuring, financialized capitalism, and the reconstitution of historical processes of racial domination into new urban forms. The first section of this paper provides a brief overview of the literature on austerity urbanism. By drawing on discussions of the origins of austerity urbanism conceptually, along with discussions of the social implications of austerity policies, I argue that the current austerity urbanism literature treats race as merely an afterthought when theorizing economic and political processes of austerity. The next section draws on varying perspectives in geography that attempt to centralize race, followed by an overview of emerging literature that looks at austerity urbanism through the lens on racial capitalism. Cedric Robinson developed the term "racial capitalism" in 1983, arguing that racism was a structuring logic of capitalism. Rather than treating race as a social position, my analyses will offer an understanding of racialized austerity by framing race as a process and bringing forth literature which theorizes how racism can be harnessed by economic processes and how this materializes in the urban. To better understand uneven geographies of austerity, critical theories of race can offer nuanced perspectives about how neoliberalization operates through and acts upon sociospatial relations of race. The final section discusses the critical importance of having more discussions of the relationship between race and austerity, calling for greater considerations for international comparative approaches across the global North and South.

Race as more than just a social implication of austerity

Austerity has been understood and theorized in a number of different ways. Some scholars theorize the political and ideological institutions of austerity, focusing on the intellectual genealogy of the term (Blyth, 2013; Callincos, 2012; Crotty, 2012), or how certain doctrines of austerity have been used to contend the dangers of debt and deficits to erode the welfare state (Krugman, 2015). Other scholars have understood austerity as an emergent technique of governmentality or mode of citizenship which demands we speak to those lives that are being restructured. Instead of examining financial and economic implications of austerity, some feminist literature in political economy and urban geography has researched personal and intimate geographies of austerity, that is, how austerity seeps into personal and family lives

(Gray, Edwards, Hayes, & Baxter, 2009; Hall, 2015; Harrison, 2013; Jensen & Tyler, 2012; Pollard, 2013; Smith, 2000). This literature understands state economic restructuring as produced through and productive of social relations of difference. For instance, Hall (2015) engages with the financialization of everyday life and family practices to show the importance of incorporating emotions and relationships that are a part of everyday life to understand how individuals and families are dealing with the impact of austerity (p. 326). Hall's (2017) work is also about the materiality of austerity—more than policy, it is understood as a lived reality. Other studies such as Gray et al. (2009) and Harrison (2013) have also explored everyday family experiences of the recent economic recession.

The body of work that I will draw on for this paper is from those who conceptualize austerity as a process of ongoing state restructuring, theorizing cities as central sites of the uneven advancement of neoliberal restructuring projects. Peck, Theodore, and Brenner (2009), Brenner and Theodore (2002), Jessop (2002), Swyngedouw (1997), and Harvey (1989) focus on the path-dependent interactions between neoliberal projects of restructuring and inherited institutional and changing urban landscapes over the last several decades. The historic financial vulnerability of cities is understood to be the result of decades of global economic restructuring. Theorized through the lens of neoliberal urbanism, that is, previous forms of entrepreneurial governance (Davidson & Ward, 2014; Harvey, 1989), high-risk, speculative growth strategies devised left cities exposed to the volatility of the financial and housing markets (Davidson & Ward, 2014). The deregulation of capital and the decline of state-revenue sharing facilitated a municipality's reliance on continuous bonds and speculative investment to finance their spending and day-to-day operations. This work has engaged with the concept of "actually existing neoliberalism," as a way to explore the ongoing production of neoliberal reforms within local spaces "defined by legacies of institutional frameworks, policy regimes, regulatory practices and political struggles" (Peck et al., 2009, p. 50). Through this lens, cities are argued as central to the reproduction and mutation of neoliberalism since the 1990s (Peck et al., 2009).

My focus is on the latest round of state restructuring in the form of austerity urbanism that was perpetuated by declining city revenues as result of broader macroeconomic forces following 2008, such as unemployment, stagnant wages, and lagging property values (Hinkley, 2017, p. 60). The origins of austerity urbanism are reflective of the prevailing structural deficits present in U.S. cities, and previous rounds of neoliberal state restructuring (Tabb, 2014, p. 91). However, the post-2008 financial crisis led to new forms of extreme austerity. Hackworth (2007) understands cities operating in a longer term, systemic age of austerity due to their increasing reliance on credit markets to access capital to fund social services and finance capital infrastructure. His work finds that the decline in federal support for urban development has been simultaneously replaced by an increase in municipal debt (p. 769).

In attending to questions regarding the socio-spatial unevenness of austerity, urban concerns have been well documented in the literature (Donald, et al, 2014; Gonzalez & Oosterlynck, 2013, Peck, 2015). For instance, case studies illustrate these struggles in the form of budget service cuts, downsizing government operations, eroding workers' benefits, and increasing user fees/rates. These are just a few ways in which cities are coping with the effects of the crisis. One main theme discussed in the literature is the tendency of nation states to respond to fiscal shocks by passing responsibility to lower tiers of government and this converges around how is it that certain marginalized groups have come to be particularly affected by contemporary austerity policies (Donald et al., 2014; Peck, 2012). Scholars discuss austerity as a politics of displacement and emphasize the relational aspect of austerity, highlighting the intra-urban geographical consequences of austerity (Donald et al., 2014; Hinkley, 2017; Peck, 2012, 2015). By rescaling the state through downsizing via service cuts, literature has examined their differentiated impacts on those marginalized.

For instance, Donald et al. (2014) provides a compelling look through empirical evidence at how austerity measures disproportionately impact low-income, marginalized communities through increases in level of intra-level inequality to consider the social implications of austerity on racialized groups. As Donald et al. (2014) explain, cuts in funding for local governments, along with policy shifts that include significant reductions in welfare benefits and a shifting of responsibility for certain social services, have major impacts on the poor and economically vulnerable (p. 10). Their examination of racially segregated neighborhoods in San Francisco shows increased levels of concentrated poverty since 2007, where marginalized communities are left with fewer assets and resources, such as good schools, and health facilities and open spaces, that include unwanted lands uses, such as contaminated brownfield sites (p. 9).

Moreover, Davidson and Ward (2014) argue cities that are financially struggling are generally faced with the greatest pressure to downsize are also the ones that face the greatest difficulties in managing populations "disadvantaged" by the fiscal crisis. Peck (2015) further notes that financially struggling cities are unable to absorb the costs and risks that have been downloaded onto them by higher levels of government and the financial sector, and thus, these cities will have no choice but to reciprocally offload themselves (i.e., implementing their own austerity measures to city services) and the adoption of fee-based systems which "will have devastating consequences for communities of color" (p. 19). Other work, such as Hastings, Bailey, Bramley, and Gannon (2017), examines the mechanism by which austerity cuts are being transmitted to the marginalized, and how these service cuts are experienced by marginalized groups. Comparing U.S. and U.K. cases together, they show how service reductions accumulate more quickly and more intensely in poorer and more marginalized neighborhoods. Second, they find that the reason why the worst impacts of austerity cuts were experienced by poorer groups was a result of the notion that better-off users had more of a capacity and the resources to protect themselves from the damaging consequences of austerity (Hastings et al., 2017, 2020). Through the concept of "dual regressive distribution," they argue that austerity urbanism involves a relational strategy: Targeting cities leads to targeting the poor and marginalized.

Throughout this literature, uneven development and the unequal social implications are argued as key to understanding austerity urbanism in the U.S. context (Davidson & Ward, 2014; Peck, 2012, 2014; Tabb, 2014), which includes discussions of the gendered, classed, and racial consequences of austerity. However, academic debates have yet to fully interrogate the role of race in analyses of austerity urbanism. Particularly, in both conceptual and concrete terms, examining why certain marginalized groups experience the costs of austerity the way they do, particularly for racialized communities, is absent in the literature on austerity urbanism. Very little research includes a discussion of race and racialization in contributing to the origins of urban austerity. In the current literature, racialized groups are seen and mapped onto austerity policy outcomes, rather than revealing how periods of neoliberalization modify the way in which race and racial inequalities are experienced in society, or how race and racism as inextricably embedded in processes of neoliberalism (see Robert and Mahanti, 2010).

Centralizing race in geography

Recent geographical scholarship has begun to incorporate critical theories of race, taking "race" as the central organizing principle of the economy, while also framing "race" as a process, that is, racialization (Inwood and Bonds, 2013; Wyly, Moos, Hammel, & Kabahizi, 2009; Bentley et al., 2015; Parks, 2012; Derickson, Hankins, & Cochran, 2012; Woods, 2012). Critical theories of race reject the notion of race as simply being a fixed, empirical marker of social identity—and instead use racialization to understand the racially grounded social relations embedded in economic processes (Kobayashi, 2012, p. 646). Racialization is a term used by scholars to emphasize that racial categories are social constructions that change in time and space. For instance, Omi and Winant (1994) offer a racial formation theory to describe a sociohistorical process that emphasizes for us to not envision a single, monolithic, and dominant racist project but rather to view race as existing in a dense matrix, operating at varying scales, networked with each other in formally and informally organized ways, and is actively working through social relations, institutions, identities, and experiences (p. 55). Their arguments point to the importance of asking how and why state structures enforce a racially unjust set of institutions producing inequality. Omi and Winant's (1994) discussion on racial formation has been influential, particularly to geographers in asking important questions related to power, such as what does the racial state have at stake in this process of creating inequalities?

Considering the interlinked nature of race and capital where anti-Blackness an "always-present precondition for capital accumulation" (Bledsoe and Wright, 12), other critical theories of race have provided human geographers with a relational approach for examining race in markets and the economy, and to explore the changeable construction of places in ways that emphasize both the structural dimensions of capital accumulation as well as contingency, difference, and complexity (Massey, 2004). This means emphasizing race as not just an effect of capital relations and accumulation, but rather is "a systemic presence that is thoroughly embedded in economic paradigms, institutions, practices, and actors" (Bonds, 2013, p. 399).

Such a relational approach has enriched our understanding of thinking about the coproduction of racialized power working through uneven economic geographies, and how processes of racialization coincide with and transform changing economic conditions (Bonds, 2013, p. 403).

In understanding the relationship between race and state restructuring in an austerity context, I argue that scholars should draw on critical geographies of race (Bonds, 2013; Inwood & Bonds, 2012; Kobayashi, 2014; Kobayashi & Peake, 2000; Price, 2010), which includes work on Black geographies (McKittrick, 2011; McKittrick & Woods, 2007), and critical race theory (Omi & Winant, 1994) to frame race as a process (i.e., racialization) that preconditions austerity measures. Taking the centralization of race seriously, both analytically and politically, in topics of geography has mostly been informed by critical theories of race in engaging with questions of scale, belonging, and displacement (Price, 2010, p. 153). Kobayashi and Peake (2000) for instance describe racialization as a process, "by which racialized groups are identified, given stereotypical characteristics, and coerced into specific living conditions, often involving social/spatial segregation and always constituting racialized places" (p. 393). In this sense, racialization is framed as always having a specific geography and spatial expression where inequalities between racial groups are operationalized through spatial relations (Bonds, 2013, p. 399).

Scholarship on Black geographies, such as the work by McKittrick and Woods (2007), notes the current geographic management of blackness, race, and racial difference hinges on a longstanding plantation past and forms of imperialism. They call on scholars to analyze how we are still living in the legacies of these processes and thus to situate racial inequalities within this framework (McKittrick & Woods, 2007, p. 6). Particularly in relation to the urban, McKittrick (2011) utilizes the term "urbicide" to explain the deliberate death/decline of a city and conceptualize how the very fabric of colonial relationships serves to mark black bodies as placeless entities, justifying their visible and invisible death in the city that works through capitalist systems.

Employing critical theories of race to understand the omnipresent and spatial expression of racialization can help geographers explore how racialized difference is reconstructed within neoliberal regulatory regimes. This would offer important insights into the multiplicity of ways race and racism are inextricably linked to economic modes of production on behalf of the state by considering how the racial state came to be what it is and follow the logics it does, when governing the economy. Mullings (2012) argues that while human geographers have utilized political economy approaches to examine inequalities that affect different racial and ethnic groups, "few have looked at the discursive and material practices and processes by which social constructions of race and ethnicity structure and transform economic relations" (p. 411). For instance, some have examined race in the context of neoliberalization moving towards a more nuanced epistemological approach where "institutions matter" in the making of economic geographies (Wyly, 2009; Roberts & Mahtani, 2010; Theodore, 2007) and have attempted to fill gaps in the literature by moving away from an economic reductionist approach and incorporating forms of regulatory capacities, governing routines, and institutional regimes to highlight how race is produced and maintained.

Drawing on historical and geographical legacies of residential redlining, some work has demonstrated that geography and race influenced capital flows during the subprime mortgage crisis. Predatory lending for subprime mortgages targeted racial groups, perpetuated old racial hierarchies, and left communities vulnerable to foreclosure and debt burdens (Aalbers, 2009; Wyly et al., 2009). Loss of revenue from the decline of property tax revenue and reductions in spending reforms have placed some local governments into a series of fiscal crises, paving the way for austerity. Through this lens, austerity can be seen as a racialized process when examining cuts to localized welfare programs and the effects this can have on communities of color who in times of economic crisis are less financially secure to cope with job and wealth losses and heavily rely on the welfare state.

Thinking about the racialization of austerity programs as state restructuring that has been uneven, and historically organized along racial lines, would provide a way to examine how the current post-crisis moment allowed for the development of new discourses and policy practices that reinforce and justify processes of exclusion via state restructuring and austerity cuts. From this lens, it is important that austerity urbanism research finds ways to re-examine how neoliberalism and race are conceptualized in geography, arguing for the "need to consider race as an organizing principle of society that neoliberalism just reinforces and modifies" (Roberts & Mahtani, 2010, p. 250).

Taking Roberts and Mahtani (2010) conceptualization of race as central to the production and reproduction of neoliberal urbanism, rather than simply a consequence or unfortunate outcome of it, calls on scholars to do more than map how processes of neoliberalization have racialized results and instead focus on the ways neoliberalism is fundamentally raced understanding that such policies reinforce racial hierarchies and racist ideologies in society. To show this, they draw on shifts in media discourses that previously demonized new immigrants to now focus on the utility and productivity of immigrants for benefitting Canada's economic growth—depicting a relationship between racialization representation in fostering neoliberalism (p. 251). They call on scholars to explore austerity urbanism post-2008 in the context of ongoing state rescaling as a social process that is connected to neoliberal regulatory regimes that draw on discourses of individual responsibility and anti-welfare redistribution that actively produced racialized spaces (Roberts & Mahtani, 2010, p. 248).

To address the interconnections between race and austerity that is sensitive to the inter-scalar conditioning of governance and policy, Bonds (2013) refers to as a "relational racialization" that examines the co-production of race and economic processes, and how racialized difference is constitutive of the economy—where race is not only embedded but also a precondition for the functioning of economic systems. Such approach requires a "centralizing of race" (Price, 2010, p. 3) on topics of political economy. Geographic studies on recent topics such as residential segregation, redlining and racist lending practices, transportation agendas, all demonstrate how race is linked to forms of governance, certain cultural ideologies, and state apparatuses, to provide certain elements to sustain the circulation of capital that is geographically embedded. In the work on austerity urbanism, this means thinking about the uneven spaces of austerity policies, decades of downloading public service responsibilities to local governments that has intensified post-2008 in conjunction with systems of institutional racism to narrow-in on who "austerity bites" within cities themselves, and why the consequences of austerity impact racialized groups the most severely.

Rethinking austerity urbanism through the lens of racial capitalism

Critical theories of race have given scholars the analytical tools to unpack how capitalism engages with racialized concepts to further reproduce itself in the urban. A growing number of scholars (Lowe, 2015; Pulido, 2016, Ponder, 2018; Ranganathan, 2017; Bonds, 2019; Danewid, 2019; Ponder & Omstedt, 2019) are conceptualizing austerity urbanism as part of a larger process of racial capitalism. The term 'racial capitalism' was first used by Cedric Robinson in 1983 to illustrate the key role of race and racism in the development of capitalist society. As Robinson (1983, 2000) explains, capitalism did not originate from a revolutionary negation of feudalism but evolved from an already racist culture of Europe "to produce a modern world system of "racial capitalism" dependent on slavery, violence, imperialism, and genocide" (2000: 3). Throughout his work, Robinson (2000) argues that Black labour and the racialization of people and spaces was intrinsic to capitalist industrial production. Thus, what we typically designate as 'capitalism' has historically been 'racial capitalism.' How, then, does 'racial' part work in 'racial capitalism' work?

Capitalism depends upon the social construction of race to reproduce and extract value whereby "economic value is derived from devaluing spaces, places, and labour of racialized groups of people" (Ponder, 2017, p. 15). According to Lowe (2015: 150), capital expands itself by "seizing upon colonial divisions, identifying particular regions for production and others for neglect, certain populations for exploitation and others for disposal." As an analytical framework, racial capitalism brings distinct forms and logics of colonization together into a relational "global history of colonial modernity" (Morgensen, 2011, p. 65), organized around racial hierarchies and ideologies (da Silva, 2007). What both Robinson (2000) and Lowe (2015) elaborate as racial capitalism includes: setter colonialism, slavery, genocide. Others focus on the more contemporary moments of racial capitalism, such as how forms of racial warfare, working thorough housing markets (Bonds, 2019; Taylor, 2019), the environment (Pulido, 2017; McClintock, 2018), policing and mass incarceration (Gilmore, 2007; Wang, 2018), and logics of finance (Ponder, 2021; Jenkins, 2021).

In this way, capitalism is not external to racialization, racial differences, and/or racial formations – but depends on them to survive. As Melamed (2015) argues, “racism enshrines the inequalities that capitalism requires" (77). Melamed (2015: 77) goes deeper in her conceptualization to understand the inner-workings of contemporary racial capitalism that involve a “system of expropriating violence on collective life itself.” Gilmore (2002) has a similar understanding of racial capitatim, that is described as a form of slow violence and works as a state-sanctioned or extra-legal production technology to reduce life to the relations to sustain neoliberal capitalism and thereby exposes certain populations to premature death. Focusing on contemporary financialized capitalism, race-making practices are fundamental to processes of financialized capital accumulation because race/racialization/racism produce the marginality and exploitability of lives that capital needs to extract value – through land, debt, labour, the built environment, nature, just to name a few.

Across geography and urban studies, there is increasing attention on racial capitalism as it relates to how racial difference and inequality are produced, and most importantly, how that relative valuation gets operationalized in the contemporary urban (see, Ponder, 2017). This means exploring not only how ideas and practices of the devaluation of race are socially constructed, but also how they are constituted spatially (Delaney, 2002). To attend to the racialization of austerity urbanism through the lens of racial capitalism, geographers are exploring topics of social reproduction (Ponder, 2018; Bhattacharya, 2018), financialization (Bonds, 2019; Ponder & Omstedt, 2019; Danewid, 2019), and political ecologies of racial capitalism (Pulido, 2016; Ranganathan, 2016). This growing literature centers on the notion that capitalist relations depend upon the social construction of race to provide and extract value and the urban expressions of racial capitalism.

Looking at the financialization of racial property regimes, Bonds (2019) examines property in Milwaukee through the lens of racial capitalism and centers property as a race-making institution. Her work shows how the criminalization of Blackness augmented Milwaukee's segregation and constituted disinvestment in Black neighborhoods. Bonds theorizes the politics of residential property, which include policies protecting of white properties and resistance to this, as connected to practices of policing of urban space (p. 5). Race is shown to work not as an intersecting force, or as the literature on austerity urbanism suggests, as an unequal outcome of capitalist processes. Instead, anti-Blackness is essential to the very workings of capitalism and its reproduction over time and space.

Similarly, Bledsoe and Wright (2019) draw on theories of racial capitalism to illuminate how anti-Blackness in fact conditions the realization of capitalist reproduction. They suggest that capitalism's recent round of accumulation requires “spaces that were once marginal or peripheral to the perpetuation of capital accumulation becomes sites of appropriation precisely because the (Black) populations occupying them receive no recognition as viable spatial actors” (p. 13). This assumed a form of “a-spatiality” of Black populations contributing to places in need of appropriation and removal. Such spatial arrangements devalue Black populations as inhuman and spaces attached to Black populations are deemed as lacking a legitimate form of occupation and usage for capital accumulation. The reliance on capital through such notions of “empty, lifeless, Blackened spaces” have contributed to practices of uneven development through practices such as white flight, gentrification, urban renewal, incarceration, and policing (p. 13). Austerity urbanism, then, needs to be understood as a governance strategy used to facilitate such practices that rely on the ever-present logics of anti-Blackness. To understand race working as a process, both Bonds (2019) and Bledsoe and Wright (2019) show how anti-Blackness works as a precondition for capitalism allowing it to constantly renew itself by associating spaces with Back populations as open for dispossession, occupation, and appropriation.

Rather than treating some of the structural origins and socio-spatial repercussions of austerity urbanism as race neutral, other scholars are examining the financialized geographies of the urban as a form of racialized social reproduction that “ruthlessly reshapes the lived experiences of racialized people” (Ponder, 2017). Ponder attempts to illustrate this by tracing the impacts of financial market liberalization brought on by rising pressures to increase the liquidity of value production—on the lives, homes, and cities of Black Americans. Ponder (2017) argues that under financialization, racialized dispossession and processes of urbanization happen through the extraordinary reach of the debt relation and corresponding processes of collateralized accumulation, such as through housing and even infrastructures. Households and cities are increasingly funding basic essentials like housing, water systems, and other necessary infrastructure by way of private debt, with uneven racialized outcomes.

Work on the racialization of municipal finance has brought attention to the ways in racial capitalism and empire-making have been financially produced through the municipal bond market, municipal indebtedness, and credit rating actors and agencies (Jenkins, 2021; Ponder, 2017; 2021; Ponder & Omstedt, 2019). Black-majority cities like Detroit not only depend on the accumulation of bond debt to distribute public goods to citizens, but also pay more on their debt obligations than white cities (Ponder, 2017). Black-majority cities who have historically been charged higher than average interest rates on bonds compared to other cities, consequently forcing these cities to use risky financial arrangements to finance bonds (2017, p. 111). In this way, the racialized emergence of urban austerity needs to be understood as a form of reproduction of racial capitalism that is connected to sociospatial process of racialized value creation in financial markets (Ponder, 2021) and how race structures assessments of creditworthiness in the urban development of American cities (Jenkins, 2021).

Other work focused on the racialization of municipal finance, has explored connect austerity governance to the violence of municipal debt and the produced racialized harm (Ponder & Omstedt, 2019). By using a case study of Detroit's water crisis and placing U.S. municipal insolvency as a condition of financialized racial capitalism, their work links the financialization of water services in Detroit to increases in water bills, and the racialized harm inflicted on residents through mass water shut offs. From their perspective, by unpacking austerity urbanism for their effects on the "reproducing and retrenching of raced socio-spatial fictionalities of accumulation and dispossession," such racialized harm is made possible because of the actively or passively devaluation of racialized groups, leaving opportunities for accumulation (p. 4). In attending to racialization at the intersection of austerity urbanism, there is much to be gained from this work that draws on understandings of racial capitalism to make sense of recent urban fiscal crises. The logics of racial capitalism serve as a powerful tool to locate connections between austerity and the raced-expressions of geographies of financialized capital.

In a different view, other work has investigated the nature of urban political ecological processes of racial capitalism and austerity urbanism. Drawing on the case of the Flint water crisis, both Pulido (2016) and Ranganathan (2016) contextualize the underlying causes of the city's lead poisoning through a long-standing, historical devaluation of Black populations. Ranganathan (2016) views the decline of federal and state support to Flint, along with decline of their tax base, as rooted in structural and historical processes of racialization. By tracing periods of white flight, and property depreciation in Flint, Ranganathan describes how these events facilitated water infrastructure abandonment. Such neglect left Flint residents extremely vulnerable to an "unjust urban nature" setting the stage for a water crisis which disproportionately poisoned young African-Americans.

Using the concept of racial capitalism to explain infrastructure failures that can be understood as a form of environmental racism, Pulido's (2016) work discusses how Black communities are seen as second to repaying bondholders in the post-crisis austerity moment the city was undergoing. Pulido (2016) argues that under the context of austerity urbanism, "people are so devalued that their lives are subordinated to the goals of municipal fiscal solvency" (p. 2). Their value represents their expendability that is reflected on them. Flint and other declining cities are considered disposable by virtue of being predominantly poor and Black. From this, we can understand racism then as a process that shapes places and, in this case, produces a racially devalued place. Infrastructure abandonment is not produced solely by capital flight but is argued by Ranganathan (2016) to depend also upon a culture of racial liberalism, that is, anti-statist notions of the welfare state based on racist ideologies. In this regard, municipal governance is instilled with value-weighted concepts rooted in liberal-democratic norms, such as utilitarianism or "best possible use" of land/resources in which local governments ascribe to, thereby harming Black spaces who do not fit into such formulations.

Pulido (2017) calls for geographers studying neoliberal state restructuring to incorporate theories of racial capitalism to require greater attention to the essential processes that have shaped the modern world, such as colonization, primitive accumulation, slavery, and imperialism. Racial capitalism as a concept captures the idea that actually existing capitalism exploits culturally and socially constructed differences and is lived through particular uneven formations as has been outlined above. As a result, austerity urbanism literature should be sensitive to how state-restructuring practices operate on already unequal socio-spatial landscapes of race. An important question that needs to be considered for future research is how then are racial hierarchies being reproduced under austerity urbanism?

Although this body of work discussing urban expressions of racial capitalism and austerity considers the contextually and path-dependency nature of processes of neoliberalism, they also are sympathetic to the contingency of neoliberalism as well and the role of race works through such contradictions. Austerity urbanism literature would benefit from the above contributions that are operationalizing racial capitalism in a way that illuminates how racialized value is made through spatio-temporal relations and works through various rounds of state rescaling. In the U.S. context, racialized processes linked to the origins of urban fiscal crises are at the core of this. Adopting ideas of racial capitalism can enrich scholars working on austerity urbanism to place contemporary forms of racial inequality in a historical and materialist framework to illuminate the contemporary state and capitalist socio-spatial processes through which racial difference is made to matter in the production of value.

Concluding remarks and future directions

Much of the literature on austerity urbanism tends to treat race as a secondary effect of the current round of state restructuring. More widely, the issue of foregrounding race in analyses of political economy can be read as a shortcoming across work on state theory and regulation theoretical research that fails to theorize state institutions as directly involved in constructing, maintaining, and reproducing white supremacy (see Inwood, 2015). By outlining the formative and recent work on racial capitalism, this paper points to how analyses of austerity urbanism need a more thorough engagement with prevailing patterns of racial domination to better understand how contemporary capitalist and financialized processes rely on certain racial preconditions to reproduce itself. While scholars like Ponder (2018) and Pulido (2017) have made important interventions, there is further work to be done on tracing race in the conceptual DNA of austerity urbanism. Such analyses would highlight the deeply ingrained racialization of state restructuring in cities. It is important to engage with conceptualizations of race and racialization to truly understand how and why urban austerity is most deeply felt in Black-majority U.S. cities. More importantly, one cannot fully interrogate the current social implications of austerity urbanism without examining the racial-financialized processes embedded in urban realities.

As it has been noted in the literature on racial capitalism, austerity policies work through racial capitalist processes and institutions—transforming urban spaces. These emerging research agendas theorizing the racialization of austerity introduce “race” as organizing principle of society, rather than just “race” serving as simply a backdrop in economic relations. Critical theories of race provide important conceptual tools for those studying austerity urbanism that argue something much deeper and hegemonic that lies behind various policies—economic and political processes working through a racial state, such as racial capitalist underpinnings of a global financial system that unevenly distributes risk in ways the reinforce racial hierarchies. Recent theory-building and research agendas focused on racial capitalism has provided geographers with a promising lens to interrogate how power is exercised within economic networks and markets, the idea that capitalism depends upon the social construction of race to produce and extract value, and furthermore, how racialized value is made.

Although scholars like Robinson (2016), Roy (2011), and Hart (2018) have all made the case for a methodology comparing cities across the global North and South, little empirical work has been done. Given the North American bias of austerity urbanism literature, there is a pressing need for more international comparative approaches. To that end, work on austerity urbanism would benefit from broader investigations that connect forms of racial imperialism and colonialism to urban austerity across the global North and South. For instance, recent work by Powers and Rakopoulos (2019) calls for the literature on austerity to be considered in comparative contexts by bringing together analyses of structural adjustment programs (SAPs) in the Global South and austerity measures in the Global North to provide a more comprehensive analysis and better understanding of transnational policy assemblages. Doing so would elucidate forces of global relational and territorial linkages of financialized austerity urbanism and race.

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Chapter 4

Bridging Geographies of Race, Austerity and Finance

The previous chapter set out geographies of austerity urbanism and race/racialization. Although austerity urbanism has been a well-researched field explicating a transformation in urban governance in fields of economic and urban geography, understanding its racialized dimensions is relatively unexplored. As such, I focus on broad understandings of austerity urban governance, its conceptual origins, and a review of the literature in geography. In doing so, I argue the existing literature does not adequately address capitalist processes of race/racialization that are woven into austerity governance approaches in U.S cities. I then argue that drawing from work on Black geographies and geographies of racial capitalism can inform these perspectives by drawing on the spatialized dimensions of racialization, as well as racial capitalism's moments of "place-making" (Gilmore, 2017) to explain when financial capitalism installs strategies for extraction or exclusion based on racial hierarchies in urban spaces (Bhattacharyya 2018; Jenkins 2018, 2020; Leong; 2013; Melamed, 2015; Ponder and Omstedt, 2019; Wang 2018). Financialized racial capitalism refers to financial situations or instruments, like municipal debt and bonds, with seemingly neutral elements — such as bond ratings and interest rates — that end up negatively affecting members of a particular racial group, through actions like water shut-offs (Ponder & Omstedt, 2019). The implications of this have meant an inequitable distribution of municipal services and infrastructures within and between U.S cities.

The purpose of this dissertation is to examine what is gained or what is uncovered when attention to austerity urbanism is understood in relation the racialization of municipal finance and segregated infrastructures in Black-majority U.S cities (Jenkins, 2020); not only for the specific case of water and sewer infrastructure, but also to inform work on infrastructure and environmental inequality across the Global North and South that can be best explained through perspectives of systemic racism (|Ranganathan & Balaz, 2015). Scholarship in Black geographies has highlighted the relationship between race and space. While older research often focused on race as a demographic category for quantitative analysis (Dwyer, 1997), more recent work articulates the mutual, interconnected production of race and space (Kobayashi, 2014;

McKittrick, 2011; McKittrick and Woods, 2007; Peake and Schein, 2000; Price, 2010; Schein, 1997). In this work, I show how austerity urbanism takes on a racialized form across U.S cities by examining how municipal finance and debt operates through complicated legacies of uneven racialized geographies, and that includes how cities are assigned value and assigned financial risk, and what this means for delivery of public goods and services. This means thinking about race as an organizing logic for urban governance and municipal finance in U.S cities.

The next chapter begins to do the empirical work necessary for this understanding. It focuses on a broad overview of my fieldwork across three Black-majority U.S cities to illustrate themes that emerged over the course of one year of fieldwork. Grappling with the ways that post-crisis austerity governance was unfolding in each city and its connections to mass water shut off programs was difficult given the different field sites, different municipal, state and federal actors and types of data that came with each city I visited. To manage this, I found myself taking a wide view of on-going state-restructuring at the state and federal level impacting urban water and sewerage services in each case. This following chapter illustrates the unfolding of infrastructural crises in Black-majority U.S cities as expressions or sites of broader trends in the financialization of cities playing out relationally in the Global North. I use Robinson's (2016) approach in tracing a city's "genetics" to tease out "the strongly interconnected genesis of often repeated urban phenomena" (Robinson, 2016: 6). This led to find through expert interviews and policy documents that each city has been struggling with financing water and sewer services and infrastructure in the municipal bond market since the decline of federal and state funding of State Revolving Funds though the Clean Water Act and Safe Drinking Water Act since 1977.

Drawing connections between race, municipal debt and austerity governance to understand the origins of water insecurity in these cities, I demonstrate how finance has played a role in reshaping urban austere governance strategies post-2008. I use Ponder's (2017) quantitative study on the racialization of municipal finance as a starting point. Considering Black-majority U.S cities are treated as riskier investments; they pay more to access loans in the municipal bond market to pay for public services than other cities. I show how each city has been reliant on the municipal debt and the bond market to pay for water and sewer infrastructure and services contributing to increasing water and sewer rates for their residents. Secondly, I outline the challenges Black-majority cities face in paying to replace their ageing water and sewer infrastructure in the municipal bond market when under EPA consent decrees. Focusing in on each city's attempt to finance combined sewer overflows (CSOs) under EPA enforced measures, I show the different speculative financial instruments that Baltimore, Detroit, and St. Louis are using to manage their municipal debt obligations.

The role of race/racialization, particularly regarding how credit risks are mapped onto Black-majority cities in the municipal bond market, becomes paramount in contributing to harsh austerity measures after the 2008 financial crisis. Rising water and sewer rates and water debt collection practices through shut offs, housing tax foreclosures and wage garnishments, are being used as revenue extraction governance strategies to manage increasing municipal debt burdens and interest rates embedded in their high-risk financial deals following the crash of global financial markets. This chapter's structural contribution to the dissertation is to provide insight into the scope of my empirical work through a theoretically informed reading of race and austerity, which the previous chapter specified.

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Chapter 5

Municipal debt meets financialization: The case of financing EPA combined sewer overflow consent decrees under revision with *Environment and Planning: Economy and Space*

Introduction

Urban infrastructures have historically been an important part of ‘modernist ideals’ in U.S cities premised on fully functioning, safe, and universal service provision tied to the welfare state (Graham and Moore, 2001). However, assumptions about the infrastructure of urban modernity in the U.S may no longer hold as they have become increasingly fragmented through parallel processes of deindustrialization, privatization, and reduced state spending (Bakker, 2003; Swyngedouw, 2001) highlighting wider geographies of urban decline. The decay of water infrastructure has become most visible in Black-majority U.S cities and pivotal for understanding the contemporary urban crisis, and the relationship between infrastructural failure and race in post-industrial contexts (Silver, 2019; Hackworth, 2019). A *Financial Times* headline declared: ‘US infrastructure decay forecast to cost trillions’ (Fleming, 2016). The American Society of Civil Engineers (2017), which reports on the shortcoming of the country’s roads, bridges, waterways, and airports, has given US infrastructure a D+ Grade. The ASCE has projected nearly $4 trillion of infrastructure investment will be needed between 2016 and 2025 (Fleming, 2017). In addition, various other studies, and policy briefings with the American Water Works Association (AWWA) and the U.S Congressional Budget Office (CBO), have highlighted the physical decay of urban infrastructure and its economic strain on cities.

The most prominent case has been in Flint, Michigan where privatization and underinvestment contaminated the city’s water system and exposed over 100, 000 residents to lead poisoning (Hacker and Pierson 2016). This chapter positions water and sewer infrastructural decay and inequality along historical uneven terrains of racialized development (Heck, 2021). Echoing Montag’s (2019) work, water insecurity in Black communities is the result of structural racism embedded in urban planning policies that has shaped patterns of urban and suburban segregation. As US cities became more racially segregated during the post-war era, localities prioritized service to white areas and underinvested in Black communities (Montag, 2019: 6).

Infrastructural neglect and decay therefore can be read as the product of decades-long historical disinvestment in urban systems as deindustrialisation hit Midwestern and some Northeastern Black-majority cites particularly strong. There has been a breadth of work that brings attention to the infrastructural challenges present in post-industrial cities through revenue shortfalls, significant population loss, environmental hazards resulting from their industrial past, and demands to make the city globally competitive in attracting and retaining public and private investment (see Akers, 2015; Hackworth, 2015; Silverman, 2018). This work has been less successful in reckoning with the deep histories of institutionalized and extractive forms of racial oppression in which infrastructural projects are embedded (see Heck, 2021).

Cities such as Detroit, Baltimore, and St. Louis, have been living under austere conditions and distressed fiscal circumstances for decades as a result of suburban white flight and deindustrialization, however, these conditions were intensified following the 2008 financial crisis While there are many investigations of how austerity is impacting cities, few studies, with the exception of Ponder and Omstedt (2019) have looked at the variegated interactions of race, municipal finance and urban austerity, and why post-crisis austerity looks different in Black-majority cities in comparison to others. Focusing on the relationship between race and austerity can inform broader work in urban and economic geography on the role that race plays in municipal finance that has configured creditworthiness and the underdevelopment of Black-majority U.S cities.

The current political economy U.S cities are navigating is neoliberalism in crisis management mode – a fiscal environment produced by offloading the 2008 banking crisis onto the public sphere (Blyth, 2013). Such fiscal environment has intensified budgetary and service cuts and has put a strain on the provision of water and sewerage services. Today, two out of three infrastructure projects in the U.S are financed by municipal bonds (Ross, 2019). At the level of the municipality, governments take on bond debt to fund infrastructural improvements, finance pensions, or deliver services. The emergence of austerity urbanism as a mode of governance further deepens racialized patterns of uneven development that is materializing through infrastructure, particularly regarding the nation’s aging urban water and sewerage systems. This chapter attempts to position municipal debt within the financialization of U.S cities that unevenly distributes risk and precarity in ways that reinforce subjugation and racial hierarchies when it comes to who gets access to water.

I use, as a case study, three Black-majority and post-industrial cities (Baltimore, Detroit, and St. Louis). These cities share common elements of decade-long population decline, infrastructural decay, and intensified rounds of urban austerity. The analysis is based on 60 semi-structured interviews and participant observation carried out with government officials, municipal bond financial experts, water and social justice organizations, and households from November 2018 to June 2019. In addition, data was collected from local policy documents and financial statements, and local and national media coverage. This data enabled key points of contention to be placed within the wider shifting geographies of financialization, fiscal austerity and infrastructure provision across Black-majority US cities.

This chapter proceeds as follows. The next section reviews literatures on historical periods of neoliberal state-restructuring and subsequent shifts in urban governance to help understand the challenges of financing infrastructure in an age of austerity urbanism, and the importance of situating these challenges in uneven geographies of racial capitalism. Subsequent sections examine the economic and political imperatives regarding the financialization of water infrastructure under austerity and how this emerges due to the decline of federal and state funding for water and wastewater services. The final sections examine the speculative municipal debt instruments used to finance water infrastructure, and each city's attempt to finance a court-ordered Environmental Protection Agency consent decree on their ageing water infrastructure. In the conclusion, I outline the main contributions of this chapter and reflect on the long-term sustainability of these financing arrangements.

This work seeks to contribute to lively conversations on how the racialization of municipal finance relies on racialized difference and uneven development to create value under capitalism, and how this extractive relationship is reproduced in the built environment through water infrastructure inequality. The intent is to facilitate a dialogue between the emerging literatures of Black urban geographies, finance, and austerity urbanism.

Urban Geographies of Financialization, Austerity Urbanism and Racial Capitalism

Local governments have come to rely on financial markets, and not just on traditional forms of municipal debt, such as general obligations bonds, for the provision of local services beginning in the 1990s (Sbragia, 1996: 170-172; Weber, 2010). The growth of the private market for municipal debt coincides with the rise of neoliberal policies characterized by the “roll-back” (Peck and Tickell, 2002) or “hollowing out” (Jessop, 2002) of the Keynesian state. It is also a product of the growing and deepening of the financialization of cities proliferated by the deregulation of financial markets (Peck and Whiteside, 2019). The relationship between financialization and neoliberalization on urban governance has received a great deal of attention throughout urban geography and urban studies with competing perspectives. For instance, Peck and Whiteside (2016: 239) for instance, suggest that entrepreneurial urban governance strategies are realized through financially mediated means and in conjunction with credit market actors, and note that financialized urban governance needs to be read as something that succeeds entrepreneurial urban governance. On the contrary, Van Loon et al. (2018: 14, et al), argue that financialized urbanism is not a new phase of entrepreneurial urbanism, but rather the means through which entrepreneurial urbanism was enabled in the first place. Others such as Aalbers (2019) see both processes happening simultaneously depending on the differentiated opportunities and threats that local governments face and channel finance to meet their fiscal goals.

Neoliberal restructuring and speculative/entrepreneurial urbanism

Those writing on neoliberal or entrepreneurial urbanism, which some refer to as speculative urbanism (Davidson and Ward, 2014) have also theorized cities as sites of financialization and highlighted the speculative means by which cities are financing urban development (Ward and Kutz, 2015; Kirkpatrick and Smith, 2011). The neoliberal restructuring of cities in combination with the deregulation of the financial sector in 2000 allowed municipalities to become debt-dependent on financial markets in which they relied on borrowed money and speculative investment to finance their spending and day-to-day operations. The decline in federal support for urban development has been simultaneously replaced by an increase in municipal debt and loans issued in the municipal bond market (Hackworth, 2007:

769). Cities are increasingly forced to respond to underfunded federal commands, where much of this fiscal downloading being social mandates, by incurring debt and relying heavily on the credit and bond market for sources of revenue (Kirkpatrick and Smith, 2011; Hackworth, 2007: 13; Ponder, 2021; Rosenman, 2019). Under state-restructuring, financialization emerges as a promising way “to accommodate economic development, relieve state budgets, create profits for private parties and reduce state involvement for both ideological and budgetary reasons” (Torrance, 2009: 806).

A stream of literature on the financialization of local government examines a move towards more sophisticated techniques, such as derivatives instruments, to manage interest rates and risk (Hendrikse and Sidaway, 2014), reconfiguring the governance of municipal operations into private or public–private partnerships to capitalize on future income streams from public services and utilities (Allen and Pryke, 2013; Ashton et al., 2016; Whitfield, 2016), or marketing poverty management as a more inclusive financial instrument (Rosenman, 2018). Others such as Furlong (2019) understands processes of infrastructure degradation in cities coping with the effects of state-restructuring form the central justification for financialization which places cities in an ‘infrastructural trap’ (574). This trap arises from their tendency to accumulate ‘staggering’ amounts of ‘public debt through a variety of high-risk financialized mechanisms – especially revenue bonds -- forcing them into a cycle of more growth and bigger infrastructure to repay that debt (Kirkpatrick and Smith, 2011: 490). For instance, some theorize the financialized municipal debt management as a direct response to fiscal constraints under state devolution (Deruytter and Moller, 2019).

By drawing on the use of new financial instruments around debt management; the imposition of credit market actors, agencies, and intermediaries; and the reconfigurations of urban governance towards new public-private partnerships, this emerging literature shows how cities have become financialized and how new speculative financial arrangements expose cities to new financial risks and debtor discipline as was documented following the 2008 housing market crash (Kirkpatrick 2016; Kirkpatrick and Smith, 2011; Peck and Whiteside, 2019; Weber, 2010).

Post-2008 Austerity Urbanism

The 2008 financial crisis launched a period of austerity that continues to play out in American cities, primarily due to the imposition of a local state fiscal crises in which cities worldwide were hit especially hard by the housing slump and a global trend of housing foreclosures (Peck, 2015:2). Scholars have emphasized not a redux of neoliberal urbanism, but rather an extension or a mutation of it, in the form of austerity (Peck, et al 2013, Peck 2015; Brenner and Theodore, 2012). The more recent scholarship has been labelled "austerity urbanism" (Davidson & Ward, 2014, 2017; Tabb, 2014; Donald, et al 2014; Peck, 2012; Peck, 2015) that has been characterized in specific ways, differing from previous theorizations of neoliberal urban governance rationalities in two ways. First, post-crisis austerity and its effects was *localized.* Secondly, there was a financial deepening occurring under austerity urbanism that was further dismantling of the local social state to restore financial markets that was concerned with governing debt. Austerity urbanism is theorized as a relational debt governing technique of government downsizing, service cutbacks and fiscal disciplining (Labao and Adua, 2011; Gray, 2018) that is "ultimately concerned with offloading costs, displacing responsibility; it is about making others pay the price of fiscal retrenchment" (Peck, 2012: 632).

In conceptualizing austerity as a relational process of downloading debt through restructuring, rescaling, and downsizing the state, there is a consensus in the literature that austerity policies disproportionately are borne by the poor and marginalised (Peck, 2012; McKendrick et al., 2016; Hastings et al., 2017). Throughout this literature, uneven development and the unequal social implications are argued as key to understanding austerity urbanism in the U.S. context (Davidson & Ward, 2014; Peck, 2012, 2014; Tabb, 2014), which includes discussions of the gendered, classed, and racial consequences of austerity. However, academic debates have yet to fully interrogate the role of race in analyses of austerity urbanism. Particularly, in both conceptual and concrete terms, examining why certain marginalized groups experience the costs of austerity the way they do, particularly
for racialized communities, is absent in the literature on austerity urbanism. Very little research includes a discussion of race and racialization in contributing to the origins of urban austerity. In the current literature, racialized groups are seen and mapped onto austerity policy outcomes,

rather than revealing how periods of neoliberalization modify the way in which race and racial inequalities are experienced in society, or the ways that race and racism as inextricably embedded in processes of neoliberalism.

Bridging austerity, municipal finance, and racial capitalism

More recently, literature in urban studies has described the emergence of austerity urbanism to be the product of financialization (see Aalbers, 2020). Davidson and Ward (2014) for instance, argue that the speculative and financialized components of previous rounds of state-restructuring and the neoliberalization of cities created uneven urban development patterns that left those cities on the losing side exposed to financial markets. This was fully realized and materialized in 2008 after falling revenues from property taxes created a fiscal environment where cities were amid a structural deficit crisis and falling into bankruptcy. Through predatory subprime lending that targeted Black and Latino neighbourhoods, Black-majority cities are still experiencing ongoing revenue shortfalls due to a decline of property taxes (Ponder, 2017; Wyly, et al, 2009) and increasing levels of Black household debt (Aalbers, 2011; Seamster, 2019) - austerity has been felt most profoundly in Black-majority cities. This interest, in turn, leads us back to recent work on racial capitalism, and how the dramatic growth of financial markets and the imposition of financial logics are not simply an economic phenomenon, but are social–spatial processes to which racism/racialization are deeply interconnected (Kish and Leroy, 2015).

As the body of research on austerity urbanism has developed, an emerging set of work is increasingly focused on understanding the emerging relationship between austerity urbanism and logics of financialization that contribute to the ongoing geographies of the racialized reproduction of cities (Ponder, 2017; Jenkins, 2018; Jenkins, 2021). New research is looking at how historical and contemporary processes of racial capitalism and imperialism (Danewid, 2020; Ponder and Omstedt, 2019) are changing our understanding of the origins, structures, and mechanisms of austerity urbanism (Ponder, 2020). Work is being done to outline how austerity urbanism is operating through and is a product of complicated legacies of uneven racialized geographies within and between U.S cities (Ponder, 2017; Ponder and Omstedt, 2019; Puldio, 2016; Ranganathan, 2016).

Racial capitalism has been defined as the production of racialized difference in tandem with the production of capital – usually through mechanisms of violence (Ralph and Singhal, 2019: 851). Scholars use racial capitalism to describe how racialism merged with capitalism to describe the origins of industrial capitalist development through slavery and colonization (Bhattacharya, 2019; Kelly, 2017; Robinson, 2000 [1983]) and to highlight how coercion is integral for capital investment (Baptist, 2014; Gilmore, 2002; Johnson, 2017; Robinson, 2000). The term 'racial capitalism' was first used by Cedric Robinson in 1983 to illustrate the key role of race and racism in the development of capitalist society. As Robinson (1983, 2000) explains, capitalism did not originate from a revolutionary negation of feudalism but evolved from an already racist culture of Europe "to produce a modern world system of "racial capitalism" dependent on slavery, violence, imperialism, and genocide" (2000: 3). Throughout his work, Robinson (2000) argues that Black labour and the racialization of spaces was intrinsic to capitalist industrial production. Thus, what we typically designate as 'capitalism' has historically been 'racial capitalism.

Capital only realizes its value when it is producing and working through relations of inequality among human groups, and these forms of accumulation require dispossession, disposability, and unequal divisions of human value. According to Lowe (2015: 150), capital expands itself by "seizing upon colonial divisions, identifying particular regions for production and others for neglect, certain populations for exploitation and others for disposal." What both Robinson (2000) and Lowe (2015) elaborate as racial capitalism includes: setter colonialism, slavery, genocide, incarceration, immigrant exploitation, and forms of racial warfare. In this way, capitalism is not external to racialization, racial differences, and/or racial formations – but depends on them to survive. Others such as Melamed (2015) goes deeper in their conceptualization to understand the inner-workings of contemporary racial capitalism that involve a "system of expropriating violence on collective life itself." Similarly, Gilmore (2002) describes racial capitalism as a contemporary force that can be read as a form of slow violence and works as a state-sanctioned or extra-legal production technology to reduces life to the relations to sustain neoliberal capitalism and thereby exposes certain populations to premature death. While some scholars are concerned with the historical role of racism/race/racialization, such as slavery and colonization, in relation to capitalist production (Baptist, 2014; Singh, 2016) others use racial capitalism to discuss specific 'moments' when capitalism deploys strategies for extraction based on racial hierarchies (Jenkins, 2018; Wang, 2018). This includes contemporary capitalism's relationship to mass incarceration (Davis, 2003; Gilmore, 2007), policing (Balto, 2019; Kelley, 2020; Wang, 2018) and racialized poverty (Marable, 2015), and environmental injustices (Wright, 2018).

In this chapter, I examine the role of municipal debt and finance to explain infrastructure inequalities in Black-majority U.S cities under racial capitalism. In doing so, this chapter reads finance alongside work of racial capitalism (Jenkins and Leroy, 2021; Seamster, 2019; Taylor, 2019) and urban governance, particularly emerging literature around the racialized unevenness of austerity urbanism, the environment, and municipal finance (Bonds, 2019; Kass, 2021; McElroy and Werth. 2019; Pulido, 2016; Ranganathan, 2016; Bigger and Millington, 2019; Ponder and Omstedt, 2019; Ponder, 2021). Emerging research, more specifically those writing on injustices in water infrastructure under racial capitalism, argue that structural racism best explains infrastructure inequality in and between cities and regions (Deitz & Meehan, 2019; Heck, 2021; Ponder, 2018; Ponder & Omstedt, 2019; Ranganathan, 2016; Ranganathan & Balazs, 2015). One of the clearest examples of the practices at work in the reproduction of racial capitalism through infrastructure is the case of Flint, Mich. and the systematic lead poisoning borne by the city's majority Black and poor residents through cost-saving measures implemented in the municipal water system (Heck, 2021). The poisoning of residents in the name of austerity highlights the central feature of global capitalism where Black life is rendered surplus such that entire places are considered racialized and disposable (Pulido, 2016; Ranganathan, 2016). For these reasons, scholars have called for expanding conceptualization of infrastructure inequity through frameworks that foreground redressing past wrongs and preventing future environmental harms (Anguelovski et al., 2020).

Focusing on contemporary financialization, race-making practices are fundamental to processes of financialized capital accumulation because race/racialization/racism produce the marginality and exploitability of lives that capital needs to extract value – through land, debt, labour, the built environment, nature, just to name a few. According to Jenkins (2020), scholars have rarely focused on the relationship between race and municipal debt, and therefore, have missed how bondholders, the bond market, and bond ratings illicit white racial advantages based on the role that race plays in structuring assessments of creditworthiness. To that end, municipal debt has been essential to the development of white America and the underdevelopment of Black America, most visibly in Black-majority cities, during the mid-twentieth century (Jenkins and Leroy, 2021).

In this sense, there can be no capital accumulation or no profit realization without racialization. Viewed from the perspective of racial capitalism, austerity urbanism and municipal finance are not race-neutral. In the U.S context, the formation of Black-majority cities is an example which illustrates the historical and contested racialization of urban spaces. Black-majority U.S cities simultaneously emerged as inhabiting mostly African American residents over a period of government-managed policies of unequal urban racialized development that enabled on-going accumulation through dispossession and exploitation of Black people such as white flight, disinvestment, residential segregation, and more recently, subprime mortgage lending (Bledsoe and Wright, 2019). These race-making practices are the product of financial capital rendering Black spaces and people as disposable and thus, made easy through municipal bond market accounting practices and logics based on creditworthiness to extract profits (Ponder, 2021; Ashton, 2009; Newman, 2009). Contemporary municipal finance is one way that financial value can rearticulate racial hierarchies by placing Black-majorities cities as higher-risk bond investments.

The contemporary expression of municipalized austerity in Black-majority cities have similar origins that stem from speculative urbanism in the form of financialization that are inextricably embedded in urban sociospatial terrains of racialization and operate through municipal finance. While financial capital is integral to the funding of local public goods and services, the recent crisis has further deepened the uneven development of Black-majority cities. How municipal credit and debt has created segregated urban infrastructures is shown through unequal debt-financed water and sewer systems. There is much to be gained from work that takes seriously understandings of racial capitalism to make sense of recent urban fiscal crises across Detroit, Jackson, Mississippi, and Flint that explore how racial dispossession is often underwritten by more abstract forms of financial violence in the form of municipal debt and bonds (Kass, 2021; Ponder and Omstedt, 2019; Seamster, 2019).

The path towards the financialization of water in U.S cities

This section positions the fiscal conditions that have facilitated the financialization of water in U.S cities within historical periods of state-restructuring under neoliberalism. Federal and state governments have eroded funding for water and sewer services beginning in the 1980s and have downloading these fiscal responsibilities onto municipalities (Table 1 outlines and characterizes three historical shifts of funding to water and sewer services in the United States).

Table 5.1: The retreat of the federal government funding in water and sewer services

1950s to 1980s Keynesianism and Expanding the Role of the Federal Government	⇒ This period has been described as 'environmental Keynesianism' (Purcell, 2012) ⇒ Increasing concerns with deteriorating water quality in the 1950s (particularly in the industrial Northeast urban centres) contributed to a substantial expansion of federal authority when it comes to the funding of water and sewerage services (Gerlak, 2006). ⇒ This brought way to major environmental legislation, particularly the Clean Water Act (CWA) in 1972, which expanded authority to cover water quality explicitly creating new powers for federal agencies such as the Environmental Protection Agency (EPA) the task of reducing pollution and improving uses of water. The Clean Water Act authorized massive expenditures in research and construction grants for municipal sewage treatment (Burian, et al, 2000: 34). ⇒ In 1974, Congress enacted the Safe Drinking Water Act (SDWA), which established national standards and treatment requirements for public water supplies, and provisions for financing needed infrastructure (Mandarano, et al, 2008). ⇒ This act created a construction grant program, where municipalities received funds (mostly subsidized grants) to upgrade any publicly

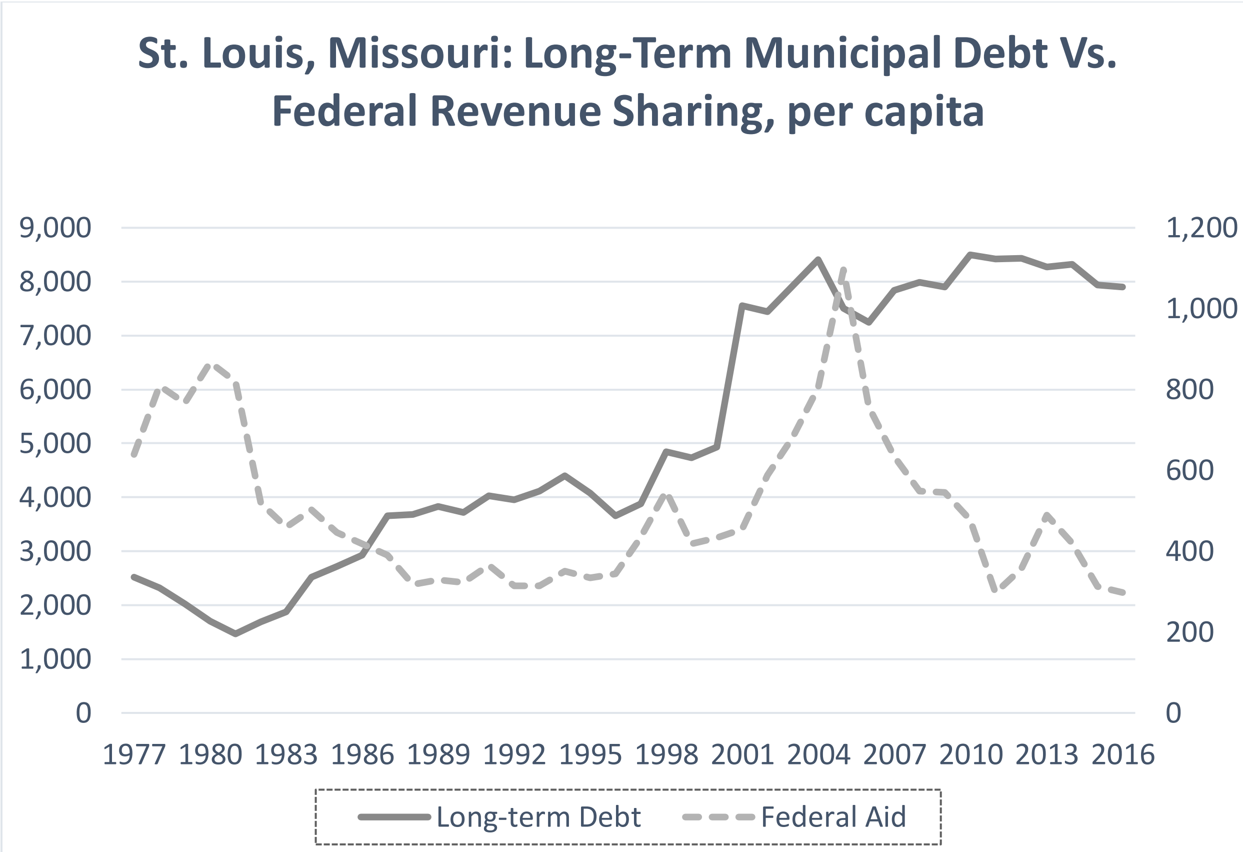
	owned treatment works or sewer-treatment plants to comply with the new federal law. ⇒ In the 1970s, federal funding for water systems was at an all-time high, peaking in 1977 (Gerlak, 2006: 236).
Late 1980s-1990s Neoliberalization of Water and Rolling-Back Funding	⇒ The Reagan administration concerned with limited federal government which contributed to moving away from federal-led infrastructure projects (Gerlak, 2006: 238) ⇒ The federal government rolled-back funds for sewerage treatment plants, local water development projects, dam safety programs, water data collection and environmental regulations (Gerlak, 2006). ⇒ In 1987, Congress replaced subsidized municipal grants with loans, called the Clean Water and Drinking Water State Revolving Funds (SRF). ⇒ SRF provided capitalization grants to each state and territory based on statutory formula weighing both population and need (Bartlett, et al, 2017). States then provided loans and other financial assistance to municipalities for the construction, upgrade, and repairing of water and sewerage services. ⇒ This shift meant that no longer were municipalities guaranteed funding to pay for their water infrastructure, but that they now had to compete with other municipalities for loans. ⇒ The devolution of state responsibilities for water and sewerage services continued through the Clinton years and has materialized into inter-urban competition of funding and uneven access to water services between cities.
1990s to Present Roll-Out Neoliberalism: The Financialization of Water and Sewer	⇒ Revolving loans were not able to match demand for infrastructure improvements nation-wide. ⇒ Since the 1990s, federal policies increasingly rely on partnerships and the private sector, to achieve water management goals, especially around water quality (Mandarano, et al, 2008). ⇒ Local water utilities now operate within P3 models or have privatized these systems altogether. ⇒ The decline of federal aid to cities meant cities were forced to turn to the bond market to finance water services and the upgrading of infrastructure. ⇒ According to the EPA, the federal government is willing to help municipalities, but not fund the full amount. Alfredo Gomez, Director of Natural Resources and Environment at the U.S

	Government Accounting Office (GAO), claims that large funding is seen as being wasteful when it comes to providing aid for water and sewerage infrastructure, so it best to be left to local governments.[2] ⇒ Officials interviewed from the EPA Office of Wastewater Management and Drinking Water describe their agency as merely playing an oversight role when it comes to water and sewerage services.[3] When asked about how cities should pay for ageing water and sewerage infrastructure with minimal federal support, their response was that cities need to implement full-cost pricing in the form of water rates, rather than subsidizing rates and relying on federal aid. ⇒ This has increased water and sewer rates over the last few decades, creating a water affordability crisis in cites.

The decline of federal funding has forced localities to rely on the private sector for capital and to pay for the day-to-day operations of water and sewer services, and some have increased their water and sewer rates to make up for the costs to finance much needed ageing and deteriorating water and sewerage infrastructure improvements. In the 1980s, federal grants funded 90% of capital improvement projects for local water utilities. As of 2019, the Congressional Budget Office data records that federal investments in water and wastewater systems constitute between 4.0 and 5.7 percent of total annual spending since 2010 (CBO, 2015). Presently, federal loans are only a small percentage of funding in comparison to the municipal bonds that cities use towards funding water and sewerage infrastructure.

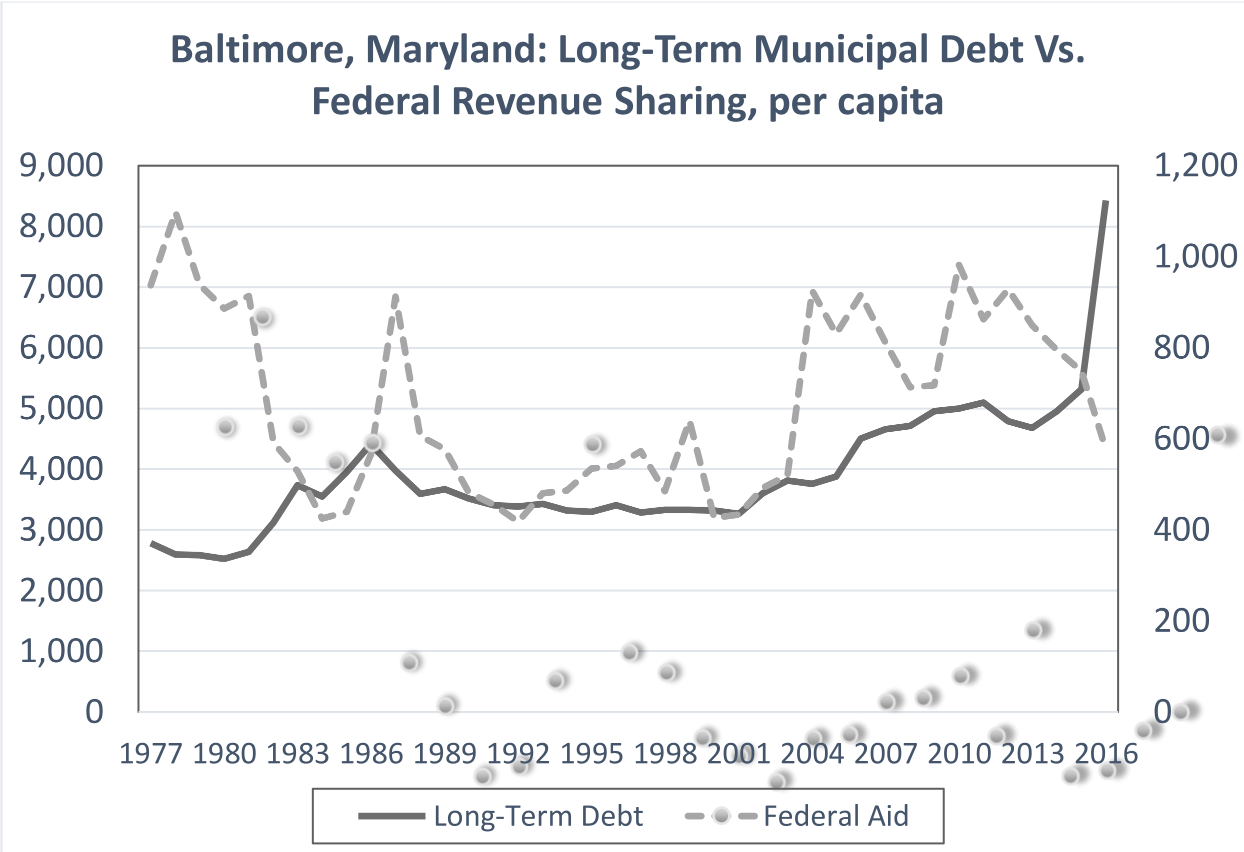
Figure 5.1: St. Louis, Missouri: Long-Term Municipal Debt Vs. Federal Revenue Sharing, per capita

[2] Expert Interview, GAO, November 2018
[3] Expert Interview, EPA, November 2018



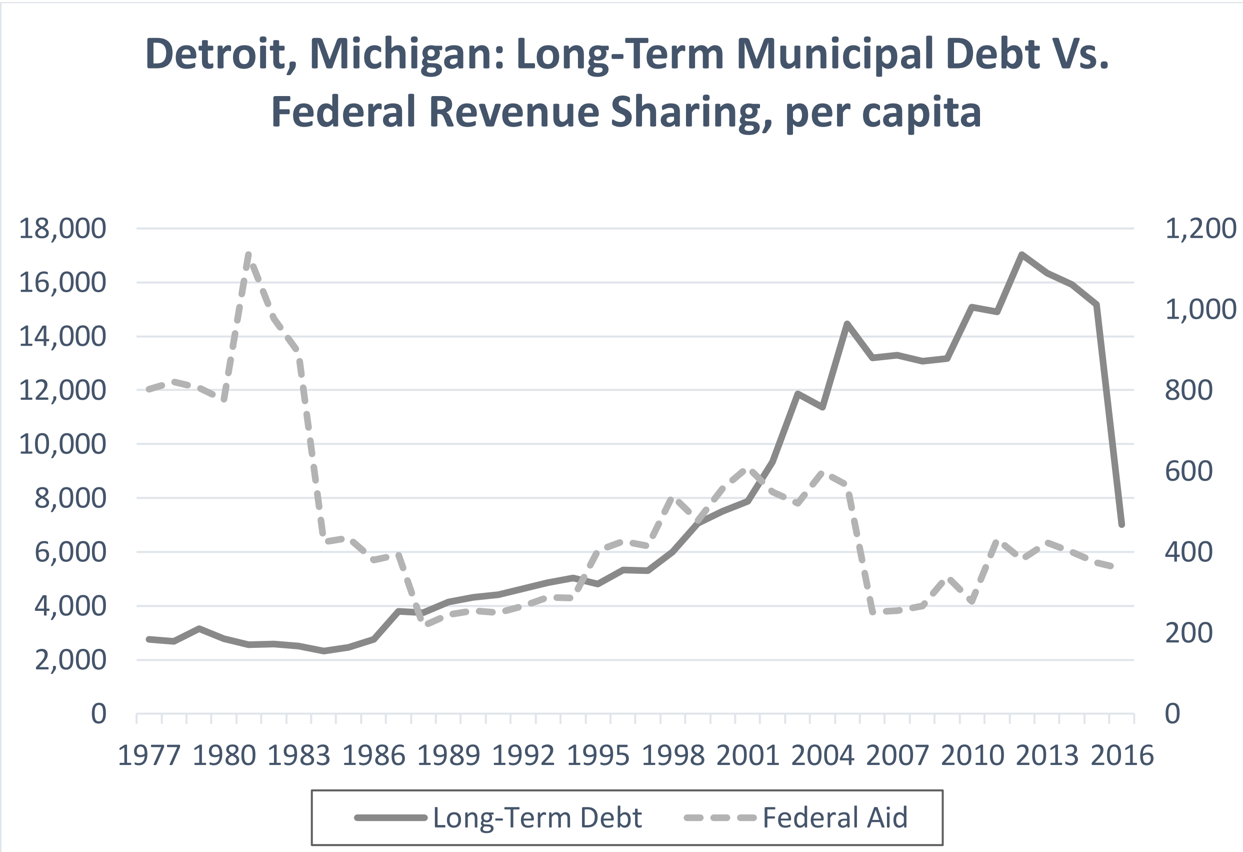
Source: Lincoln Institute of Land Policy database.

Figure 5.2: Baltimore, Maryland: Long-Term Municipal Debt Vs. Federal Revenue Sharing, per capita



Source: Lincoln Institute of Land Policy database.

Figure 5.3: Detroit, Michigan: Long-Term Municipal Debt Vs. Federal Revenue Sharing, per capita



Source: Lincoln Institute of Land Policy database.

The charts above show the relationship between federal aid and municipal debt in each city. The chart shows this relationship for Baltimore, Detroit, and St. Louis between 1977-2016. The amounts are in real 2016 dollars, with long term debt outstanding on the left axis and rates of federal aid on the right axis. The two time-series express nearly mirrored images of each other, so that a decline in the amount of federal aid the city receives is almost always matched by a rise in the city's long-term municipal debt load immediately thereafter, and vice-versa. This chart illustrates, then, the powerful role played by the federal government in determining the level of financial vulnerability and exposure to investor-centered conceptions of risk that cities must face while provisioning basic services to urban residents. It also points to the powerful role played by the federal government in causing the historically expansive growth of the municipal bond market overall.

Financing water and sewer infrastructure: Contours of speculative infrastructure development in Black-majority cities

The origins of long-term municipal debt in Black-majority cities relate to ageing water infrastructure and the dire need to replace or repair old and deteriorating water systems. For some Black-majority cities facing industrial decline, the cost of maintaining or replacing existing water infrastructure is higher considering the lifespan of their water systems in comparison to others (see U.S GAO, 2011). With federal support depleted and the added pressure to meet legal obligations to replace water and sewerage infrastructure that does meet regulatory standards, cities have turned to the municipal bond market in search for loans to fund EPA consent mandates. With federal support substantially withdrawn, the imperative of the Clean Water Act is experienced by municipalities in the form of whatever financialized means are necessary to get the job done. This has been achieved through financialized high risk and speculative borrowing (Davidson and Ward, 2014; Kirkpatrick and Smith, 2011).

A changing fiscal environment of neoliberalism from the 1980s onwards and the deregulation of the financial sector produced a thirty-year period in which the size of the municipal bond market increased by $110 billion each year. From 2000-2008 this figure more than doubled (Kozlik, 2018: 3). The surge of leverage taken on by cities adopting these risk-taking positions in the years leading up to the financial crises of 2008 grew astronomically, most evidently in the municipal water and sewerage sector (Sloan, 2016). Not only Baltimore, Detroit, and St. Louis – but other municipalities took on enormous sums of municipal bond debt and engaged in the use of speculative financial instruments in the municipal bond market to replace and fix ageing water and sewer infrastructure. This includes Chicago, Pittsburgh, Philadelphia, Jackson, Mississippi, Birmingham, Atlanta, Southern California, and more.

The racialization of municipal finance

Generally, loans from the bond market to finance most EPA consent decrees, and other water and sewerage improvements are secured through revenue bonds. Unlike general obligation bonds (GOBs) which are secured through the taxing authority of cities, revenue bonds are secured via the promise to investors of future revenue earned from the projects themselves and often more riskier bonds with higher interest rates in comparison to general obligation bonds (Davidson and Ward, 2014: 82). Revenue bonds are more expensive and riskier than general obligation bonds as they are backed by user fees, rather than property taxes, and allow a municipality to circumvent legislated debt limits in states and without electoral approval. Viewed in the light, revenue bonds can be considered a municipality's corporate bonds since they are free of debt ceilings, pay interest (often at higher rates than general obligation bonds), and are paid from the profit of a revenue-producing service, such as water and sewerage rates. Revenue bonds have been used more increasingly to fund local infrastructure projects, like water and sewerage, as they allow evasion of local government accountability and shift the burden from the taxpayer to who benefits directly from the public infrastructure. This means who is financially able to pay for the service, thereby excluding low-income groups, who cannot afford to pay for the service. Revenue bonds started emerging in the 1970s, and by 2000, revenue bonds far outplaced general obligation bonds and were issued twice as much (Hackworth, 2002: 708). As of 2018, nearly 60% of municipal bonds issued in the US were revenue bonds, and only 36% in the form of general obligation bonds - the remainder in private placements (SIFMA, 2019: 4)

According to Susan Iott, a U.S GAO official who oversees and audits federal grants for water and sewerage services, the main tool to finance water and sewerage infrastructure is the bond market through revenue bonds, and these loans are paid off using rate payers.[4] However, access to the bond market is not all equal for municipalities. Small and usually rural local governments do not have equitable access to the bond market to be able to pay for needed improvements. This is also the case for fiscally distressed cities with declining populations with unfavourable foreseeable economic conditions that are given higher interest rates on revenue bonds since they are rated as more likely to default on bonds.[5] This therefore puts post-industrial, Black-majority localities in a conundrum: since federal and state revolving funds are not enough, municipalities search for new finance arrangements through the bond market and have been forced to raise rates compromising the affordability of services.[6]

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[4] Expert Interview, GAO, November 2018
[5] Expert Interview, GAO, November 2018
[6] Expert Interview, GAO, November 2018

Until 1999, banks could only loan general obligation bonds to municipalities. However, the Financial Modernization Act of 2000 gave commercial banks the authority to be able to participate in the far larger market in revenue bonds which had been resisted under the Banking Act of 1933 (SIFMA, 2011: 97). Meanwhile, the Commodity Futures Modernization Act of 2000 further enabled derivatives trading and instruments like credit default obligations and 'swaptions' to enter the municipal bond market, entrenching contradictory incentives to simultaneously invest and bet against financially exposed, economically vulnerable cities in the search for higher yield (Newman, 2009; Ashton, 2009). Thus, because of financial deregulation around municipal bonds, higher financial and investment risks were mapped onto declining post-industrial, Black-majority cities, making the search for municipal bonds more lucrative and more expensive to pay for public services than other cities. Investment risk in relation to municipal bond are defined as: "financial securities [that] are risk-bearing commodities, priced in relation to how (un)likely it is that investors will recoup the money they have put forward" (Omstedt, 2019: 7).

Ponder's (2017) work demonstrates the largest Black-majority cities in the US have consistently received higher interest rates in the bond market since the deregulation of the financial industry in 2000, and therefore, have been forced to engage in financialized speculative arrangements around issuing debt to pay for city services. The implications of financial deregulation have been proven to be costly for Black-majority cities, where per capita rates of interest paid on debt taken out by Black-majority cities is higher than per capita rates of other cities (Ponder, 2017: 176). For Black-majority cities, median interest rates calculated between 1970-2014 are over 5%, above the national average of other municipalities - the highest median interest rate in Flint, at an average of 6.25% over this period. Ponder (2017) also notices that the gap between Black-majority cities' interest rates in the municipal bond market and other issuers started to increase starting in the late 1990s following financial deregulation (172). Financialized urban governance for majority-Black cities thus entails moving towards more sophisticated techniques, such as derivative instruments, to lower interest rates and risk, and manage debt (Aalbers, 2019; Hendriske and Sidaway, 2014).

The challenges of meeting combined sewer overflows (CSOs) EPA consent decrees

What are combined sewer overflows?

The implications of rolling-back funding were made clear in 1995, when the EPA released an updated pollution control policy as part of the Clean Water Act regarding “combined sewer overflow (CSO) systems,” that forces municipalities to upgrade the water infrastructure to meet regulatory requirement but without the state and federal funding to do so. In the nineteenth century, drainage problems and sanitation and health crises led many cities to develop sewer systems. These early systems were built as so-called combined sewer and rainwater systems – where sanitary wastewater from houses and buildings was combined with storm-water runoff into the same pipe system. Today, 772 U.S cities have combined sewers, mostly located in the older industrial regions of the Northeast and Midwest. Due to climate change, heavy rainfall is overwhelming the capacity of combined sewers and treatment systems. After storms, the sewers become overwhelmed and the treatment plants can’t keep up. Instead of allowing the excess water to back up into streets and basements, the solution from decades past was to build overflow valves that divert some of the untreated flow into the nearest waterway. According to an Environmental Protection Agency report, just at the nation’s major beaches—a small portion of the country’s swimming areas—about 3,500 to 5,000 Americans a year get sick because of sewage-contaminated water (Trickey, 2017).

The EPA refers to combined sewers as “remnants of the country’s early infrastructure” (Evans, 2015: 1). Newer cities generally handle stormwater separately from human and industrial waste, but older cities have sewers that had always been combined continued to treat both waste streams together. In both post-industrial and Black-majority cities, who have dealt with large amounts of pollution from the manufacturing sector, combined treatment systems struggled to keep up, largely due to increasing heavy industrial waste coming from factories.

As a result, sewer systems in places like Baltimore, Detroit, and St. Louis, overflow, dumping untreated wastewater into local rivers and lakes at overflow points – referred to as “combined-sewer overflow” (CSO). Unfortunately, the same bodies of water experiencing spills from CSO systems are usually the same water that are used for drinking water. According to an

Environmental Health Perspectives study - after a very heavy rainfall, those overflows will affect a communities' water quality in the form of E.coli concentrations (Goehl, 2001).

Figure 5.4: Flooded Basement in Detroit due to Combined Sewerage Overflow System

Source: Detroit Resident, Narrative Interview, June 2019

The overflow is so significant that the stormwater and sewerage mixtures back up into the streets or a households' basement when a heavy rainfall occurs. When interviewing a Detroit resident, she explained that when it rains in the city – citizens frequently expect their basements to get flooded and backed up (See Figure 5). Many need to use pumps to drain out sewerage water in their basements that usually takes 8-12 hours to complete. Through interviews with households, many disclosed their ongoing household problems with sewage backup when it rains due to the city's combined sewerage overflow systems. During a heavy rainfall, a Detroit resident and her mother spend nearly half a day pumping water out of their flooded basement with an attached hose leading to an outside sewer. Prior to the restructuring of the city's water department, water and sewerage service workers worked to ease the overflow of sewerage throughout the city using their own pumping equipment in the sewer system. However, these services have since disappeared, and households are now forced to de-flood their overflowing pipes themselves. Driving down the flooded Detroit streets with a member of Detroit Water Brigade (a water justice organization), pointed out the overflow of water on the streets:

> "Do you see those freeways that are flooded? That's because it is backed up. The pumping stations on those freeways are closed down. The workers that operate the pumping stations were mostly laid off after the restructuring of the water department in 2014."[7]

Combined sewer overflow systems have been an EPA priority for several decades. The EPA issued a CSO Control Policy in 1994 intended to eventually bring CSOs nationwide into compliance with the Clean Water Act (Lyandres, et al, 2012: 2). This law requires cities to eliminate CSOs to comply with the Clean Water Act. Since this law has been enacted, the EPA has undertaken enforcement actions and sued cities and independent sewer districts across the U.S for non-compliance. EPA-enforcement actions have resulted in consent decrees specifying mandated investments municipalities need to spend to achieve compliance. Remediation actions under these consent decrees vary, depending on the specifics of the sewer system. Some cities like Baltimore are expanding their treatment capacity to reduce pollutant discharges and upgrading the capacity of sewer lines to transport wastewater to the treatment facility. Other cities like Detroit and St. Louis, are constructing 'deep tunnel' projects underground to store access wastewater and are separating sanitary and sewer pipes.

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[7] Expert Interview, Activist, June 2019

These infrastructure projects are large in scope, take many years to complete, and carry significant costs that municipalities have difficult financing, even over many years. In a 2012 report to Congress, the EPA estimated a need for $50 billion in CSO-remediation projects. As of 2019, 209 municipalities were forced under EPA consent decrees to address combined sewer system (EPA, 2019). Out of the major cities that have been under or presently under EPA consent decree due to CSO, nearly half are Black-majority cities (EPA, 2017). This has posed many challenges for these cities in terms of funding ways to finance these infrastructure improvements in a municipal bond market which has historically made it difficult for Black-majority cities to issue loans to pay for city services and capital improvements on favourable debt terms.

Infrastructural decay of Black-majority cities and financial troubles

These consent decrees and the inability of some cities to upgrade their water and sewerage infrastructure needs to be understood within contested uneven geographies of racial capitalism within and between cities. Under austerity, cities are sacrificing the funding of other city services to pay for these improvements or risk being fined by the EPA. These water systems were built over 100 years ago and were over-designed and built for more people and houses than the city currently has. Over several decades, all three cities have experienced dramatic population losses that has placed a strain on their local revenue. The decline of residents was exacerbated during the 2008 economic crisis, where many homes were foreclosed on and left empty.

In an interview, a State of Michigan government official claims, “cities can experience significant loss of revenue and public health problems from trying to keep water mains and lines in abandoned/blighted areas pressurized.”[8] What this means is that when moving water through pipes in blighted area, the pressure is lower than normal because less people are using water in a neighbourhood. Eric Oswald claims Detroit and Flint, and other declining cities, who experience significant blight throughout neighbourhoods use what is called “flushers” to keep the water flowing at an adequate pressurized rate. Not only does this cost significant money to do this, but

[8] Expert Interview, Eric Oswald, February 2019

also overtime, it can damage chlorine residual inside of water pipes – a coating that protects contaminants in the pipes from leaking into the treated water. This makes Black-majority cities more at risk of water contaminants, like copper and lead, leaking into the water system that are poisonous and can cause determinantal health effects, a situation that occurred in Flint, Michigan where lead leaked into the city's water system, poisoning thousands of children. Thinking about race and space, infrastructural decay in Black-majority cities needs to be theorized as a product of sociospatial racialization of municipal finance.

Financialization of Municipal Debt

Case-study findings from this research has revealed previous rounds of neoliberal state-restructuring and the racialization of municipal finance placed a substantial toll on city finances that led to debt-led development and cities under austere governance that was further amplified after 2008. Persistent revenue shortfalls and increased demands on spending for services and straining local budgets has made investment towards water infrastructure limited. Often referred to as crowding-out in municipal finance, local leaders have searched for ways to relieve fiscal pressures. The approaches all three Black-majority cities took to finance their consent decrees show some similarities and differences, but overall, each city used speculative tools in response to fiscal restraints demonstrating an imperative financialization of water and wastewater infrastructure. The case of Baltimore, Detroit, and St. Louis, present the financial strategies used to manage heightened municipal debt in the bond market that ultimately contributed to increasing water rates and the restructuring of water services. Austerity following 2008 in these cases was more than the cutting and restructuring of services but turned predatory and inflicted "racialized harm" (Ponder and Omstedt, 2019) in the form of unaffordability of water and sewerage and mass water shut offs for those urban citizens who could not afford to keep up with increasing water rates.

St. Louis and debt management through advanced refunding

The St. Louis region has nation's fourth-largest sewer system, behind only New York, Los Angeles, and Chicago (Trickey, 2017). St. Louis and other cities have refinanced existing debt to take advantage of a low interest rate municipal bond market. For majority-Black cities, capitalizing on lower interest rates has been critical, particularly in a municipal bond market that has made it very expensive for Black cities to issue loans to pay for city services in comparison to other cities. St. Louis's consent decree agreement with the EPA was signed in 2012 and is the most expensive in the US (Trickey, 2017). It is a $4.7 billion project over 20 years to cut down on sewer overflow. Project Clear, the name of the project, is being completed by the St. Louis Metropolitan District (MSD)– a decentralized, public-private entity that operates sewerage and stormwater services to the City of St. Louis and other municipalities in St. Louis County. The plan involves eliminating 50 sewer overflows, and building 60 miles of wastewater sewers, including a tunnel from Fenton to the lower Meramec River treatment plant using both green and grey infrastructure. Once complete, Project Clear is supposed cut the total volume of overflows by 80 percent, to about 1.2 billion gallons a year.

St. Louis' Metropolitan Water Division (MSD) has relied on revenue bonds and mounting debt to pay for the completion of its new stormwater and sewer projects at higher costs than other cities. For instance, in January 2010, MSD issued $85 million through Series 2010B Revenue Bonds that increased interest rates annually going up to 5.9%. ending in 2039, although the average interest rate on all municipal bonds issued in 2010 was close to 4.5% (MuniBondAdvisor, 2020). Moreover, two years prior in 2008, MSD issued $30 million through Series 2008B Revenue Bonds where interest rates increased annually from 5.1% to 5.75%, ending in 2035. Comparably, these interest rates were way above average in comparison to interest rates on municipal bonds issued by other municipalities during that same year. In 2008, the average interest rates for all municipal bonds were 4% (MuniBondAdvisors, 2020). Similar to subprime mortgage loans, these bonds are designed in a way to be refinanced to keep cities rolling their debt forward endlessly so that interest rate collection never stops. In 2012 and 2015, MSD used a financial tool called advance refunding to refinance their revenue bonds and save costs from updated credit ratings and a low interest fiscal environment.

According to a Pew Charitable Trusts 2013 report, 30 major U.S cities issued $13.9 billion in the form of advanced refunding in 2012 – the largest amount in two decades. For the first time since 1991, advanced refunding accounted for more than 57 percent of the total refunding municipal bonds that were used by three U.S cities: Houston, New York, and Chicago (2013: 1).

Advance refunding bond issuance totalled $91 billion in 2017, accounting for 22.2 percent of the municipal bond market last year (Pierog, 2018). Advance refunding is a more complex and costly financial arrangement than the current refunding mechanism – a tool where general obligation and revenue municipal bonds can be refunded only within 30 days. In a typical advance refunding deal, an issuer can refinance their bonds following 91 days of the original bond issue and invests the proceeds in an escrow account that is funded with treasuries and produces the cash flows necessary to cancel the prior bonds (1642). Advance refunding allows issuers to restructure their debt service, provide debt service savings, and eliminate burdensome covenants. This financial tool has been used more frequently for fiscally distressed cities with higher interest rates on their revenue bonds and seek to lower their debt payments in the short-term to free up capital. Following the 2008 financial crises, revenue declines made it difficult for cities to take on new debt which contributed to a lack of borrowing for new projects. Studies show the use of advance refunding increases when municipalities experience declining tax revenues or budgetary shortfalls (Ang, et al, 2017: 1670). Thus, advance refunding is a tool that became attractive to a fiscally distressed municipality like St. Louis facing severe cash flow constraints due the decimation of their tax base and high debt obligations. However, as Ang, et al (2017) mentions, the fees paid to underwriters, rating agencies, lawyers, municipal debt advisors and other transaction costs, can get expensive over time with advance refunding although debt payments in the short-term may decrease.

Generally, recessions and the immediate post recessionary periods result in low interest rates that make it attractive to cities for funding new long-term capital projects because they can do so at a lower total cost. These periods of low interest rates are also opportunities for cities to issue refunding bonds to reduce annual debt-service costs and trim spending in austere times. Refunding bonds pay off the outstanding principal on a previous bond by reissuing that debt at a lower interest rate. However, rather than the paying off the bond, advance refunding merely extends the payments (for principal and interest) over the term of the new advance refunded bond—20 to 30 years. Municipalities can therefore use refunding bonds to trim the cost of existing obligations, similar to the way homeowners can lower their mortgage payments through refinancing. However, the downsides of this financial mechanism means that cities become locked into longer debt payments over a span of multiple decades.

After the financial crisis when interest rates on municipal bonds were very low, St. Louis were able to use advance refunding to get an interest rate of 2-3% on new bonds. When they entered a consent decree with the EPA in 2012 and needed more loans to pay for infrastructure projects – MSD advanced refunded older bonds and issued a new loan to pay off an older loan for a cheaper price. Although savings have been realized in the short-term, it has been residents who are bearing the costs in the long-term in the form of higher water and sewerage bills as assurance on the bonds. Average sewer rates went from $44 per month in 2019 to nearly $100 in 2022. Since the EPA Consent Decree was signed, sewer rates alone for citizens have been increasing 10% annually in St. Louis. Since the city of St. Louis also has a high poverty rate and a lower minimum wage in comparison to the national average, sewer bills can take up a big portion of poorer city homeowners' budgets (Colton, 2017: 306).

Through advance refunding, St Louis was able to realize interest savings in the short-term on future debt-service payments on their revenue bonds. This strengthened their ability to pay for other day-to-day city services, particularly when property tax revenues were declining following the housing crisis. However, financial risks have been translated on urban residents by increasing sewerage rates to meet these obligations. Put simply, bonded projects work for the bond market industry, not for cities (Ponder, 2021). The example of advance refunding of St. Louis' revenue bonds shows the differentiated financial logics and exposure to risk Black-majority cities face in the municipal bond market in comparison to other cities that is partly the result of the racialization of municipal finance in the United States. The focus of using this financial tool is for debt management, debt recovery, and debt refinancing that is prioritized over service delivery. This example speaks to the imperative of using speculative financing in Black-majority cities to manage debt under austerity rather than for improving the delivery of water and sewer infrastructure. Meanwhile, marginalized communities in these cities bear the costs and financial risks of these deals in their bills.

Baltimore and Detroit: The use of auction rate securities and interest rate swaps

In the case of Baltimore, their EPA consent decree has been in place since 2005 and required the removal and replacement of combined sewer overflows by 2016. Over the past 20 years, Baltimore's consent decree has cost the City of Baltimore $2.1 billion to repair the City's aging sewage system (City of Baltimore, 2016). The sewerage overflow was so dire that sewerage and industrial waste had been leaking into Chesapeake Bay for decades. Despite the efforts to fund these repairs through debt-led development in the form of revenue bonds in the municipal bond market, thousands of residents still report sewerage back up in their homes. The consent decree was renewed in 2016 due to unresolved repairs, and the projects covered in the revised decree were expected to cost another $630.1 million in 2017, and an additional $548.4 million by 2030 (MCE, 2019).

Beth Harber, an expert working on water affordability in Baltimore, describes the problems associated with combined sewer overflows as connected to uneven racialized development patterns, planning, and zoning.[9] Water and sewerage infrastructure between the Black-majority City of Baltimore and surrounding white suburbs, such as the sharing water and sewer mains and treatment plants are inextricably linked. Sewer pipes start in the white suburbs and come down through the water shed into the city, and then go out to various water treatment plants. This means all the sewerage from the white surrounding suburbs is going through Baltimore City pipes, yet "the 10 mile of backup sewerage is thought of as a city problem."[10] Beth Harber argues that the city has been subsidizing suburban residents and paying for these high infrastructure costs to replace their combined sewer overflow system for many years.[11]

Over the years, the City of Baltimore has issued revenue bonds to pay for these repairs. To save costs on interest rates on these bonds, Baltimore's Department of Public Works began in the early 2000s using auction rate securities and interest rate swaps as a type of high-risk variable rate on their revenue bonds to save costs on debt payments. By 2015, the City of Baltimore had paid banks nearly $53 million in interest payments just for water and wastewater swaps, and another $43 million in penalties. The total for all the city's swaps, not including the huge losses on the city's auction rate securities, came to nearly $200 million (Sloan, 2016). As of 2015, Baltimore has 17 interest rate swaps on which they are paying the banks about $12 million a year

[9] Expert Interview, Abell Foundation, March 2019
[10] Expert Interview, Abell Foundation, March 2019
[11] Expert Interview, Abell Foundation, March 2019

on net interest costs. This is money that bondholders are collecting from Baltimore that could otherwise been spent on water infrastructure projects.

Baltimore's water department's revenue bonds that were using interest rate swaps were known as auction rate securities. Auction-rate securities (ARS) are bonds with variable interest rates. ARS can provide low, short-term interest rates on long-term revenue bonds. If a water utility wants to raise money for an infrastructure project and they issue bonds, they can issue bonds at a fixed rate or a variable rate. The variable rates that are available are usually lower, but they're riskier in that they fluctuate according to market conditions. The principal advantage of variable interest-rate debt is the opportunity for municipalities to pay a lower interest cost on debt in the short-term, rather than a higher, fixed-interest rate in the long-term. Banks pitched interest rate swaps to Baltimore city officials to allow them to get cheaper loans and as insurance on their auction rate securities. What we have seen nationally following the market crash in 2008, is that it didn't work out this way for cities who have these interest rate swap deals. They were designed in such a way that they were filled with risks, most of which were not adequately disclosed to cities like Baltimore when they were issuing the bonds and attaching the swaps to them.

In the years leading up to 2008, variable interest rates were lower than fixed interest rates, and therefore, financial tools, such as auction rate securities and interest rate swaps, were attractive for municipalities who were attempting to manage their debt obligations. The main disadvantage of variable interest rate debt (such as auction rate securities) is that interest rate risks are tied to fluctuations in the economy. The use of interest-rate swaps agreements used for auction rate securities are tied to what is known as the London Interbank Offered Rate (LIBOR), a benchmark interest rate at which major global banks lend to one another for short-term loans. The use of interest rate swap agreements tied to LIBOR soared into 1990s as local and state governments tried to hedge against interest rate hikes. Since 2008, issuers have seen their auction rate securities rates increase from less than three percent to eight percent or more as a result of the LIBOR rate changes scandal where banks artificially inflated the rate to secure more profit and limit losses following the financial crisis (Maciag, 2012). Since the scandal broke in 2012 multiple global investment banks have been fined hundreds of millions and sometimes billions of dollars by the US Justice Department and European Commission for playing key roles in manipulating the LIBOR (Ashton and Christophers, 2015: 196-200). Through the LIBOR manipulation, municipalities using auction rate securities and interest rate swaps were left with two options: lose money by failing to refinance floating rate debt or pay hefty contract termination fees. In the fine print of these financial deals, auction rate securities fiscally strapped municipalities so they were unable refinance their debt at lower available interest rates unless they give the banks a hefty payment to do so. Municipal bond market experts estimate that by as early as 2012 American localities had already collectively paid banks more than $6 billion in termination agreements to refinance their debt out of toxic interest rate swaps (Merrefield, 2020).

The raced implication of all of this is that revenue from residents' rising water bills funded the high price of financialized, speculative water infrastructure development, which did not materialize into funding water and sewerage infrastructure for city residents. Instead, the costs of these bad financial deals were downloaded onto residents in the form of higher rates that have become unaffordable for many. As reported by a study conducted by Food and Water Watch (2018), one-third of Baltimore city residents cannot afford their water bills. Baltimore's water rates have risen more rapidly than the national average. From 2006 to 2016, the cost of water has increased by 127 percent (Montag, 2019: 33). Annual bills for combined water and sewerage services for residential customers increased 37% between 2014 and 2018 alone, from an average of $517.26 to $787.58. In January 2019, the city approved another 30 percent rate increase over the next three years. According to calculations by water expert Roger Colton, the average customer's water bill is expected to increase to $1,115 by 2022, more than triple the average bull in 2010 (Montag, 2019: 33).

As with Baltimore, interest rate swaps were a contributing factor to Detroit's financial crisis and to the fiscal struggles of the Detroit Water and Sewage Department (DWSD). From 1977 to 2013, Detroit entered consent decree with EPA due to the dumping toxic waste into the Detroit River and to separate the combined sewer overflows which were overwhelming its sewage networks during heavy storms and mounting pollution. If not released into waterways, the foul water backs up and floods basements of homes (see figure 2). Moreover, due to decades of manufacturing and the auto industry shaping Detroit as an industrial midtown for most of the

20th Century, this created enormous environmental consequences as industrial development created pollution in the rivers that placed added strain on their water and sewerage system. In 2011, Detroit dumped 7 billion gallons of untreated sewerage and stormwater into the Detroit River, which flows to Lake Erie (Lyandres, et al, 2012: 5).

Having already spent nearly $800 million on the infrastructure, in the form of designing and building water tunnels, dewatering stations and treatment plants, Detroit now faces some of the biggest financial challenges in the region to pay for the remaining needed repairs. These are estimated to be an additional $555 million for gray infrastructure and $50 million for green infrastructure for the CSO correction project that is expected to be completed by 2029 (Lyandres, et, 2012: 5). Financing water and wastewater infrastructure to correct the combined sewer overflow system has placed the city in fiscal distress and has forced DWSD to issue risky bonds to pay for the project, in some cases which never materialized. According to a city official from the water department, "there were upwards of $600 million of assets that were written off, or items that were paid for with debt that never materialized as projects" (Nikki, 2). One example of this was a project for their combined sewer facilities. This involved the city building a deep tunnel to further reduce sewage overflows. This project was halted by the city in 2009 due to a lack of capital funds to complete it after it collapsed following termination fee payments using interest rate swaps. However, this is still a debt the water department has to re-pay.[12]

During its time under federal consent decree, the DWSD also entered into multiple predatory interest rate swap agreements on their auction rate securities. In 2012, Detroit's water department issued $1.1 billion in revenue bonds that was allegedly for infrastructure repairs. But, $537 million of that was used to pay interest rate swap termination fees to Chase Bank of America (Bellant et al., 2014). One of the criteria in the swap agreement is that if the city was going into fiscal stress, such as declared in a financial emergency, as they were by the State of Michigan in 2011 – the swap counterparties could exercise certain rights involving penalty fees.

The water department was left approximately $5.4 billion in debt, and was immediately put under emergency management control, before filing for municipal bankruptcy in 2013. Many

[12] Expert Interview, Nikki Bateson, June 2019

activists viewed the bankruptcy as an extension of the subprime mortgage crisis. Through the bankruptcy process, financial emergency managers semi-privatized the city's water department into a quasi-public-private authority now known as the Great Lakes Water Authority (GLWA). As mentioned by a City of Detroit financial lawyer, part of the bankruptcy was to privatize and regionalize the water department into order to separate its bad fiscal position from the City of Detroit, shed debt, and be able to access the bond market with better credit rating. As part of the deal to transition the water department to a private authority, Nikki Bateson who is currently the Chief Financial Officer at the Great Lakes Water Authority claimed "we put a provision in the agreement that if a regional authority was forced, as the buyer of new, you would agree that your bonds would be transferred from being the City of Detroit to bonds for the Great Lakes Water Authority."[13] Moreover, when asked about the motivations behind semi-privatizing Detroit's water department through a municipal bankruptcy, a financial advisor for the Detroit's water department, responded with:

> "there was a sense that as an independent regional system, bluntly, they would able to approach the market with a better credit rating. And that has proven out to be the case. GLWA basically reinforcing what was then the existing 6.5 billion of DWSD debt resulted in savings of millions of dollars because they've been issuing new debt in the credit markets with a solid credit rating."[14]

There was also another element to this: racial tensions. There was a lot of frustration between suburban customers and Detroit's water department. This move served as a way of white, suburban counties taking back control of the system. A water justice activist saw enforced-austerity privatization as a "suburban dream come true" and that the fight between control of Black-majority controlled water system in Detroit has been a battle the suburbs have been fighting for many decades.[15] The implications to the financialization of infrastructure to fund Detroit's EPA consent decree has meant that Detroit residents — who have among the lowest per capita incomes in the US — have footed the bill for the majority of the costs required to address combined sewer overflows. Detroit water customers have seen their rates spike by nearly 120 percent in the last decade; almost half of their payments now go toward paying down

[13] Expert Interview, Nikki Bateson, June 2019

[14] Expert Interview, Eric Rothstein, June 2019

[15] Expert Interview, Eric Rothstein, June 2019

the debt on the swap termination fees (Russell, 2016). Because the DWSD borrowed money for the termination fees, ratepayers' money is going not only toward the banks' settlement, but also for interest to bondholders on the debt.

It is not just the base usage water and sewerage rates that are going up, but these cities have added extra fees and taxes to pay for infrastructure costs since 2008 in the form of "infrastructure surcharges" in addition to water rates based on usage.[16] In Baltimore, Detroit, and St. Louis increasing bills have led to thousands of water shut offs over the past few years and other egregious debt collection methods for water bills, such as housing auction foreclosures, for households who have accumulated water bill debt owed to the city's water department and are unable to pay it off. Majority-Black citizens living in these cities who are facing the consequences of the unrepaired water and sewerage system are also the same people who are seeing their water rates go up and their water get shut off because of their inability to keep up with increasing water rates. In a 2016 study conducted by Food and Water Watch, water bill burdens are much higher in Black-majority cities – where low-income households pay more than 7 percent of their income on water in comparison to low-income households in white-majority cities that pay only 3 percent (Food and Water Watch, 2016: 9).

Some municipal financial consultants understand the policy decisions made around these bad financial deals to be rooted in poor management and corruption on behalf of city officials.[17] But other view it as banks pitching high risks deals to Black-majority cities in fiscal distress to reap high profits in interest rates. When asked about the city's credit rating impacting their ability to pay for water infrastructure, a city official at St. Louis' Metropolitan Sewerage Division viewed the ability to issue bonds for a declining city like St. Louis has meant lower credit ratings in comparison to other cities, and thus having to pay higher borrowing costs and interest rates. This means Black-majority cities pay more for infrastructure upgrades based on measures of poor credit and financial ratings due to economic decline and white disinvestment, but also rooted in racist ideology tied into finance and governance structures where Black debt is viewed as crippling and something that must be disciplined, and where municipal indebtedness

[16] Expert Interview, Eric Rothstein, June 2019
[17] Expert Interview, Eric Rothstein, April 2019

for white cities is understood as an economic opportunity (Seamster, 2019).[18] As some have indicated, these deals made sense at the time, and no one was aware that the market was going to crash. Eric Rothstein, a financial consultant for Detroit's Great Lakes Water Authority (GLWA) on the impact of high risks financial tools to finance water infrastructure, "if used properly and if market conditions prevail, the swaps can be an effective tool. However, many water departments were unaware or misinformed of the risks involved." Justin Marlowe, a professor at the University of Washington mentioned that interest-rate swaps are the most common among entities with unpredictable revenues, such as water utilities. It is estimated that one or two of every 10 municipalities might have come out ahead in the swap contracts, the other 8 or 9 lost millions of dollars. What is unfolding at the municipal level in Black-majority cities runs parallel to the 'super inclusion' predatory subprime lending of racialized communities leading up to the financial crisis. The hidden costs and risks were designed to be overly complex and to fail and this is reflected by how sophisticated financial teams sold Black-majority municipalities into risky investment deals because of their desperation to manage municipal debt and pay for water and wastewater infrastructure.[19]

Similarly, to St. Louis – both Baltimore and Detroit engaged with high-risk financial arrangements to manage their increasing debt obligations to pay for needed infrastructure in a municipal bond market that arbitrarily lends to Black-majority cities. In this sense, racial capitalism in the form of financialization works through municipal finance and the municipal bond market by operating through racialized financial risks and socio-spatial terrains of uneven racialized development. By understanding the racialized configurations of municipal finance, I argue that the concept of "risk" in the municipal bond market is racially spaced through illustrating how Black cities – in the form of urban infrastructures – serve as extractive sites of global financial capital. From this, we can make sense of why Black-majority cities are more inclined and at the same time, made more susceptible to the financialization of infrastructure. Narrowing-in on the all-pervasiveness of anti-Blackness in urban finance as a locally experienced aspect of global racial capitalism, rather than an urban phenomenon of regional

[18] Expert Interview, Brian Russell, February 2019
[19] Expert Interview, Dharna Noor, May 2019

exceptionalism, is useful “to understand how racial capitalism flows through urban finance frameworks to spatialize plantation futures (Ponder, 2021: 5).

Conclusion

This chapter uses a comparative case study of St. Louis, Baltimore, and Detroit to try and understand how infrastructural financialization and austerity-influenced state regulations produces and reproduces socio-spatial and racial inequalities that disproportionately harm Black-majority cities and their residents. Its key contribution develops an approach that centers racial capitalism when examining the relationship between state-restructuring, infrastructural downloading and municipal finance in the U.S. In engaging with these bodies of literature, this chapter provides two principal contributions.

First, it argues for an approach that centers race/racialization embedded in emerging literature on racial capitalism into analyses of urban geographies of financialization and austerity urbanism (Pulido, 2016; Ponder and Omstedt, 2019; Danewid, 2019; McElory and Wreth, 2019). The case studies of three Black-majority cities in their search for savings through speculative financial tools to meet EPA regulatory requirements points to how analyses of the contemporary urban fiscal condition are in dire need of more comprehensive engagement with long-stranding, historical patterns of racial capitalism, while also attending to the racialization of municipal finance to understand the distinctive nature of financialization operating in Black-majority cities. It asks researchers to pay attention to how Black populations come to experience water and sanitation inequalities, as well as the new accumulation regimes targeting the infrastructures of social reproduction across Black cities. Racialized people are made vulnerable through continuous rounds of austerity budget cuts, scalar dumping of infrastructure responsibilities, and financialization of municipal bonds due to the absence of federal funding. The everyday unaffordability and insecurity of water for urban residents are increasingly operating through racialized finance markets and logics. Therefore, tracing the path-dependent and unevenness of the municipal bond market through the lens of racial capitalism illuminates how financial risk and precarity are tied to Black cities to access funding. Examining macro-level financial tools of debt management shows how contemporary racialized capital moves through and operates at the urban scale, but also how it impacts citizens lives in the form of who can afford and who gets access to water.

Secondly, I undertook a relational theorisation of urban governance in Black-majority cities by expanding on the idea of austerity as regressive redistribution debt strategy in the form of infrastructural downloading and exploring the differentiated governance mechanisms at work through forms of privatization, financial arrangements, increasing user fees, and service shut offs. In doing so, this chapter has illuminated some of how austerity urbanism is felt more profoundly by Black-majority cities by situating these governance strategies within a framework on that considers the remnants of previous rounds of neoliberal state restructuring and racialized uneven development. As a result, this current round of urban austerity post-2008 created new socio-economic and socio-spatial ramifications for Black residents in the form of water and sewer affordability and service shut offs. In trying to pay for infrastructural decay as mandated by EPA consent decrees but without support from the federal and state government, each city relied on private market loans and struggled to manage their debt liabilities which placed them in fiscally distressed situations where debt management financial tools became attractive avenues. In the form of revenue bonds, advance refunding, and using interest rate swaps, such arrangements inextricably tied them to the boom-and-bust cycles of the financial markets. Infrastructural upgrading under the current era of financialization operates through asymmetrical power relations in the bonding process, re-inscribing the racialization of urban space through water. Using water as an empirical case-study has provided a useful perspective and platform by which variegations of infrastructure inequality can be identified involving racialized capital that unevenly unfolds throughout the urban fabric.

As I have demonstrated, the municipal bond market is actively engaged in the uneven financial production of U.S cities that is rife with racial hierarchies in ways that determine who gets access to local public services and goods. Ageing infrastructure requires large capital improvement expenditures in a way that does not place cities into a debt trap. On March 31, the White House released the American Jobs Plan, a $2 trillion infrastructure plan aimed at creating jobs and rebuilding U.S. infrastructure that dedicates $111 billion dollars towards clean water and drinking water investments (Volcovici, 2021). While the proposal does not include detailed program funding allotments yet, this national infrastructure plan represents a new phase of federal government investment to address the financial needs of cities. Using federal pools of capital and making subsidized financing programs available for will helps water and sewer systems bring down the expense of needed infrastructure upgrades in cities that will reduce affordability risks for the many who are least able to manage them.

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Chapter 6

Racialized Inequalities of Austerity Urbanism

The previous chapter's aim was to provide a broad empirical scope of water and sewer infrastructural financialization in Black-majority cities, the next chapter begins to focus more acutely on the austere effects of Black-majority cities that have been captured by speculative financing and debt-led infrastructural development. Focusing on three different water and sewer debt collection methods used across Baltimore, Detroit and St. Louis, chapter seven's key contribution highlights how these debt collection practices become a racializing process, which reveals the distinctive predatory nature of financialized austerity when it operates in Black-majority cities. This chapter also seeks to contribute to wider scholarly debate in urban and economic geography that operationalizes urban geographies of racial capitalism, and its connections to debt, finance, and austerity. I argue that the use of punitive debt collection practices for unpaid water bills is a particular form of extraction under austerity governance following budget shortfalls after 2008. Secondly, I argue how this is institutionally embedded in the financialized logics of the municipal bond market to ensure profit leverage and the racial implications of this in the form inequitable access to water and sewer infrastructures.

The previous chapter addressed the interactions of neoliberal state restructuring and its impact on urban governance. Focusing on how neoliberal state-restructuring has downloaded fiscal responsibilities onto cities to provide and deliver water and sewer services led to narrowing-in on the local practices of speculative development in Black-majority U.S cities to deal with fiscal restraints under reduced state and federal revenue-sharing since Keynesianism, and what may this reveal about the distinctiveness of the financialization of Black-majority U.S cities. I continue the focus on the interactions of finance and governance by illustrating how racialized austerity is operating in each city from the case studies of water debt and new debt collection mechanisms local governments are using to collect on unpaid bills in an environment of unaffordable water and sewer services. Furthermore, I demonstrate that there has been a further financial deepening of Black-majority cities under austerity through pressure to satisfy municipal bondholders and meet their debt obligations as it is considered "good governance" practices. Mass water shut offs and other debt collection practices are the outcomes of downloaded debt onto local spheres following the 2008 economic crisis, and what happens when residents are squeezed to their limits.

This chapter follows Fields' (2017) assertion that empirical work on financialization needs to be understood as a situated and variegated process, rather than as a blanket phenomenon that unfolds uniformly across spaces. In this sense, infrastructure financialization in post-industrial, Black-majority cities is contingent on uneven terrains of racialized urban development and geographies of austerity through decades-long historical disinvestment in urban infrastructure systems in Black communities (Harrison, 2015; Melosi, 2000). Considering work that articulates how infrastructure, race and capital produce 'hierarchical regimes of reproduction' (McIntyre, 2011: 1466) and 'surplus populations' in inner-cities (Gilmore, 2002; McIntyre and Nast, 2011), the collusions of municipal finance, austerity governance and debt can articulate how financial risks are unevenly placed on Black cities and households. Municipal bond institutions and practices devalue Black spaces through accounting measures of debt collection methods and rates of delinquency as preconditions to issue loans to municipalities to measure creditworthiness. This has led to a water access and affordability crisis in Black-majority U.S cities.

The main question that frames this next chapter is: what is "racial" in urban geographies of racial capitalism? By exploring how municipal debt and finance is a condition of racial capitalism, I refer to financial tools or instruments, like municipal debt and bonds, with seemingly neutral elements — such as bond ratings and interest rates — that end up negatively affecting low-income, Black communities, through actions like water shut-offs. In this sense, this next chapter is concerned with how these physical and punitive austere policies around debt collection are underwritten by more abstract forms of financial violence in the municipal bond market.

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Chapter 7

The policing of Black debt: How the municipal bond market regulates the right to water

Introduction

On May 25th, 2020, George Floyd, a 46-year-old black man, was killed in Minneapolis by a police officer for allegedly using a counterfeit $20 bill to buy groceries after he lost his job due to COVID 19. George Floyd's murder sparked mass protests globally against police brutality and police racism. Moreover, it has forced many cities to rethink how racialized poverty is policed and the predatory function of police departments that exist to extract wealth and criminalize the racialized poor. According to the U.S Fines & Fees Justice Center, the criminalization of poverty is one of the main factors driving police violence in the United States (FFGC, 2020). With George Floyd and countless others before him, law enforcement uses alleged crimes of poverty to justify dehumanizing and killing people of color. Only a few years ago after a police officer killed Michael Brown in Ferguson in St. Louis for selling CDs, the Justice Department's investigation found a pattern of racially discriminatory practices incentivized by the city's dependence on the criminal justice system to raise revenue (U.S DOJ, 2015). On a more mundane level, the same practices exist to manage debt and the fiscal crises of municipalities caused mostly by the dynamics of the financial market. American cities, and in particular, Black-majority cities, rely on the punitive enforcement of fines and fees to fund basic municipal services in an austere fiscal environment produced by the 2008 financial crisis. These punitive practices are increasingly being used to collect debt for local water and sewer services. Over the last 10 years, there has been a wave of mass water shut offs happening across U.S cities in tandem with rising bills due to ongoing austerity policies (Food and Water Watch, 2018). Such events have forced scholars to rethink who has a right to the city and more specifically, what Mitchell and Heynen (2009) refer to as "the geography of survival" in the Global North which refers to the various spaces and spatial relations that structure *how people may live* and *whether they may live*. The governing of local debt through austerity has thus become an important avenue to research finance capital's predatory relationship to Black America and what this means for everyday survival.

This chapter examines the financialization of water and sewerage services in Black-majority cities and the regressive debt collection practices local utilities use to generate revenue to deepen urban geographers' understanding of how municipal financialization and austerity urbanism are reshaping Black-majority cites and Black lives. Austerity spatially and politically materializes different in Black-majority cities than others. Some Californian cities, for instance, who were fiscally struggling and even went bankrupt following 2008, (Davidson and Ward, 2014) were able to bounce back very quickly (Lerner, 2018). Black-majority cities on the other hand are still struggling with austerity and its lasting effects. By using approaches on the intersections of racial capitalism and municipal debt and the extractive relationship between white and black enclaves through municipal finance techniques (Seamster and Purifoy, 2020), I highlight how debt expropriation is a racializing process embedded in the financialized austerity governance of cities. This chapter seeks to contribute to lively conversations on neoliberal state-restructuring and the racialization of municipal finance to offer better understandings of how contemporary capitalist and financialized processes rely on racialized socio-spatial conditions by devaluing of the geographies of racialized groups of people (McKittrick, 2006). The intent is to facilitate a dialogue between the emerging literatures on Black urban geographies, financialization, and austerity urbanism that takes seriously the racialized dimensions of austerity, and how debt serves as a method of dispossession in an age of financial capital. By drawing on case studies of the unaffordability and insecurity of water in Black-majority U.S cities and the types of local practices being rolled-out to manage debt, this research highlights new emerging trends of environmental injustices and infrastructure inequities between white and black spaces.

Poor Black Americans are paying for the debt incurred by municipalities through forms of revenue extraction. This chapter argues that the financial sector and the municipal bond system reinforces racial inequality. Bond lending to municipalities and its financial logics are a racializing process that makes certain subjects suitable for expropriation and where finance capital is incentivized to increase the pool of urban residents marked "risky" to increase value and thereby extract profits in the municipal bond market. These logics are based on and operate through social-spatial geographies of racial capitalism.

In the first section, I review literature on the relationship between austerity urbanism, financialization, and racial capitalism within the context of its potential to engage with prevailing patterns of racial domination to better understand how contemporary capitalist and financialized processes rely on certain racial preconditions to reproduce itself in the urban. Next, I provide the context of a water affordability crisis across Black-majority US cities created by speculative arrangements to finance infrastructure, and the institutionalization of disciplinary bond market rules and routines around debt collection this is increasingly demanded by bondholders as leverage. Third, I outline three debt collection methods in the form of water shut offs, housing foreclosures, and garnishing assets used in Baltimore, Detroit, and St. Louis. This chapter concludes with two arguments and outlines further engagement. First, austere governance strategies, such as water and sewer debt collection practices, are unevenly dispensed in racialized ways. These strategies are institutionalized in municipal bond market procedures through municipal creditworthiness that operate through socio-spatial relations of racialization revealing urban moments of racial capitalism of racialized value creation where "coconstructed dynamics of empire play out in global cities" (Ponder, 2021: 1). Secondly, the distinctive austere measures employed by each city to collect owed debt is being used to make up for revenue shortages following the 2008 financial crisis (Wang, 2018; Aalbers, 2019; Singla, et al., 2020).

Financialization, austerity, and racial capitalism

Neoliberal economic policies over the last half century have enabled free market, capital mobility that has resulted in a fiscal race to the bottom and has transformed the nature of governance. Although austerity has existed alongside neoliberal polices, historically in times of economic recessions (Peck, 2015), Donald, et al (2014) emphasize the need for us to conceptualize this current round of austerity post-2008 as "peculiarly local in nature" (5) where the severity of this current round of austerity measures is felt most profoundly in cites and operating on already neoliberalized terrains of public service retrenchments (Peck, 2014).

Shifts in urban governance from the 'welfare city' to the 'entrepreneurial city' to the current 'austere city' are understood as symptoms of a wider process of Western governments' neoliberalization (Brenner and Theodore, 2002; Peck, Theodore & Brenner, 2010, 2013). The more recent scholarship has been labelled "austerity urbanism" (Davidson & Ward, 2014, 2017; Tabb, 2014; Donald, et al 2014; Peck, 2015) that has been characterized in specific ways differing from previous theorizations of neoliberal urban governance rationalities.

Austerity is understood as a dominant state practice of financially 'restructuring' the fiscal agendas of governments to reduce government budget deficits that have been persistent conditions under neoliberal governance since the 1980s (Peck, 2015). Austerity urbanism, on the contrary, represents a post-crisis moment cities are experiencing that is understood as a "relational debt strategy," that involves devolved budgetary repression and fiscal disciplining through the downloading of fiscal costs onto lower levels of government thereby transforming a sovereign debt crisis into a municipal debt crisis (Peck, 2015: 4-5; Ponder, 2020: 1). In other words, austerity urbanism is "ultimately concerned with offloading costs, displacing responsibility; it is about making others pay the price of fiscal retrenchment" (Peck, 2012: 632). This chapter views austerity urbanism post-2008 as taking on new dimensions that differs from previous rounds of neoliberal restructuring where cities are unable to absorb such costs and risks, such as debt, and have few options but to offload them onto their residents.

My understating of austerity urbanism reiterates work by Peck (2015) who distinguishes new emerging features of austerity in cities to address local governments' structural deficits post-2008 that involve new rounds of dismantling the social state. This includes significant government downsizing through headcount reductions in city government, reducing wages, and eliminating benefits; fiscal retrenchment; forms of privatization of government operations and public services; offloading responsibilities such as reduction in social-service delivery and adoption of fee-based systems onto citizens (2015: 17-21).

Such transformations in governance are understood to be embedded in the financialization of cities over the last several decades in which speculative development schemes have exposed cities to financial risks and debtor discipline through the bond market (Omstedt, 2019; Kirkpatrick and Smith, 2011; Weber, 2010). In the context of the financialization of infrastructure, scholars have looked at how this has reconfigured the role of local governance to take on market-oriented risk (Fields, 2017; Weber, 2010, Furlong, 2020; Farmer, 2019). In some cases, this means governance expands the scope of financialized infrastructure regulation beyond the asset itself to encompass ‘punitive’ activities needed for continuous accumulation of capital (Farmer, 2019). As global finance capital unlocks value embedded in the material-spatial configuration of infrastructure – it expands its power over everyday urban life. This can be understood as what Rosenmann (2019) describes as “finance-as-governance” (1129) where local governments are increasingly using debt collection practices as revenue-generating mechanisms to meet municipal debt obligations and protect the interest of financial investors. In this sense, bondholders and the practices of rating agencies monitor and discipline municipalities to adhere to fiscal and economic policy that benefits investors in a similar way that the IMF and World Bank serve as policing institutions to adhere to a neoliberal order in the Global South. Municipal bond rating agencies have been understood by Hackworth (2007) as the most influential “police officers” of neoliberal urban governance.

The punitive enforcement of local revenue demonstrates the financial power into the public functions of the city where municipalities are finding new mechanisms for extracting fees from residents under austere agendas. However, the present ways that urban spaces and institutional arrangements are being reconfigured by way of financialization depends on pre-existing socio-spatial inequalities of uneven development. Financialization must not be conceptualized as a one-size-fits-all process that unfolds unilaterally across spaces, but rather as “fundamentally fragmented, path-dependent and variegated” (Aalbers, 2017: 4). It is why Fields (2017) notes that financialization needs to be understood as a situated process explained in its context rather than as a blanket term.

To better understand how the municipal bond market regulates access to water, this chapter reads financialization alongside work of racial capitalism (Bhattacharya, 2018; Gilmore, 2007; Lowe, 2015; Melamed, 2015; Robinson, 1983, 2000; Bledsoe and Wright, 2019) and urban governance, particularly emerging literature around the racialized unevenness of austerity urbanism, the environment, and municipal finance (Bonds, 2018; Jenkins, 2021; Pulido, 2016; Ranganathan, 2016; Ponder and Omstedt, 2019). I draw on the literature on racial capitalism to interrogate the racial logics of municipal finance and austerity urbanism.

The term ‘racial capitalism’ explains the vital role of race and racism in the development of capitalist society. Scholars use racial capitalism to describe how race/racialization/racism combined with capitalist relations to describe the origins of industrial capitalist development through periods of slavery and colonization (Bhattacharya, 2019; Kelly, 2017; Robinson, 2000 [1983]) and to highlight how coercion is integral for capital investment (Baptist, 2014; Gilmore, 2002; Johnson, 2017; Robinson, 2000). Finance, municipal debt, and forms of post-crisis urban governance have begun to be theorized through the lens of racial capitalism (Jenkins, 2020; 2021; Millington and Bigger, 2019; Ponder, 2017; Pulido, 2016; Wang, 2018). According to Wang (2018), local, state, and federal institutions ‘manage’ Black communities through tactics, such as extracting and looting, confinement, and gratuitous violence. Wang goes to great lengths to demonstrate that this “policing as plunder” is explicitly raced, through what refers as the “racial kapitalstate.” When local budgets are struggling, it is imperative that “municipalities must fuck over residents by instituting austerity measures […] As demonstrated by the case of Ferguson, in order to remain solvent, municipalities develop a parasitic relation to the people they are supposed to serve” (Wang, 2018: 182).

Others such as Jenkins (2020; 2021) and Ponder (2017) show how the municipal bond market structures racial advantages for whites based on creditworthiness, an assessment of investment risk understood by bond market analysts to be grounded in “objective economic conditions” (Jenkins, 2020). This then, determines who gets access to public services and who does not. Through the financial accounting of key indicators, such as “net debt to assessed valuation ratio, overlapping debt, and “economic” and “socioeconomic” factors such as population, industry, tax base, and welfare costs” bond analysts postulate future economic growth and the amount and interest rates on the loans based on these determinations (Jenkins, 2020). In this sense, municipal finance is measured based on the socio-economic spatialities of pre-existing racial inequalities, and thus, financial markets can never be insulated from power relations, such as race/racialization/racism.

Since the growth of the municipal bond market in the United States, most notably following the deregulation of the financial industry in 2000, Black-majority cities have had to pay higher rates to access loans in the municipal bond market to pay for public infrastructure and services for residents (Ponder, 2017). Ponder (2017) notices that the gap between Black-majority cities' interest rates in the municipal bond market and other issuers started to increase starting in the late 1990s following financial deregulation (172). Financialized urban governance for majority-Black cities thus entails moving towards more sophisticated techniques, such as derivative instruments, to lower interest rates and risk, and manage debt (Aalbers, 2019; Hendriske and Sidaway, 2014). This has created what Jenkins (2020) refers, to as a segregation of infrastructures. Urban geographies of racial capitalism can therefore be analyzed thorough the configuring of municipal debt in tandem with the neoliberalization of cities that has constituted the underdevelopment of Black America.

I therefore situate the political economy of Black-majority municipal debt within this framework, arguing that financialization has reshaped austere governance in Baltimore, Detroit, and St. Louis towards a local state that is dependent on extractive and coercive debt collection methods to make up for revenue shortfalls and to meet debt obligations for interest of investors. Although water shut offs, for instance, have been used by local governments in the past when bills are unpaid, the mass scale of water shut offs across U.S cities came to fruition following 2008. Focusing on contemporary financialized capitalism, race-making practices are fundamental to processes of financialized capital accumulation because race/racialization/racism produce the marginality and exploitability of lives that capital needs to extract value – through land, debt, labour, the built environment, nature, just to name a few. In this sense, there can be no capital accumulation or no profit realization without racialization.

Viewed from the perspective of racial capitalism, austerity urbanism and municipal finance are not race-neutral. In the U.S context, the formation of Black-majority cities is an example which illustrates the historical and contested racialization of urban spaces. Black-majority U.S cities simultaneously emerged as inhabiting mostly African American residents over a period of government-managed policies of unequal racialized development that enabled on-going accumulation through dispossession and exploitation of Black people, such as white flight, disinvestment, residential segregation, and more recently, subprime mortgage lending. These race-making practices are the product of financial capital rendering Black spaces and people as disposable and thus, made easy through financialized accounting and logics based on creditworthiness to extract profits. In this sense, contemporary municipal finance is one way in which financial value can rearticulate racial hierarchies by placing Black-majorities cities as higher-risk investments.

This work seeks to contribute to debates around how municipal finance and debt work through and reproduce uneven geographies of racial capitalism in Black-majority cities. By examining Baltimore, Detroit, and St. Louis' aggressive use of punitive debt collection practices for unpaid water bills and how this is institutionally embedded in the financialized logics of the municipal bond market, this paper situates municipal debt as a method of dispossession in an age of financial capital that can read as distinctive urban formation of racial capitalism. As municipal debt is financialized and funds to pay for municipal services and infrastructure are increasingly provided by the municipal bond market, local governments become more accountable to creditors than the public and their residents. Austerity urbanism is now operating through complicated legacies of uneven racialized geographies within and between U.S cities (Ponder, 2017; Ponder and Omstedt, 2019; Pulido, 2016; Ranganthan, 2016). Austerity urban governance can be viewed as a form of neoliberalizaton that has been implemented through the racialized logics of financialization. Local governments are not necessarily passive to the unfolding of financialized practices, but can use finance "to legitimize, empower and depoliticize the use of state policies, regulations and funding in order to prioritize the interests of private investors" (Aalbers, 2019: 601).

Thus, austerity policies and its shifting responsibility from the state onto citizens are imposed differently in Black-majority cities than in white majority cities. For Black majority cities, austerity has materialized into policing Black debt through carceral techniques. This includes punitive debt collection practices, such as housing foreclosures, service shut offs, garnishing wages, and forms of incarceration for failure to pay municipal and civil fines, to squeeze revenue out of low-income residents by use of obfuscated force and dispossession for residents who could not afford to pay for those municipal services when fees were added or increased.

Current literatures have started to use ‘spaces’ of austerity and everyday financial geographies (households, community groups, workplaces) to think about how everyday experiences ‘talk up’ to economic policy (Fields, 2017; Hall, 2019). This work can be further developed with attention to the relational contours of racial capitalism to address how everyday life cuts through, across and between racialized spaces. The impacts that contemporary urban governance of austerity – personal and societal, resulting from measures imposed by government to reduce state deficits (Hall, 2017) – have in and on everyday life is what provides the focus for this chapter. An important question this chapter examines is what are how cities are generating revenue to meet their contractual obligations to bondholders when households in Black-majority cities have been squeezed to their limits? What local mechanisms of austere governance have been used? This chapter brings light to the interconnectedness of everyday financialization, race, and austere governance through the policing of debt in Black-majority cities.

Bond market discipline over Black-majority cities

Water system upgrading is an impending political and financial issue in the United States, yet cities are no longer supported by a state apparatus that perceives the provisioning of infrastructure as one of its fiduciary responsibilities. Replacing the state as the major source of funding for cities in need of infrastructural repair and renewal is the interest-seeking $4 trillion municipal bond market. Federal and state governments have eroded funding for water and sewer services beginning in the 1980s and have downloaded these fiscal responsibilities onto municipalities (Gerlak, 2006). Through increasing budget deficits and offloading debt onto marginalized Black residents, the local practices of municipal finance debt collection have become embedded in the everyday politics of municipal bond financing.

Case-study findings from my research reveals previous rounds of neoliberal state-restructuring placed a substantial toll on city finances that led to debt-led development and cities under austere governance that was further amplified after 2008. This research shows that cities under these conditions have encountered complex financial arrangements in their search for infrastructural funding. Persistent revenue shortfalls and increased demands on spending for services and straining local budgets has made investment towards water infrastructure limited.

As a result, local leaders have searched for ways to relieve fiscal pressures. The approaches all three Black-majority cities took to finance old and deteriorating water and sewer infrastructure that was built over 100 years ago show some similarities and differences, but overall, each city used speculative tools in response to fiscal restraints. Detroit, Baltimore, and St. Louis used municipal debt instruments in the form of public-private partnerships, interest rate swaps and advance refunding with the intention of trying to cut long-term debt costs to finance a court-ordered Environmental Protection Agency (EPA) consent decree, a legal order, to fix their water and sewer systems.

However, after the 2008 economic crash, Baltimore and Detroit were left owing millions of dollars to banks in termination fees to end their loan contracts as the financial tools used on their revenue bonds, such as interest rate swaps, were tied to the market conditions of the financial sector. St. Louis on the other hand used advance refunding financial mechanisms to take advantage of lower interest rates and manage their debt portfolio, forcing them to increase water and sewer rates, and amid an urban fiscal crisis. While some cities, such as Detroit went bankrupt, others like Chicago and Pittsburgh privatized water services, and some found new ways to generate revenue to make up for budget shortfalls. How did the Black-majority cities of Baltimore, Detroit and St. Louis generate revenue to meet contractual obligations to bondholders and what mechanisms are being used?

Policing municipal debt in this chapter is understood as racializing expropriation, which is a form of extraction and looting that is used in the public sphere when government bodies out of pressure to satisfy their private creditors – harm the public by looting residents through regressive taxation, fees, fine farming (incarceration for failure to pay municipal and civil fines), service shut offs, and offender-funded criminal justice services such as private probation services (Wang, 2018: 58). Moreover, expropriation is deeply tied to the institutionalization of debt collection practices in the municipal bond market that works to rank and convert urban residents according to "risk" into a source of revenue. In this sense, expropriation is a racializing process that works as in index of already-existing racial inequalities to distinguish which people should be dispossessed based on their creditworthiness and how they are rated in the financial market. There are several financial risk factors the municipal bond market takes into account when issuing loans to municipal governments for services, such as water and sewer. However, these factors are based upon pre-existing and uneven racialized environments of poverty, such as rates of delinquencies, which reinforce punitive debt collection practices.

Bond rating agencies draft credit reports for investors and arrive at a rating which determines the borrowing costs a municipality will have to pay on a bond. Bonds are rated at either investment grade or speculative grade, and the interest rates a municipality must pay on their loan is significantly higher than investment-grade bonds. With the onset of the deregulation of the financial sector in 2000, traditional banking (through big banks) no longer provides short and long-term finance to municipalities, rather it is institutional investors, such as pension funds, hedge funds, insurance companies, and mutual funds (Sinclair, 2005: 5-6). With this shift, bond rating agencies stepped into provide an intermediary disciplinary role to satisfy investor demands for information on cities through superficial evaluation in the form of ratings (Paudyn, 2014; Omstedt, 2019). More importantly, beginning with the 1970s fiscal crisis that resulted in several defaults for municipalities, investors became worried about municipal debt and tightened control by pushing for more complete information on municipal bonds (Sinclair, 2005). The rating agencies responded by becoming more intrusive than they had been in the past on a municipalities' fiscal policies.

The outcome of this led to bond rating agencies having a greater influence in shaping local governance as cities are forced to keep expenses low and revenues high to maintain a positive rating. Research on the municipal bond market since financial deregulation in 2000 show that Black-majority cities are rated more speculatively than other cities (Ponder, 2018). This can be related to how Black household debt is disciplined through using unconventional banking institutions, such as cash chequing institutions and payday loans with exorbitantly high interest rates. According to Seamster (2019), Black debt is a key industry for creating white wealth as racial discrimination shapes who feels debt as crushing and who experiences it as an opportunity (33). The result of this in cities has created a Black debtors' prison compounded across neighbourhoods and cities enforced through disclaimer measures, but where debt works relationally as it performs as an asset to bond rating agencies and the municipal bond market. For Black-majority cities, a municipality's debt collection practices have become an important indicator of asset performance in the municipal bond rating process for investors who want assurance that there is local policies and practices in place for cities to collect on unpaid bills. The most prominent examples being Detroit's filing for Chapter 9 Bankruptcy, both Cleveland and Philadelphia's attempt to structurally adjust to balance their budgets following declines in property taxes, and Jackson, Mississippi insolvency of their water department.

In October 2008, the Government Revenue Collection Association (GRCA) was founded by debt collection industry leaders. The organization works with the local and state governments across the U.S to improve and enhance revenue recovery. Many U.S states since 2008 have allowed localities to privatize their debt collection services to third parties. For instance, a collection agency called Receivable Solutions Specialists, Inc. was recently hired by Adams County, Mississippi to collect $2 million in court and outstanding garbage collection fees and fines. In addition, Mississippi passed the Local Government Debt Collection Setoff Act that authorizes counties to collect debts against a person's income tax refund (Robertson, 2019). Other examples include Chicago and Kendall County, Illinois hiring Harris & Harris to collect unpaid traffic tickets. Municipalities are increasingly outsourcing debt collection services or are creating new revenue-generating mechanisms through additional fines and fees for unpaid bills to make up for budget shortfalls. This includes a wide array of city services, such as unpaid property taxes, sanitation fees, traffic tickets, court fees, and water and sewerage services.

Processes of urban restructuring have become embedded not only in the rollback of responsibilities from the state and federal government that has forced cities to seek alternative funding mechanisms in an increasingly speculative municipal bond market, but also in the technicalities and accounting measures used in the municipal bond market through rating agencies and investors to regulate and discipline debtors (Omstedt, 2019). Bond rating agencies and investors monitor a city's collection rate and debt collection methods, and it is an integral part of the accounting process for rating bonds (S&P Global, 2016: 2). For instance, Figure 1 shows what S&P Global Ratings would categorize as a "AA" municipal bond rating (their highest rating) based on stable debt collections.

Figure 7.1: S&P Global Ratings for Municipal Bonds

Rating category	
AA	This is typically a fully developed district with a substantial tax base and strong transportation access to a major metropolitan region, supported by a stable history of property tax base growth and tax collections. It will have a moderate, albeit declining, debt level and tax rate. The operating history and reserves are strong. All infrastructure needs have been addressed, with minimal, if any, additional debt plans. These districts are often part of a multidistrict community.

In the case of water and sewerage services, utilities are required to disclose their debt collection practices for nonpayment of service to ensure leverage to investors. For Baltimore, Detroit, and St. Louis this includes late penalty charges, water shut offs, liens on property, garnishing wages, and housing foreclosures. There is a financial incentive to engage in egregious practices, such as water shut offs, if a city wants to access credit but has a high number of delinquencies (people who are unable to afford to pay their water bills), and therefore, are categorized and rated through the bond market as "high risk." According to a financial investor who deals with the financial underwriting and creditworthiness of municipal entities, when it comes to water and sewer bonds there is a due diligence questionnaire for each borrower to complete which asks municipalities to provide information on their debt collection methods, how they are being enforced, and what their collection rates are versus billing.[20]

Part of knowing that bondholders can get a return on investment is examining all the structures municipalities have in place so they can collect and hence, "bondholders require evidence that you're going to be able to pay off your debt and meet your debt service obligations, this includes collection rates and methods."[21] Particularly, if one is a fiscally distressed borrower, "if they want to keep a certain credit rating so their bonds are cheaper, they have to be very aggressive on their collection. There is greater insurance to get better terms on loans the more effective these methods are."[22] For instance, in 2012, Philadelphia $71 million water and sewer revenue bonds were downgraded by Fitch Ratings. In the credit report, "below-average collection rates" were cited to be the major factor for their downgrade. The report also cited their collection rates of only at 87% which needed to be higher for a better rating, and that their

[20] Joe Boland Interview, March 2019
[21] Eric Oswald Interview, June 2019
[22] Joe Boland Interview, March 2019

enforcement debt collection methods through property tax liens was "only somewhat effective" (Fitch Ratings, 2012).

When a city is looking for investors to loan them money in the form of a municipal bond, they are required to disclose debt collection information about the bond offering through their preliminary offering statement to banks as well as their official statement.[23] Official statements include information about the terms of the bond and financial information or data concerning the municipality or department. Some of the information that is included on debt collection methods are details of the types of penalties and fees charged, shut off policies, third party debt collection agencies used, and so forth.[24] In addition, other municipal officials mention how debt collection methods have become a selling point for municipal governments when looking to issue bonds. When meeting with investors, such methods are included in their presentations and reports.[25] do presentations to credit rating agencies in advance of issuing water and sewer bonds, you can guarantee there will be a section on collection rates, water shut offs, and or forms of debt collection utilities decide to use based on the requirements municipalities have to disclose in their preliminary Official Statement that serves as informational document on why investors should lend you money. Debt collection methods and collection rates are a key selling feature and considered "good policy" to bondholders according to the Chief Financial Officer of Detroit's Great Lakes Water and Sewerage Authority (GLWA).[26]

Debt collection practices can also be part of a municipal bond covenant. The cornerstone of a bond's legal structure is its covenants, which are legally binding rules to which the utility agrees when issuing the bonds. Utilities abide by many different types of covenants, which can include debt service coverage, what water and sewer rates should be set at, the debt service reserve fund, and other things that will assure investment risk such as, ways of collecting debt. Utilities usually enter a debt service coverage covenant under which they pledge to achieve a given level of coverage each year. The covenant ensures that the utility utilizes its assets to generate sufficient income to pay bondholders and cover operating and capital expenses, plus

[23] Marion Gee Interview, January 2019
[24] Eric Rothstein Interview June 2019, Joe Boland Interview March 2019
[25] City government official, Detroit, 2019
[26] Nikki Bateson, GLWA CFO, June 2019

more to adjust for any sort of future financial risks. This means that often water and sewer rates need to be set where they can meet a 1.2x – 3.0x coverage (in this case, making a profit of one to three times more than needed to operate for bondholder insurance). Weak covenants that allow the utility to operate on a thin margin (1.0x) often mean utilities are rated speculatively and will pay higher interest on their loans (Moody's 2014: 13-16). This can create a cycle of raising water and sewer rates to appease bondholders and bond rating agencies to meet these covenants, but in turn making these services unaffordable.

In this way, disclosing debt collection practices and setting water and sewer user fees to fund water and sewerage services has become institutionalized in the politics of municipal bond rating. For municipalities that need loans in the bond market, they are rated along a scale that measures investment risk and an entity's creditworthiness based on several calculations that include debt collection practices. The lower the credit rating, the higher the borrowing costs for municipalities. This means that cities, particularly those with low-incomes and higher poverty rates (which are disproportionately Black majority cities) (Beyer, 2020) will need to have a sophisticated debt collection practices to ensure a better rating for credit rating agencies to be able to pay for their infrastructure and services. Echoing Omstedt (2019), this is one way in which financial discipline in the municipal bond market is transmitted onto cities. In this sense, bond ratings operate as processes of commensuration which also serve as a form of governance where municipalities "do not just observe but change behaviours as actors seek to conform to standards they perceive as external and objective" (15). In an urban environment marked by fiscal distress, bond ratings reproduce forms of reactivity to ensure debt service coverage. The criteria and evaluations of the agencies become internalized within municipal governments—constructing a "neoliberal notion of budgetary normality as the hegemonic discourse against which democratic governments are judged and governed" (Paudyn, 2014: 5). Austerity in Black-majority cities through punitive debt collection practices shows how the carceral techniques of the local state can be shaped and work in tandem with the imperatives of racial capitalism through the institutionalization of policing Black debt by bondholders and bond rating agencies. I extend this argument below by demonstrating the socio-spatial variations of debt collection techniques used to manage austerity and financial risks in each city.

Water shut offs

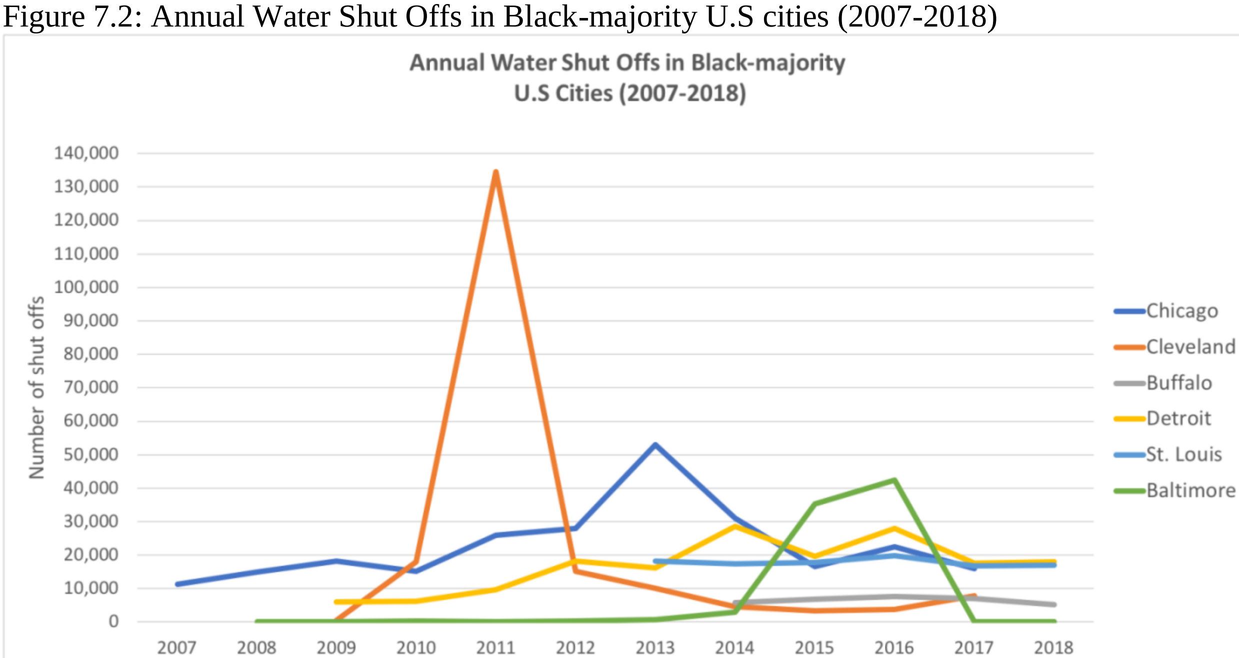
The most common and widespread debt collection practice in Black-majority cities for water debt is shut offs. Media attention around the severity and harm of water shut offs was highlighted during the COVID-19 pandemic, where some organizations were calling for moratorium on water shut offs across U.S cities, citing public health concerns around proper hygiene to stop the spread of the virus (Maqbool, 2020). COVID-19 shined light on the importance of access to clean water, and the millions who are living without water due to shut offs in Black-majority communities (Klasing, 2020). By using Freedom of Information (FOIA) requests, I was able to access city-level water shut off data. At their peak, Detroit shut off 30, 000 households' water in 2014, Baltimore shut off 42, 000 in 2016, and St. Louis shut off water to nearly 21, 000 households in 2016, their highest number of shut offs recorded (see Figure 1). Through access to data in some other Black-majority cities, I have found water shut offs were just prevalent. For instance, Cleveland recorded nearly 135, 000 shut offs in 2011 alone. This means over one-third of residents in Cleveland had their water shut off in 2011 (see Figure 1).

Nationwide, the rising price of water has significantly exceeded the consumer price index over the past decade (Stratton, et al, 2017). The US is the only country in the industrialized world without a regulatory system responsible for monitoring water and sewer rates and performance. Due to rising costs to pay for needed water and sewerage infrastructure investments, water has become unaffordable for many low-income and working-class urban citizens. Between 2010 and 2018, water bills have increased from 27% to 154% in U.S cities, although median household incomes increased only 3 percent per year (Lakhani, 2020). Circle of Blue calculated that residential water costs in 30 U.S cities, determined that in 2015 the price of water rose faster than nearly every other household expense. According to Roger Colton, a leading water affordability expert in the U.S, "the data shows that we've got an affordability problem in an overwhelming number of cities nationwide that didn't exist a decade ago, or even two or three years ago in some cities." The main factor contributing to rising water costs in the US in financing aging and failing infrastructure, that in many older and post-industrial cities, it was built over 200 years ago and needs replacement. But infrastructure upgrades are costly. The EPA has estimated that nearly $400 billion must be spent by 2030 to keep the country's water system operating properly.

In an alternative estimate, the American Water Works Association (AWWA) estimates that restoring water systems will cost at least $1 trillion over the next 25 years (ASCE, 2017).

It is also municipalities that govern and manage debt collection practices related to unpaid water bills, rather than states or the federal government. Due to rising capital costs and diminishing federal funds, some cities have downloaded these responsibilities onto its citizens to please municipal bond market investors using punitive measures, such as water shut offs, tax liens (a legal claim on a house linked to an unpaid water debt), and through debt collection agencies by garnishing wages. Like mortgage foreclosures, water shut offs and liens can force affected households to abandon their homes. Water debts are clustered in communities of colour which disproportionately devalues their homes and neighbourhoods. According to the only nationwide study on water shut offs, as many as 1 in 20 homes have had their water shut off for unpaid bills annually (Food and Water Watch, 2018: 9). However, water bill burden was found to be much higher in Black-majority cities. The average majority-Black city had a water bill burden more than twice that of the average majority white city. In Black-majority cities, low-income households paid more than 7 percent of their income on water, whereas low-income households in white majority cities only paid 3% of their income (Food and Water Watch, 2018: 9).

Figure 7.2: Annual Water Shut Offs in Black-majority U.S cities (2007-2018)



Source: Municipal Freedom of Information Requests, 2019 - Own Calculations

When it comes to water shut offs, there is no national policies or watch dog – and census questions related to water poverty and access have been eliminated since the 1980s. And although there is a national target or measure of affordability according to the EPA (assessed on should not be paying more than 3% of your income on water), it is not enforced (Mack and Wrase, 2017: 14). Cities use shut offs to increase system revenue from people who cannot pay, and there is a pattern of weak mechanisms to appeal or suspend shut offs. There is a near-consensus among those whose water has been shut off and organizations who advocate and provide emergency water services that this represents a crisis threatening the survival of communities. However, among those who rationalize and argue there is a need for shut offs, their view is that it is a routine practice when you do not pay, just like any other service. In other words, there needs to be a way to incentivise bill collection.

When asked why some cities are reluctant to have water affordability plans, Anita Thompkins, EPA Director of the Drinking Water Protection Division responded that, "usually the cities who really need affordability plans are the most reluctant to implement them because they see it as, "well, we need that money.'"[27] Andrew Sawyers, EPA Director of Wastewater Management, when asked about the challenges to water affordability in cities, stated "the perspective of water utilities today is that they don't want to operate as a social service agency."[28] Although Baltimore and Detroit provide a water assistance plan which offer some discounts on water bills for vulnerable groups (such as seniors, or people with disabilities), it is only short-term and is not an affordability plan that takes into consideration income. My research demonstrates that St. Louis' water shut off policies are the harshest and most penal out of all three cities in addressing water affordability, as the municipality does not provide any assistance nor an affordability plan.

Through my examination of water affordability and insecurity across three Black-majority cities, water shut offs is most used as a debt collection and enforcement mechanism for

[27] Anita Thompkins, EPA Director, Interview November 2018
[28] Andrew Sawyer, EPA Director, Interview November 2018

unpaid water bills. When asked about St. Louis' water shut off policy, the Director of St. Louis' Water Division understood water shut offs as the only available mechanism to mitigate financial risks of losing revenue from delinquencies and not being able to meet debt obligations, indicating "we have a process that when we have delinquent bills, our method of collection is to turn off because we have leverage."[29] Similarly, a Michigan state official that leads the EPA State Revolving Funds program that gives loans for water infrastructure to Detroit, rationalizes water shut offs for cash-strapped cities who have high levels of debt and a declining tax base because the money has got to come from somewhere to keep the water and sewerage systems operating and "the ultimate hammer is shut offs."[30]

My research found that water shut offs were used more aggressively post-2008 as form of structurally adjusting public services and served as revenue-generating local strategies. In these cities, water departments began charging additional fees and penalties, such as a disconnection and reconnection fee, and only offering a short amount of time to pay their bills before facing shut off. Detroit was more punitive than Baltimore and St. Louis, for instance, in requiring households to pay an upfront cost or a down payment, usually a percentage of their water debt before the city reconnected their water. On top of having unaffordable water rates, these cities add additional fees to punish those who fail to pay, placing many in a cycle of long-term water debt. My findings determine that each city presumes that when someone gets their water shut off – it is because of a one-time financial problem, and this is reflected in their inability to develop a meaningful water affordability plan. However, below I argue the problem is structural in that most people cannot afford to pay their bills recurrently because water rates are too high, and the cost of additional burdens and fees added to water bills for unpaid bills. Figure 3 is a comprehensive list of each city's water shut off policy showing the timeframe of household disconnections with unpaid water and sewer bills and showing additional charges utilities add to late or unpaid bills.

Figure 7.3: City-level Water Shut Off Policies

[29] Curt Skouby Interview, February 2019
[30] Eric Oswald Interview, June 2019

City	Days until water is disconnected for an unpaid bill	Additional fees for unpaid bills
St. Louis	5 days	-Reconnection fee -Balance needs to be paid in full before water reconnection
Baltimore	60 days	-Reconnection fee -6% late penalty charge of total unpaid balance
Detroit	90 days	-Disconnection fee -Reconnection fee -Late fee charge -interest charges on unpaid balance -Down payment of 50% of balance before water reconnection

The examples of Detroit, Baltimore, and St. Louis are broadly similar, but the details vary significantly. The next sections address the conditions that led to the hyper policing of debt collection and municipal fine farming of water and sewer services, and alternative methods that are being used alongside water shut offs.

Detroit

Detroit is marked by inequality materialized in the city's infrastructures. This is rooted in remnants of the loss of their manufacturing industry, and institutional racism in city planning, housing and the labour market (Sugrue, 2014; Safransky, 2014). In 2014, shortly after filing the largest municipal bankruptcy in U.S history, the city launched a massive water shut off program that has disconnected at least 170, 000 households since.[31] Massive water shut offs were so severe during this time that the United Nations were called and concluded the debt collection scheme violated human rights and condemned the disproportionate impact on Black

[31] FOIA request in March 2019, water shut off data sent November 2019

communities (Carmody, 2014). Although water delinquencies existed before Detroit was declared in state of financial emergency by Governor Rick Snyder (State of Michigan 2013), there was no history of mass water shut offs until the bankruptcy.[32] Mass water shut offs were part of emergency management's local state restructuring plan following 2008 to make the water department's municipal bonds "more marketable for privatization and to sell off Detroit's biggest asset - its water system" by showing to bondholders and rating agencies they were serious about collecting delinquent water accounts.[33] Detroit's financial crisis quickly became a water crisis. Eric Rothstein, who was hired by the city's emergency manager as a financial consultant to restructure Detroit's water department, acknowledges that he viewed the bankruptcy as being the catalyst that "put pressure on the city to make sure that you're able to collect revenue to meet your obligations to bondholders."[34]

Leading up to the bankruptcy in March 2013, restructuring consultants hired by the State of Michigan and city department officials created a report to oversee DWSD's assets and to make recommendations on the future viability of the water department under the control of the city. In the report it was concluded that "the city's financial distress has directly negatively impacted Detroit's Water and Sewerage Department (DWSD) bond rating, making it more expensive for DWSD to borrow money to fund capital projects (DWSD, 2014: 2). The report also emphasizes the benefits of potentially transitioning DWSD into a private authority that would effectively create "a more autonomous DWSD operational model that would be designed to provide a recurring revenue stream to the City of Detroit, enhance DWSD's operational and legal independence from the City, and better ensure compliance through financial stability" (DWSD, 2014: 2).

The report outlines the dire financial situation of the water department, which caused two rounds of bond rating downgrades - a high risk of default for DWSD debt obligations - and the incurrence of additional indebtedness through interest rate swaps. For DWSD to resolve these issues, it ultimately led to higher costs of capital for DWSD and higher rates for its customers (DWSD, 2014: 1). The report further indicates "delinquencies" as an impediment to access the

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[32] Jerry Goldberg, Bankruptcy Lawyer, May 2019
[33] Abayomi Detroit Activist Interview, May 2019; Thomas Stephens, City Government Interview, 2019
[34] Eric Rothstein Interview, June 2019

municipal credit markets that has contributed to DWSD's incapacity to maintain upfront capital costs needed to invest in their ageing and deteriorating infrastructure, which became so dire that the city's water and sewerage system was at a point of "non-functioning" (DWSD, 2014: 2)

As of 2014, DWSD's credit rating was categorized as deep-junk status and had been significantly downgraded over the last several years since the financial crisis. According to Fitch Ratings, bonds issued on behalf of the DWSD were downgraded to below investment grade in 2014 due to "weak financial performance [and] believe economic improvement over the near term is unlikely given recent disclosure regarding the full scope of customer delinquencies" (Fitch Ratings, 2015).

In a time of low budgeting and economic stagnation in Detroit, finding new and innovative service provision strategies has provided a lexicon for urban austerity through a series of public- private partnerships, specifically transitioning the operation of public utilities from city departments into private authorities. While Detroit had been privatizing many of its services prior to their bankruptcy, new emergency manager laws, along with having the opportunity to enforce debt-cutting measures without local elected officials involved in the process, made privatizing vital services, such as water and sewerage, a strikingly attractive avenue to do so.

Private authorities can access the bond market with lower interest rates considering a private authority is viewed by credit agencies as a separate legal entity that is no longer associated with the City of Detroit, and rather it is a joint entity between its rate users and the governance structure of the private authority (GLWA, 2015, 15). As part of Detroit's bankruptcy process to reduce municipal debt, core public services have been shifted to private authorities. This includes transitioning Detroit's Water and Sewerage Department into the Great Lakes Water Authority (Disclosure Statement, 2014: 114). The restructuring and privatization of Detroit's water department was done during the bankruptcy while the city was under emergency management and did require city council approval. City officials and financial consultants view this new governance arrangement as a reset button to improve services by giving more operational and management control to the suburbs in order address the high number of delinquencies that were blamed on poor Black Detroiters (Phinney, 2018: 621).

According to We the People, a grassroots water justice organization "mass water shut offs in Detroit all goes back to who controls the infrastructure in the region during the bankruptcy, and how are we going to offload the debt we have so that it looks better in the eyes of the people who own our debt, i.e. the banks."[35] In this sense, the city was trying to prove to its creditors during the bankruptcy that they are "cracking down on people, they are getting tough" under this new public-private management structure as a way to get access to higher rated bonds.[36]

Policing the right to water in Black communities

Figure 7.4: Detroit Community Organizing against Water Shut offs, 2014

[35] Monica Lewis Interview, June 2019
[36] We the People Interview, June 2019

Image from *I Do Mind Dying* by Kate Levy (granted permission to use in dissertation)

A three-year contract to shut off water to Detroit residents was outsourced to a private demolition company called Homrich Wrecking Inc. The contract was first signed in 2013 for \$5.6 million and has since increased to \$12.7 million by emergency managers, and without city council approval (Cwiek, 2020). According to records, the contract involved a target of water shut offs to meet, where Homrich was required to continue at an average of 540 per week during non-winter months until 2017. In 2014, when the city experienced the highest numbers of water shut offs, overall collections increased \$15 million to \$310 million through aggressive extractive tactics used by Homrich (Kurth, 2016). From reports received from residents in their community work, Hydrate Detroit, revealed that in some instances if a household had been shut off and was found to be turned back on, Homrich Wrecking Inc, "would destroy the valve where you turn it back on and after, pour concrete over it. If that family then found money to pay their bills, they would have to pay someone to replace the entire water valve." There were also stories of them just smashing and destroying the valve, rather turning it off. There was no expectation by Homrich that water bills would be paid, or it would get turned back on again.[37] Permanently cutting off water to households indicates the implausibility of households ever getting out of debt.

[37] We the People Interview, June 2019

In an interview with *Detroit News*, Gary Brown, Director of Detroit's Water and Sewerage Department, acknowledged that "shut offs are now a fact of life." Due to the severity, and difficulties of getting your water turned back on due to the high upfront debt payments DWSD requires, many residents began bypassing the water department and turning on their water 'illegally.' Particularly in 2014, individuals organized themselves and began going neighbourhood to neighbourhood and turning back on households' water that was disconnected because of unpaid bills.[38] In order to deter this, the State of Michigan passed a law to change water service reconnections after being shut off from a civil infraction to a criminal offence (Carmody, 2019). As a result, many activists and residents have been fined, criminally charged, and jailed due to illegal access to water. Policing the right to water through criminalising those who try to access it in Detroit is one example that shows the growing punitive environment that is embedded in austerity governance in majority-Black cities.

City of Baltimore: Housing Tax Foreclosures via Water Debt

In the last several years, Baltimore has been very aggressive in handling delinquent water accounts. Water rates have more than quadrupled since 2000 (Food and Water Watch, 2017). In 2000, an average household using 5 units (hundred cubic feet) of water paid $177 annually for water and sewerage services. By 2020, a household using the same amount of water paid $1,022 a year. Water bills are now unaffordable for about one-third of households in Baltimore (Food and Water Watch, 2015).

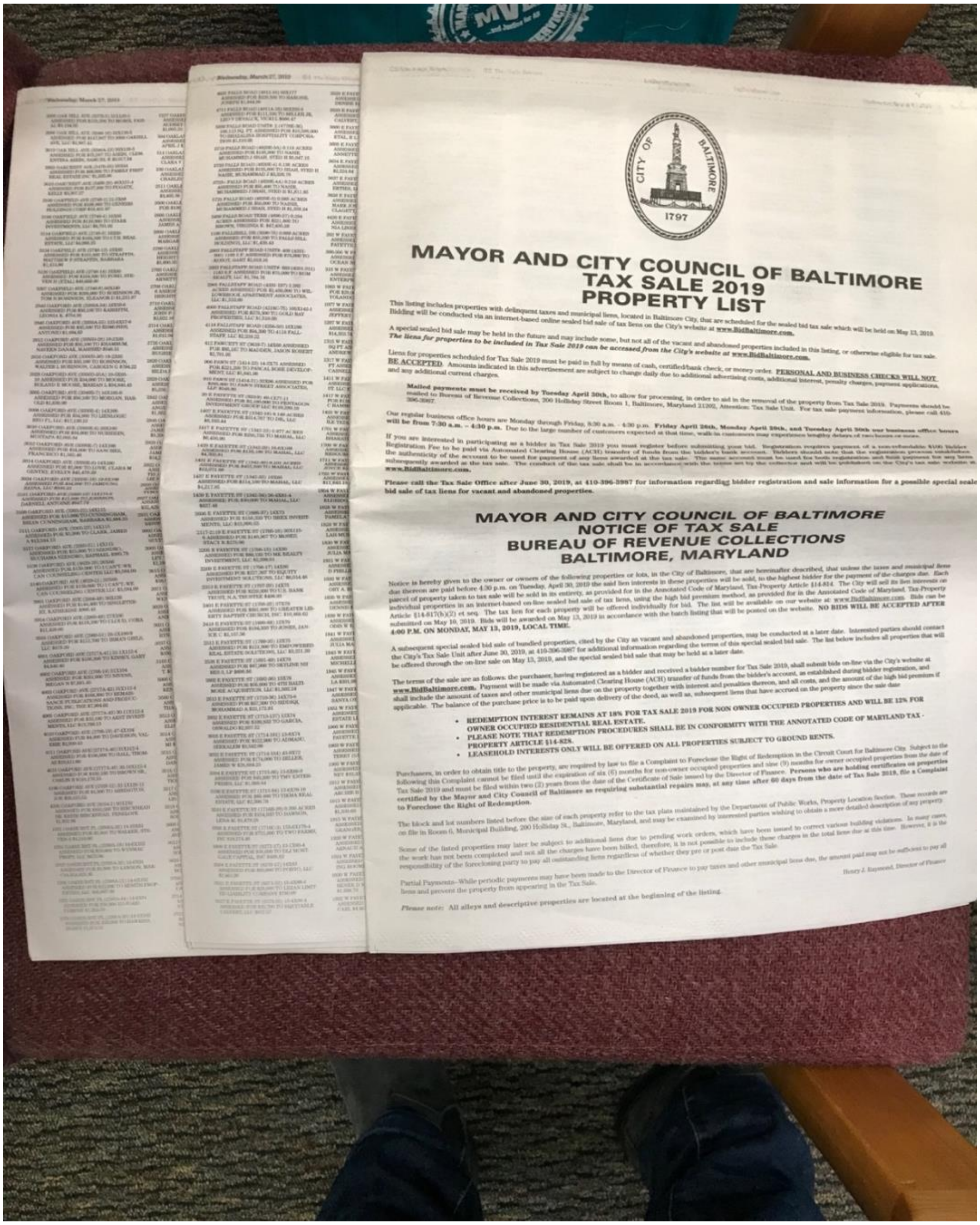
Between 2008 and 2016, the City of Baltimore had over 82, 000 water shut offs (FOIA request, 2019). At the time City Council President (who is serving as acting mayor as of May 2019) Bernard C. Young expressed support for water shut offs, claiming that "I like it better than taking people's houses and putting them into foreclosure." After receiving negative media press and pressure from water activist groups, the Department of Public Works stopped issuing water shut offs and instead, turned to housing tax foreclosures to collect unpaid water bill debt. According to Mary Grant from Food and Water Watch, an activist group working to eradicating water poverty in Baltimore, "they city only knows how to collect water bills through punitive

[38] Demeeko Williams, Hydrate Detroit Interview, June 2019

measures."[39] Under the renewed debt collection process, a homeowner can lose a house and its entire equity for an unpaid water bill for as a low as $750 (an increased from the previous amount of $350), and for an unpaid property tax bill for as low as $250. Every year in February, a "Final bill and Legal Notice" is sent to each delinquent property owner for when a property tax bill or a water bill is past due, or at least 30 days before properties are advertised for auction. In March, a list of properties with delinquent bills is published in newspapers, *the Baltimore Sun and the Daily Record.* Moreover, they are also posted in the Baltimore City tax sale website at http://www.bidbaltimore (see Figure below).

Figure 7.5: City of Baltimore, Tax Sale List

[39] Mary Grant Interview, April 2019

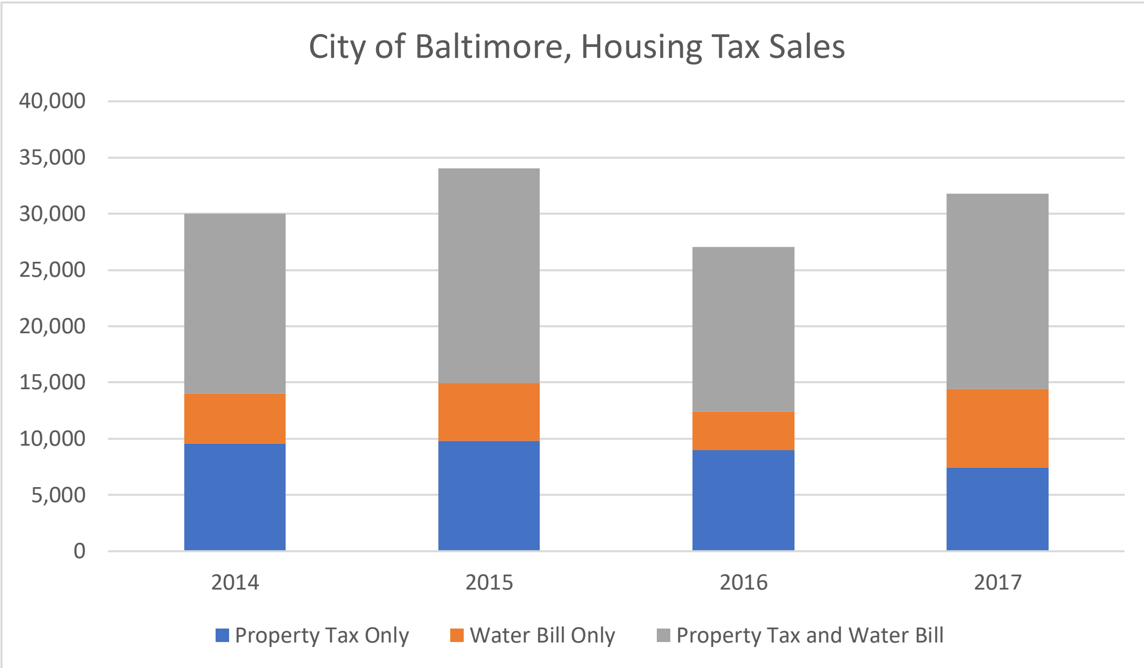


During the annual auction, properties are sold to the highest bidder. Those who bid and win on the lien certificate offered at the auction earn the right to charge interest and fees to homeowners seeking to redeem their properties, as well as the right to foreclose. To redeem their property: owners must pay their unpaid bills, plus 18 percent interest and hundreds (sometimes thousands) in court costs and legal fees to investors. For instance, a $500 water bill can climb to $3000 two years after the tax sale when the lien on their home is bought by investors. The pay-out from the interest and fees goes to investors, not to the city. Moreover, investors who do not receive full repayment from the property owner can file a foreclosure. Baltimore's interest rate on unpaid property taxes and water bill debt is among the highest in the State of Maryland. Hartford County for instance, has interest rates set at 12%. Even in Washington D.C, and New York – interest rate is also at 12% that a tax lien investor can charge (Jacobson, 2014: 10). More in both Washington, D.C and New York, their laws prevent a property from going to tax sale for unpaid water bill. Baltimore's high interest rate, along with legally allowed fees for lawyers have made it almost impossible for low-income, Black homeowners to redeem their properties. A homeowner with a lien that is sold at tax sale can pay as much as $1,500 in attorney fees on top of the lien plus 18 percent interest, as well as title searches up to $325, and court fees.[40] In addition to the expensive costs, Amy Hennan, a lawyer that works for the Pro Bono Resource Center of Maryland, claims the city's housing tax sale is a complicated process to navigate, and unfortunately many do not have the upfront costs to pay for a legal team, and end up losing their property because of not submitting the proper legal documents.[41]

In 2017, nearly half of properties that entered Baltimore's housing auction sale was for standalone unpaid water bills (meaning they were not behind on their property taxes, but only their water bills) (see graph below). The other properties consist of a combination between owed property tax and water bill debt.

Figure 7.6: Unpaid water bills that led to housing tax sale, 2014-2017

[40] Abell Foundation Interview, April 2019
[41] Amy Hennan Interview, April 2019



Source: data obtained from city documents, own calculations

The housing tax sale process is not unique to Maryland and is used in many states as a last resort debt collection system for property taxes, and more recently, water bills – where they are using private investors to purchase debts owed to the city by homeowner and the right to foreclose on homes. This speaks to a process by which household debt is being converted into a speculative asset, known as 'asset stripping' by investor rentiers seeking to leverage tax foreclosed properties through tax auction sales (Akers, 2013: 1088).

Although the city has been auctioning properties for unpaid bills for decades, the practice has increased due to double-digit increases to water rates, and water shut offs no longer being used a debt collection practice by the city's water department. Baltimore County, where mostly the white, upper class suburbs are located, does not include properties with unpaid water bills in the tax sale. This is due to the City of Baltimore owning the public water system that serves suburbs in Baltimore County. Although the city bills county property owners for water use, the city has no legal authority to put a lien on a property for an unpaid water bill – even if those bills are not paid. This means that suburban residents benefit from the investments in the city's water and sewer infrastructure but do not have to deal with costs of austerity measures, such as housing foreclosures, when they are unable to pay their bills. Since the city does not have jurisdictional authority in the suburbs as they are considered their own separate municipality, suburban residents are not at risk of losing their home for unpaid water bills in the same way they are in the City of Baltimore. Black homeowners are forced into foreclosure for an unpaid water bill and punished, yet white suburbanites are untouched and can retain their property and its equity.

Data from the Pro Bono Resource Center of Maryland shows that most homeowners who were at risk of losing their homes from unpaid water bills is overwhelming low-income, Black residents (80% in 2016 and 73% in 2017) with a household income under $30, 000. Moreover, based on data of clients who visited tax prevention clinics organized by various lawyers, 78 percent of clients had delinquent water bills in 2016 and this rose to 86 percent in 2017 (Jacobson, 2014: 5). Baltimore's debt collection practice of placing water liens on homes and selling the liens to investors is reported to have contributed significantly to loss of Black homeownership in the city (Sullivan, 2020). The Black homeownership rate fell from 45% to 42% from 2007 to 2017. Though other racial groups have recovered from the massive foreclosures that hit the City of Baltimore since the economic crisis, the Black community has not seen the same rebound – and my findings indicate this is attributed to tax sale housing auctions (ibid).

The city and state have attempted to justify the tax sale and foreclosure process by claiming that it was beneficial in seeking new owners for abandoned and blighted properties (HUD, 2014). Investors claim that the benefit of the system is that property can be put back into the hands of people who will redevelop it. However, most properties sold to investors were occupied. Investors purchase properties in tax sales in Baltimore for two reasons: first, to eventually purchase the "right" to foreclosure on the home, but not actually move the home into their own name, and second, to eventually purchase the home where they either rehabilitate the property to sell for a profit. By doing the former, it extends the process for over two years giving investors an opportunity to charge full interest over the period. This is strictly to make money and earn a return on their investment through the interest and fees the homeowner must pay them.

Lawyers and water activist groups describe the housing tax sale for water bills in Baltimore as a “bizarre, confusing, and antiquated system that preys upon poor people.”[42] Using water debt and housing foreclosures as a form of asset to sell on the market serves as an act of value extraction that works as an urban process of racial capitalism that Lowe (2015) describes, where capital only realizes its value when it is producing and working through unequal relations of race and these processes require dispossession, exploitability, and expendability (151). In this case, Black homeowners are dispossessed from their wealth and homes, and exploited, due to unaffordable water bills, where their homes replace their debt owed and are then bought by investors and resold on the market for a profit. This resonates with work that suggests the state is ‘both object and agent of financialization’ (O’Brien et al., 2019: 6) and may mobilise financialization for the interests of private investors or what Aalbers (2019) argues, to simply “get by” in a context of urban austerity and state-rescaling.

Other lawyers and organizations that were doing work around foreclosures related to outstanding water bills found that water debt owed in some cases was due to erroneous bills. In these cases, the homeowner had a leak due to old water infrastructure but could not afford the capital costs to fix it. This then leads to situations where homeowners have been stuck in cycle of water debt where they are unable to pay down the entirety of their water bill. Renee Hatcher claims poor piping infrastructure is a product of racialized underdevelopment of city services, “where water in access disproportionally affects poor Black folks in Baltimore. It’s an issue of race and power. It is based on who the city invests in, what neighbourhoods do we fix and which ones do we disregard or intentionally ignore and abandon”[43] Beth Harber, who has worked to end tax sales views access to water in Baltimore as increasingly difficult because it is valued as a commodity and claims the water department does not invest in programs to address infrastructural issues, stating “the city does not take responsibility for the provision water that goes beyond the meter.”[44] This means homeowners bear the cost of infrastructural failures that is the result of austere agendas and infrastructure disinvestment on the city’s behalf. In this case, they lose their homes to an investor because of it. Many residents that I spoke to indicated they

[42] Amy Hennan Interview, April 2019
[43] Renee Hatcher Interview, April 2019
[44] Beth Harbor Interview, Abell Foundation, April 2019

had water bills in the thousands because of leaks due to water line breaks but could not afford the repairs to fix it. One resident in Baltimore revealed that due to leaky pipes in the basement of his church, he owed the city $3000 in water and sewer bills. Unable to pay down this debt, the city put a lien on the church, then sold the lien in 2017.[45]

Households and city property owners are responsible themselves to replaces water lines between their meter and any lines on their property. Mike O'Leary, a Baltimore city official, said it a roundabout way of often telling people when it comes to water infrastructural failures, "You've got a problem. It's up to you to fix it"[46]

When asked about the recent increasing numbers of houses that enter the tax auction each year due to water debt, a city official refers to the high capital expenditures to replace old water and sewerage infrastructure that needs to be matched by utility revenues through higher rates. Moreover, unlike some other water departments, the City of Baltimore does not have a collection agency in-house to collect on unpaid bills or the funds to use for third party agencies. In other words, utilizing tax auctions is understood as the local governments' only option at their disposable to collect on our water debt. Placing water debt on tax liens was a new local strategy that came into full effect beginning in 2007, but it wasn't until 2014 that it became the central debt collection practice used for water and sewer bills by the Department of Public Works (NCLC, 2012). As a city official responded on the benefits for this debt collection process, "It is a very effective way of getting people to pay their bills."[47] This example speaks to how water departments have become reliant on user rates and fees to fund their operations and capital expenses and to meet debt obligations. When it reaches a point of residents being squeezed to their limits and unable to pay their bills, the solution is to use methods of dispossession to collect. Housing tax sales for unpaid water bills is a form of criminalization of Black poverty in Baltimore but echoing Wang (2018), it is also a method of racialized expropriation working through financial logics of debt and risk: "the state is no ordinary borrower; it is a borrower endowed with the legal power to loot the public to pay back its creditors" (173). In this case,

[45] Alvin Gwynne Interview, March 2019
[46] Mike O'Leary Interview, April 2019
[47] Mike O'Leary, City of Baltimore Official, April 2019

revenue extraction of water bills is indirectly used to subsidize the process of financial capital accumulation. As municipal and public debt is financialized and the funds to cover municipal expenditures is supplied by the financial market, over time, it has a de-democratizing effect where local governance works for the benefit of financial markets, rather than the public good.

St. Louis

The City of St. Louis is just one of 88 municipalities in St. Louis County. Each municipality has its own government, courts, and services. Such political fragmentation is rooted in decades of racialized uneven development that was encouraged by Missouri's "home rule" law. This was designed to keep Black people from moving into white neighborhoods by allowing communities to form their own municipality and sought to maximize local wealth and tax bases through restrictive zoning laws. Over the years, this pitted municipality against municipality – and created a fiscal race to the bottom for resources in the region. More starkly, this placed the suburbs against the city. Governmental fragmentation perpetuated racial segregation - and these legacies still plague the St. Louis Region today. Fragmentation has also contributed to intensified inter-urban competition and thereby, creating fiscal struggles for some municipalities over the years. Strapped for cash, some municipalities like the City of St. Louis and Ferguson have resorted to punitive tactics relying on speed traps, traffic tickets and petty fines to fill revenue gaps (Badger, 2015). As one resident mentioned, "each county is basically their own municipality and it is completely racial. Counties want to stay separated. They don't want to deal with the city, and they don't want to share either."[48] In particular, government fragmentation when it comes to the region's water and sewerage service provision has exacerbated debt burdens and create infrastructure inequalities for Black communities (Badger, 2015; Tighe and Ganning, 2015; Heck, 2021).

In St. Louis, the practices of racial capitalism shaped Black areas through local labor and housing markets but also through physical infrastructure and public service provision, or lack thereof. In 1970 the U.S. Commission on Civil Rights (USCCR) heard testimony from residents living in the St. Louis region on the racial implications of uneven development (USCCR, 1971:

[48] For the Sake of All Interview, Feb 2019

3). Resident testimony indicated that, despite municipal authorities claiming universal access to basic city services including trash collection, street lighting, paved roads and sidewalks, and sewer and stormwater connections the provisioning of basic public services was socially uneven. Black residents testified that despite paying taxes their neighborhoods suffered from inadequate drinking water, street lighting, absence of road and sidewalk maintenance, infrequent garbage collection, lack of sewerage connection, and unenforced anti-dumping ordinances (USCCR, 1971: 304). According to Heck (2021: 10), it was the poor provisioning of municipal services in St. Louis, such as water, that later codified redlined neighborhoods as blighted and targeted these areas for federal urban renewal programs. Given the racialized geography of St. Louis where deep histories of institutionalized and extractive forms of racial oppression are embedded in the built environment, how might we contend with contemporary water insecurity in the region?

Using The Racial Dissimilarity Index, the St. Louis Federal Reserve designates St. Louis as one of the top 10 most segregates cities (Downs, 2014). Presently, racial tensions in St. Louis magnify the crippling amounts of debt and fiscal troubles that the area's black community faces from these legacies of infrastructure inequality and uneven development. In response to Black Lives Matter protests after the 2014 death of Michael Brown, Missouri Governor Jay Nixon created the Ferguson Commission. According to the Commission's report, the lack of economic mobility in St. Louis is one underlying cause of racial tensions in the area, and this is rooted in the city's punitive methods of revenue extraction. The Commission acknowledged the overwhelming and deep-seated obstacles families in St. Louis face in attempting to break free from the perilous cycle of debt that grips them – and the racializing effects of punitive debt collection practices. (U.S DOJ, 2015: 4). It was found in the report that the use of practices to extract revenue disproportionately target black residents.

In the City of St. Louis – and other Black-majority municipalities in the region – between 25 and 35 percent of local revenue comes from municipal fines and fees. Whereas middle class, white communities in St. Louis County, such as Kirkwood and Ladue, draw only about 5-10 percent of their revenue from this (Gordon 2015: 60). Between 2011 and 2012, municipal revenue generated from fees and fines increased from $1.41 million to $2.11 million in the City

of St. Louis (Better Together Task Force, 2019: 11). As one resident noted, “I grew up in the neighbourhood of North St. Louis, so I really felt like I was born into debt.”[49]
The criminalization of debt, as understood through fines and fees, is all too familiar for Black communities in St. Louis. During the 2008 Great Recession, city managers from St. Louis and other surrounding Black-majority municipalities, such as Ferguson, pressured courts, and the police department to increase the cost and collection of fines and fees to close the municipal budget gap created by declining sales and property tax receipts (US DOJ, 2015). Under this local system, residents can spend years, even decades, in a jail (called ‘the workhouse’) if they cannot afford to pay traffic fines, such as a speeding ticket, or technical violations, such as having an unmowed lawn or jaywalking (Sharma and Randall, 2020). It has been referred to as a modern-day “debtors’ jail” by activists interviewed from ArchCity Defenders, an advocacy organization in St. Louis that combats the criminalization of poverty and state violence in Black communities.[50] This example shows the similar ways, through punitive debt collection methods, how municipalities in St. Louis criminalize poverty and police Black debt to extract revenue from the most vulnerable under austerity.

Mostly Black residents have been incarcerated at the workhouse simply because they are poor and are unable to pay off municipal fines and fees. Currently, in the City of St. Louis – nearly one third of the city’s budget goes towards policing services, and only 0.3% towards human services (City of St. Louis, 2019). A social justice organization claims St. Louis functions through “an arrest and incarcerate model” to deal with poverty, and this includes those with unpaid water and sewer bills.[51]

Combined with the subprime housing crisis, Black wealth in St. Louis has declined even further leading to harsh austerity policies. Housing foreclosures were higher in majority Black neighbourhoods than white ones in St. Louis. (Tighe and Ganning, 2015: 666). As a result, while finances often squeezed for low-income households, Black households are less likely to have resources to draw on when they fall into a financial bind. This can be due to credit card bills, medical bills, or payday loans, but quite often in St. Louis it is the water and sewer bill. From

[49] Montague Simmons, Interview, February 2019
[50] Montague Simmons, Interview, February 2019
[51] Montague Simmons, Interview, February 2019

2014-2019, the City of St. Louis had over 100, 000 water shut offs (FOIA requests, 2019). This means approximately 1 out of 6 St. Louis resident had their water shut off during this period.[52]

Alongside water shut offs, the City of St. Louis uses additional measures, such as garnishing assets through third-party debt collectors, to collect water and sewer debt. A garnishment is a legal order directing a third party to seize assets, usually wages from employment or money in a bank account, to settle an unpaid debt (Kagan, 2019). Water shut offs are harmful, but a Missouri state official, claims what is just as harmful is the collection process thereafter that allows St. Louis' water and sewerage utilities to take a person's assets and garnish wages for unpaid water and sewer bills through a judicial process.[53] In St. Louis, over 100,000 judgments were passed down in debt collection lawsuits from 2008 to 2012. Between 2008 and 2012, debt collectors seized an estimated $34 million from residents in mostly black neighbourhoods in the St. Louis area (Constantinea, 2017: 487). Majority of this was wages lost through garnishments. This financial strain through punitive debt collection drives families even further into debt because they seek out new loans to repay the initial debts.

The Metropolitan St. Louis Sewer District (MSD) provides service to the city of St. Louis and its surrounding suburban counties. In 2012, St. Louis was signed a consent decree agreement with the EPA (Trickey, 2017). It is a $4.7 billion project, named Project Clear, over a span of 20 years to cut down on sewer and stormwater overflow. As a result of having to issue billions of dollars in revenue bonds to pay for infrastructure to fix their combined sewer overflow system, sewer rates have tripled since 2005 (MSD, 2020). Over the last 10 years, MSD used some speculative financial arrangements to fund sewer infrastructure development through advance refunding revenue bonds in the municipal bond market. In 2010, MSD decided they had too many delinquent bills and so they increased their collection efforts by using third-party debt collectors and filing lawsuits against residents who owed debt from their sewer bills. MSD went from filing 3,000 suits in 2010 for unpaid bills to 11, 000 in 2012 (Kiel and Waldman, 2015). In 2012, MSD filed more suits for debt collection efforts than any other company in Missouri.

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[52] This is not an exact number, but an approximation of total shut offs as the data received could include multiple shut offs for some residents

[53] Geoffe Marke Interview, June 2019

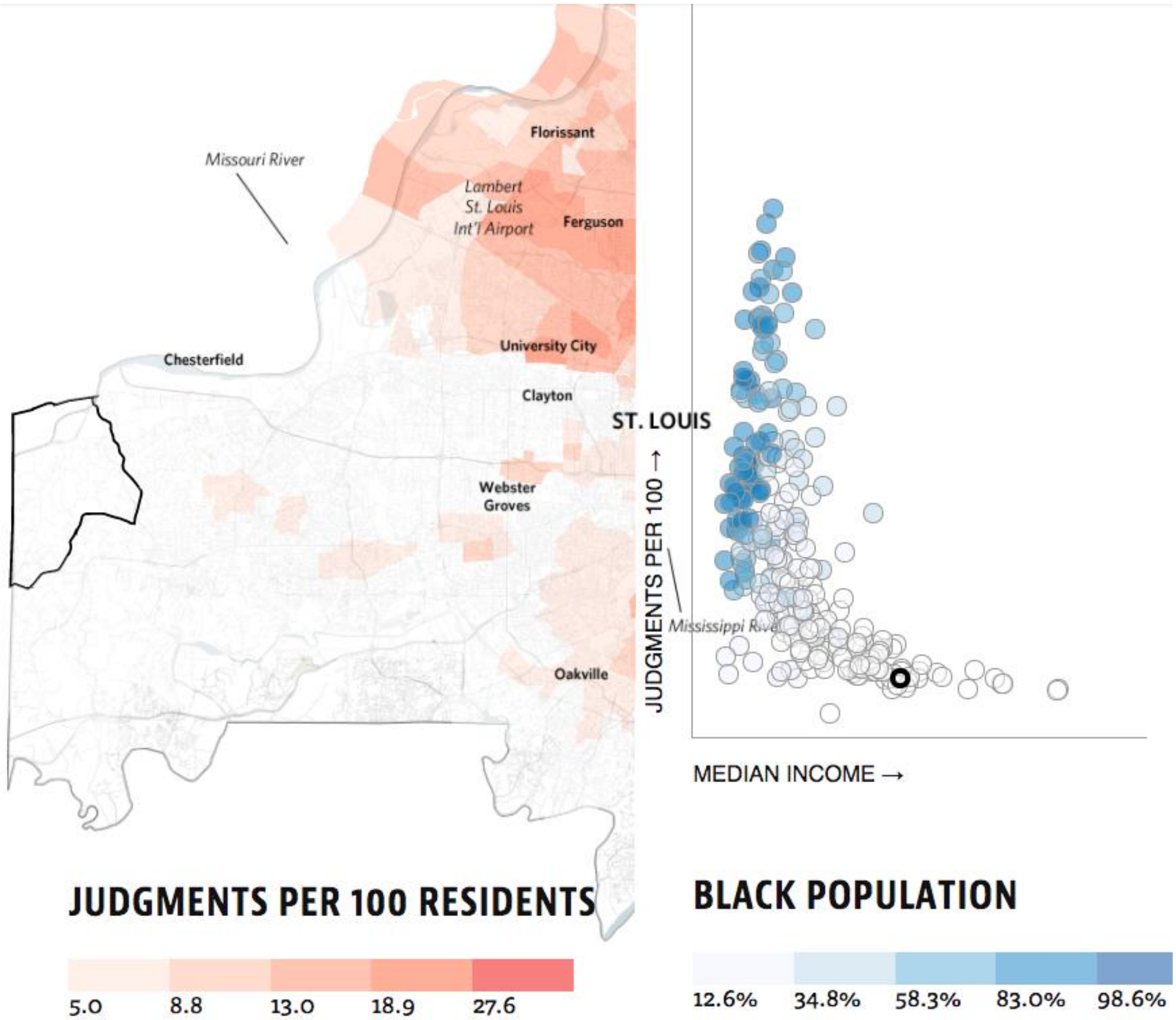
Through data obtained by Pro Publica, MSD judgements were in overwhelming filed against residents in Black communities in St. Louis, even though most of MSD's customers are from the suburban, mostly white counties. It found that debtors who owed money to MSD in majority-black communities are more than twice as likely as income-equivalent debtors living in majority white neighborhoods to have debt collectors attempt to recover delinquent debts through legal action. Additionally, MSD obtained judgements where they could garnish wages and charge interest fees on unpaid debt in mostly Black neighbourhoods at a rate of about four times than in majority white ones (Keil and Waldman, 2015b).

Under Missouri law, a judgment-creditor may legally garnish 25% of a debtor's disposable income (Thompson 2019). Moreover, the Missouri Revised Statutes state that a creditor can charge additional annual interest rates between 9-20% for unpaid bills if the judgement favours the creditor. Therefore, water and sewer debts that originated in the hundreds of dollars can quickly "balloon" to tens of thousands of dollars.

When MSD sues, the debts can be quite small, even as little as $350. Although this only a small amount - many residents are unable to navigate the judicial process and cannot afford legal counsel to fight the sewer department's lawsuit. In St. Louis, defendants had counsel in less than 8 percent of debt collection cases filed between 2008 and 2012. And in lower-income black neighborhoods, just 4 percent had a lawyer (Constantineau, 2017: 492). This is in part due to this being a civil court case, in which there is no right to a public defender. Lance LeComb, who is the public relations official for MSD, said the utility is trying to work with delinquent customers who are behind on their bills, but that MSD has a duty to pursue owed debt to the full. When asked about the utility's debt collection methods, MSD Financial Officer Marion Gee, stated that unfortunately just like any other service or product, "MSD has to be aggressive in order to function and to raise revenue" and to primarily be able to pay for bonds for infrastructure improvements.[54]

Figure 7.7: Debt Collection Suits in St. Louis Metropolitan Region 2008-2012

[54] Marion Gee, MSD, City of St. Louis, Feb 2018



Source: Data, Map and Graph from 2015 ProPublica Report

Judgments from MSD lawsuits are concentrated in areas of St. Louis that are majority black, revealing an aspect of racial disparity in the debt-collection process in lower income St. Louis communities. This debt regime operates not only through categorizing and targeting certain racialized subjects for debt collection of owed sewer bills- but it also involves extracting value by operating through racially segregated neighbourhoods across the St. Louis region to function. In this way, residents from Black communities are spatially exposed to debt predation and are disposable populations, where their owed debt and the fees attached have become a target for revenue extraction. At the same time, the proliferation of variegated municipal debt collection practices for unpaid water and sewer bills, as is the case with wage garnishments in St. Louis, is that municipalities are redrawing local strategies to facilitate the needs and wishes of bondholders, as Ashton and Christophers (2015) mention, to find ways to facilitate the transformation of urban products (i.e water and sewer services) as financial assets. Local governments, as is shown in all three examples, actively – sometimes unconsciously – construct the conditions for the financialization of the cities and their built environment (Aalbers, 2017)

Conclusion

This chapter examines the contemporary juncture of austerity policies and the financialization of water and sewer infrastructure that has created a wave of water insecurity crises across cities. Widespread water shut offs in cities like Detroit in which United Nations was called in to observe the situation illuminate the extreme forms austerity prevailing following 2008. Catarina de Albuquerque, the UN Special Rapporteur on the human right to safe drinking water and sanitation, said the City of Detroit was violating human rights by shutting off water to those who can't pay their bills at an "unprecedent scale," which disproportionately affected poor African Americans (Kwesell, 2014).

In Black-majority cities, these water crises have been the product of local state 'solutions' governing in a fiscally distressed environment over the last decade in which they have been unable to economically recover. These 'solutions' have served to keep residents paying and revenue flowing. Local officials' decisions to use municipal fine and fees through debt collection practices reveals the unequal position Black-majority cities are placed in the municipal bond market through their poor creditworthiness which signifies a degree of expendability in the financial sector and how urban governance, as Aalbers (2019: 596) argues, can be captured by finance and at the same time, municipalities can use and invite finance to achieve their objectives. The racialization of municipal finance has created differentiated opportunities and threats for local governments of Black-majority cities that have been examined. Consequently, local governments rely more on speculative borrowing tools to finance infrastructure and have had to structurally adjust towards utilizing debt collection practices to manage debt obligations. As the financialization literature suggest, investors are the ones increasingly "calling the shots" to restructure urban plans to favour their financial interests (Kaika and Ruggiero, 2016; Waldron, 2019). As outlined, resident debt collection has become institutionalized in the bond lending process to make up for revenue shortages to be able to meet debt needs and to favour bondholders' interests. These debt collection practices make it so that poor Back residents are the ones subsidizing the accumulation process, compensating for revenue gaps created by financialization and debt incurred by municipalities to appease investors. Debt is one of the few mechanisms that Black-majority municipalities have for attempting to manage financial crises. Moreover, as was shown, debt can be relative and is evaluated differently based on creditworthiness. Aggressive debt collection techniques to pay for water and sewer infrastructure have now become institutionalized in the bond rating process for cities to access credit. In this way, the municipal bond market plays a decisive role in regulating the right to water across U.S cities.

Municipal water debt collection though water shut offs, tax foreclosures, and garnishing wages is framed as a mechanism for enabling better ratings in the bond market, less costly debt terms, and low financial risk, but it is structured through existing racialized geographies of inequality. Detroit for instance, used more harsher methods in the form of charging higher interest fees for unpaid debt and applying criminal offences for those who illegally turn on their water in comparison to St. Louis, who are using legal avenues to deduct wages for unpaid bills. All these case studies show similarities in terms of the financialization and commodification of water and sewer services and the imperative to use some method of debt collection. These practices serve as requirements to access the bond market throughout different stages of issuing bonds and are increasingly asked about and of importance to municipal bond investors according to my findings with experts in the field.

Nationally, more federal funding programs are needed to ease high water debt burdens and to redistribute costs through a more progressive funding streams where cities are not solely dependent on the bond market to fund water and sewer infrastructure improvements. Increased federal funding can also assist low income-families with water and sewer bills. For example, the federal government could expand the current Low-Income Home Energy Assistance Program (LIHEAP), which is a federal block grant program that provides states with funds to assist low-income households with expenses for heating and cooling, as well as energy crisis interventions and weatherization (Montag 2019: 72). Families are eligible for assistance if their incomes are at or below 150 percent of the federal poverty line or 60 percent of state median. Most LIHEAP funds are used to help families pay for heating assistance, and funds currently cannot be used for water or sewer bills. An expanded program could help mitigate and household water insecurity the battle for affordable water.

This chapter calls for further engagement with critical geographies of race/racialization to advise urban and economic geography scholarship on urban governance to better understand the connections between long-term capital flight and racial capitalism that are redefining how Black-majority cities are responding to fiscal crises. Conceptually, by drawing together Baltimore, Detroit, and St. Louis, I highlight the need for fine-grained, comparative analyses of racial capitalism in Black-majority cities to better understand the relational geographies of urban financialization, associated patterns of local state-restructuring, and how these processes are "lived out" in cities.

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Chapter 8

Life, debt, and survival: From austerity urban governance to everyday lives

Chapter five and seven focused on the governing and financial practices of austerity: 1) the financialization of debt to pay for ageing water and sewer infrastructure, and 2) the post-crisis local service restructuring that followed in the form of increasing water and sewer rates, and the use of water and sewer debt collection practices through mass shut offs, housing tax foreclosures, and wage garnishments. The next chapter shifts focus to the everyday realities of Black residents indebted through unaffordable water and sewer bills, and their survival strategies once the water is shut off. This draws on much of the scholarship on urban marginality and informality (McFarlane, 2011; Silver 2014; Simone 2010, 2014) that informs this chapter is further explored. Specifically, it looks at the importance of “on the ground” (Katz, 2001) urban relational comparison to situate what Roy and Crane (2011) refer to as “Southernism in the North” that is being produced in Black-majority U.S cities through post-crisis austerity urbanism. This next chapter details the rise of water insecurity households are experiencing due to predatory debt collection methods of water shut offs, how they navigate their everyday lives without water, and the emerging infrastructural improvisations used to survive.

The role of chapter nine is to build knowledge on how finance and debt cuts thorough everyday spaces and the limits financialized austerity poses for the social reproduction of the household. I ague that financialized austerity has reproduced racial hierarchies in Black-majority cities by deepening precarious living conditions and reshaping everyday care provision in the home due to water shut offs. Secondly, I outline how these processes are transformed informally at the household and community level through forms of makeshift infrastructures that have appeared as survival strategies. In this way, austerity and finance have come to shape Black lives and their means of survival to bathe, cook, clean and hydrate. This chapter reveals how racialized poverty is shaped in this moment of financialized austere governance and its variegated dimensions in each city. The second contribution highlights the gendered roles of care provision under austerity and the role of women in bearing the responsibility of managing water-related household needs when the water is shut off (O’Neil, 2018; Crow and Sultana, 2002)

While an analysis of post-crisis austerity urbanism has helped to uncover how local water and sewer services are being downsized, restructured, privatized, and financialized, this research has also been considered in tandem with wider geographies of racial capitalism and finance to inform everyday urban life for racializing groups experiencing infrastructure inequality across the North-South dichotomy. Therefore, chapter nine contributes to a broader understanding of the informality, marginality, and slum-like conditions that has long been theorized in Southern cities to be the same multi-scalarity forces of racial capitalism that is reproducing infrastructure inequalities through municipal finance and debt under structural racism. To intervene in infrastructural and austerity politics in Black-majority U.S cities, it is therefore important to draw on geographies of racial capitalism to make sense of how capitalist relations operate on and work through racial difference and value, and how these relations become spatialized, globally speaking, and how racialized processes and features of financial capitalism are connected in both the North and South (Roy et al, 2020). As Cedric Robinson has emphasized, "The tendency of European civilization through capitalism was not to homogenize but to differentiate – to exaggerate regional, subcultural, and dialectical differences into 'racial' ones" (1983: 26). Thus, the history of capitalism is connected to differentiation in human value via racial regimes and associated with colonial divisions between possessors (i.e colonial empires) and the dispossessed. This chapter attempts to answer how does debt configured by finance and austerity become both racialized and spatialized and what can this tell us about contemporary geographies of racial capitalism operating in U.S cities?

I decided to place chapter nine, the last empirical chapter, at the end of this dissertation to provide a logical structure within the manuscript that follows from broader macro-economic processes, local government austerity policies and finally, how individual urban lives are impacted through infrastructure inequalities. However, participant observation and narrative interviews with community organizations and households occurred at different stages throughout the one year of fieldwork. By interviewing households experiencing water insecurity in each city and at different stages of fieldwork, this helped inform my wider analysis on the racial implications of finance and austerity by exploring everyday life and what this means for who has a right to water in U.S cities. By drawing attention to the intimate relationship between indebtedness, care and everyday life through story-telling methods with households, this chapter reveals the crisis of care and social reproduction in each city through the transformation of water from a public good to a commodity that is now tied to financial markets and governed as a financial asset. My hope is that chapter nine will be read and understood in conjunction with previous empirical chapters.

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Chapter 9

"…I do what I gotta do": racialized austerity, living without water and living on the margins

Introduction

The 2008 financial crisis reignited scholarly attention on the financialization of cities as sites of capital extraction for global investors. Urban space and the built environment of cities represent prime sources of the ongoing supply of assets on which financial capital depends on to generate new profit streams (Leyshon and Thrift, 2007; Christophers, 2011) but the search for returns on investment also entails increasingly risky financial products. This speculative financing is increasingly being used by municipalities in their search for infrastructural funding. Considering the complicated legacies of uneven racialized development within and between U.S cities, this chapter argues that financial risks and debts are being downloaded onto marginalized groups along racial lines through categorizing Black-majority cities as high-risk investments based on pre-existing racialized socio-economic conditions in the municipal bond market.

The financialization of water infrastructure has recently led to the manufacturing of multiple water crises across cities in the form of mass water shut offs and in the most extreme case, the poisoning of Flint's water system (see Pulido, 2016; Ponder and Omstedt 2019). Water crises meaning as being constituted by systemic financial logics and institutional failures that have led to a disproportionate number of residents without sufficient access to safe, clean and reliable water. An estimated 15 million people in the United States experienced a water shut off in 2016 (Food and Water Watch, 2018: 2). These events have been felt most deeply in Black-majority cities like Detroit, Baltimore, and St. Louis, where lower-income households are struggling to pay their water and sewer bills due to increasing rates (Food and Water Watch, 2018; We the People, 2019).

In this chapter, I examine how households and communities experience and respond to water affordability crises. Due to deindustrialization, Black communities in each city have long suffered infrastructural deprivation through aging pipes and treatment plants in dire need of replacement in comparison to other U.S cities. Speculative financing through the municipal bond market is the only viable option for post-industrial, Black-majority cities due to, 1) older water and sewer infrastructure in need of repair, 2) the decline of federal funding for water and sewer systems since 1977, and 3) the historically higher borrowing costs for Black-majority cities in the bond market (Ponder, 2017). The bulk of the literature on the financialization of U.S cities highlights macro-economic processes, and its profit generation models (such as fees, capital gains, interest rate spreads, etc), and the state-market relations involved (Christophers, 2015; Lapavitsas, 2013; French, Leyshon, and Wainwright 2011). This chapter follows Pollard's (2012) call for the expansion of research sites that move beyond questions of global financial institutions and financial centres to explore how global financial practices are connected and reconfigured in the reproduction of the household and everyday lives.

The aim of this chapter is to refocus financialization research to explore the uneven, racialized lived experience of finance and debt in Black-majority U.S cities post-2008. I argue the use of municipal speculative and debt-led infrastructural financing deepens uneven racialized geographies and the exposition of racial-capitalist logics perpetuate water marginalization and insecurity. By using the case studies of water crises within each city, this chapter explicates the relationships between financialized urban governance under austerity and the remaking of everyday lives through debt. This chapter is organized into four sections. The first discusses the financialization of cities, austerity and race, the value of scholarship in Black geographies, and theories on racial capitalism that help explicate global processes of racialization across the North-South divide to better understand urban conditions of marginality. Next, I give an overview of the municipal speculative financing of water and sewer infrastructure and how this shapes water affordability in Baltimore, Detroit, and St. Louis. I then highlight the methodology, data, and participants. The findings section will first focus on the lived consequences of water insecurity and the limits financialization poses to the social reproduction of the home through an analysis of the everyday experiences of water shut offs and how finance and debt is embodied across each city. The following sections look at how these processes are transformed informally at the household and community level through different forms of makeshift infrastructures that emerge as survival strategies. The final section reflects on key theoretical considerations generated to re-orient urban theory production to more relational accounts when researching urban process across Global North and South cities

Rethinking the North-South divide: Black geographies and racial capitalism

Public discourse in the US has highlighted stories of infrastructural decay to articulate wider geographies of urban decline. A *Financial Times* headline declared: 'US infrastructure decay forecast to cost trillions' (Fleming, 2016). The American Society of Civil Engineers (2017), which reports on the shortcoming of the country's roads, bridges, waterways, and airports, has given US infrastructure a D+ Grade. The ASCE has projected nearly $4 trillion of infrastructure investment will be needed between 2016 and 2025 (Fleming, 2016). In addition, various other studies, and policy briefings with the American Water Works Association (AWWA) and the U.S Congressional Budget Office (CBO), have highlighted the physical decay of urban infrastructure and its economic strain on American cities.

The decay of water infrastructure has become visible in Black-majority cities and pivotal for understanding the contemporary urban crisis and the relationship between infrastructural failure, long-term austerity, and race in post-industrial contexts (Silver, 2019). Cities have been central targets of financialization, through infrastructural development (Furlong, 2019), as well as debt-led forms of financing to fund basic city government services and social provisioning, such as water and sewer, housing, health care, and education (Peck and Whiteside, 2016). Discussions on the relationship between financialization and neoliberalization emphasize how neoliberal forms of public-private partnerships and other urban governance strategies allow for the speculative infrastructure development in cities (Fainstein and Novy, 2019). There are however disagreements in the literature on whether urban scholars view finance as capturing urban governance (Davidson and Ward, 2014; Henrikse and Sidaway, 2014; Peck and Whiteside, 2016), or whether municipalities are playing an active role in using finance to further their agenda (Weber, 2010; Gonzales and Oosterlynck, 2015; Ashton, et al., 2016). Others such as Aalbers (2020) argue that both processes can occur simultaneously depending on the different opportunities and challenges local governments may face.

The effects of financialization were realized after the 2008 financial crisis in the form of austerity policies and a further dismantling of the social state. Municipalities struggled to manage their increasing debt and downloaded these costs even further onto residents through privatization, outsourcing, cutting back services and higher rates and fees (Ward and Davidson 2018). This is what a body of work refers to as "austerity urbanism" (Davidson & Ward, 2017; Tabb, 2014; Donald, et al 2014; Peck, 2012) where states were "ultimately concerned with offloading costs, displacing responsibility" (Peck, 2012: 632) onto local spheres that has impacted those most marginalized. What makes this period of post-crisis austerity distinctive from preceding neoliberal urbanisms is the further financial deepening of cities under austerity. In other words, cities deploy financialization to simply "get by" in a context of urban austerity and state-rescaling (Aalbers, 2019).

Our knowledge of the financializaton of cities (and infrastructure) tends to be capital-central and not fleshed out with everyday socio-spatial relations. (Fields 2017; Pike and Pollard, 2015). Rarely entering the space of the home, such work neglects the opportunity to connect financialization and the lived experience. Work on everyday financial subjects (Langley, 2008), or on the contrary, understanding financialization as a fragmented rather than top-down process where financialized subjects can be unmade as seen through everyday social contestations and resistance at the household level (Fields, 2017). Through austerity and financialization, residents in Black-majority U.S cities have been made vulnerable to expulsion, marginalization and dispossession through water insecurity, subjecting spaces of everyday life and social reproduction.

In this chapter, I am interested in the everyday conditions of urban *marginality* that financialization and austere governance are (re)producing in U.S cities following the 2008 financial crisis. In this section, I will first detail debates on everyday life of marginality in cities that have been used in the Global South and elicit calls for more nuanced interpretations from Black geographic scholarship that addresses globalized and spatialized processes of racial capitalism in shaping marginal urban living conditions in Global North cities.

Urban Marginality

There is a growing literature focused largely on the global South that examines the making of everyday life in marginal urban contexts (see, for example, Banks 2016 Bayat 2010; Kihato 2011; Lomnitz 1977; McFarlane, 2011; Silver 2014; Simone 2010, 2014). In particular, the study of informal settlements has become a defining feature of Southern cities. For instance, Simone's (2010: 3) work on African cities has shifted attention to the "city as a thing in the making" and forms of makeshift infrastructures that function in an environment where everyday life, such as housing and infrastructures, have been informalized. A concern for urban dwelling and informal living conditions has also been taking up by McFarlane (2011), who has researched informal settlements in Mumbai, focusing on how urban residents learn to live in "contexts of producing urban inequality" (2011: 48). For McFarlane, navigating the city in poverty conditions is never a formal, liner process, but rather is an incremental and makeshift arrangement that depends on a "cumulative process of assembly" (2011: 36).

These debates are increasingly being drawn on to understand everyday urban marginality in global North contexts, especially in the context of growing forms of precarious urban living because of neoliberal state restructuring (Hall 2012, 2015; Lancione 2014; Roy and Crane 2015; Vasudevan 2015). Urban marginality has been argued as a form of "social exclusion" discussed in relation to precarious and informal living conditions or at other times in relation to the erosion of citizenship rights (Perlman, 2006). Others use the term "advanced marginality" (Wacquant 2008) to denote the combination of neoliberal exclusion, such as the retreat of the social state and punitive criminalisation in stigmatised urban places. The concept of urban marginality as forms of expulsions via the absence of public services where citizens are excluded from access to basic services, or the right to certain infrastructures, like water, that is part of a "much larger process of financial deepening" that cuts across North-South divides (Sassen, 2014: 201). However, such concept requires an understanding of how neoliberal financialization impacts everyday lives.

Feminist interventions in geography have been integral in shaping discussions around how neoliberal urban governance is reproducing everyday urban insecurity and informality in the Global North (Katz, 2001 Peake and Reiker, 2013; Mullings, 2013; Peake, 2016). Through critiquing Marxist political economy perspectives, feminist approaches to urban governance have argued that political economy approaches rarely consider how structural divides in the urban are built upon gendered and racialized hierarchies that simply cannot be subsumed under class relations (see Peake and Reiker, 2013). Political economy approaches fail to fully assess how patriarchal power relations shape how particular bodies negotiate and access urban space. These hierarchies, Peake and Rieker (2013) argue, are integral to how neoliberal urban governance functions in terms of their material and discursive subjectivities (69). By acknowledging the everyday lived experience as a site of neoliberal restructuring, "broader social issues of family, community and livelihoods are addressed" (Peake and Reiker, 2013: 1-2).

Feminist perspectives in urban geography suggest neoliberalism spreads and consolidates at and through multiple scales, and its political rationality is filled into everyday practices, relationality, and experiences (Kern and McLean, 2017). Paying attention to the role of gender and other social differences in shaping neoliberal urbanism provides a lens through which to view the workings of these processes in everyday life that allows us to avoid theorizing the political economy of neoliberal restructuring from the top down. Katz (2001) for instance, argues for a feminist counter-topology that seeks to understand sexism, racism, and hetero-patriarchy to inform the contours of neoliberal ideology "on the ground" that includes looking at social reproduction, households, people and landscapes, and emotions and affect. Paying attention to these intersectional differences can produce a more nuanced picture of the political-economic landscape (Bakker and Gill, 2003).

Feminist interventions on urban governance have also been important to understand the everyday experiences in terms of how marginalized people engage in informal activities and survival strategies produced by neoliberalization (Elyachar, 2005, Kern and Mullings, 2013). Kern and Mullings (2013: 66-70) suggest that much of the literature on neoliberal urbanism has not given substantive attention to the so-called informal sector and the ways that it is both the product of and productive of neoliberal restructuring. By downloading debt onto residents and placing increased responsibility on the individual or households to attain self-sufficiency, an informal economy arises through which people attempt to secure a livelihood for themselves. The existence of the informal sector plays a role in making neoliberal urbanism possible, through how it sustains and reproduces workers and residents when the neoliberal state refuses to provide basic services to live. Women's prominent role in informal economies (wherein production and social reproduction are inextricably linked) requires serious consideration if we are to try and understand the complex dynamics through which neoliberal urban restructuring and the informal sector are connected (Kern and Mullings, 2013: 67).

In his book, *Planet of Slums,* Davis (2006) details the marginal conditions that characterize and shape everyday lives of people living in slums in Global South cities. According to Davis, the "brutal tectonics of neoliberal globalization" has established "informal survivalism as the new primary mode of livelihoods in a majority of Third World cities" (178). Rather than argue that slum-like conditions are a totalizing, blanket approach to describe Global South countries, I follow Roy (2011) calling for more nuanced epistemological frameworks to research the "heterogeneity of Southern urbanism" (221-224). This means exploring informality or marginal-like conditions not only as "a terrain of habitation, livelihood, politics" but as theoretical frames for rethinking the epistemologies and methodologies of urban studies (Roy, 2011: 224). Such dualism has limited research on "Southernism in the North" and led to global historical approaches to poverty, welfare and development that avoid multinational comparison, rather than "hold in simultaneous view the uneven geographies, and temporalities, of the global North and global South" (Roy and Crane, 2015: 3). Indeed, this is a methodological point that has been argued by Hart (2018) to focus on relational comparison that examines "how processes are constituted in relation to one another" through power structures in multiple and interconnected geographies (374). Alongside this is a postcolonial imperative to translocalise urban theory and imaginaries that shifts thinking away from polarizations around ideas of developmentalism across the global North/South (Robinson, 2006), and depictions of elite urban models (e.g. Roy & Ong, 2011) that are often set against dystopic 'megacities' (McFarlane et al., 2017). This can help to uncover differing axes of power and difference, particularly at the micro-scale, as they shape urban experiences, infrastructure inequalities and vulnerabilities.

By rethinking the relational categories of the North and South that does not hold these categories as impermeable, such as the "Euro-American Welfare States vs Third World Development" we can offer more nuanced approaches to tacking the reproduction of infrastructural tensions and attend to the varied and often contradictory trajectories of urban life for marginalised groups. By foregrounding the multi-scalar dimensions of the everyday, we can reveal a dialectic relationship between specific places and extra-local, networked spaces, of finance (Pieterse, 2010; Temenos, 2017).

The nuances in rending some characteristics as Southern and others as Northern demonstrates the polarization and presumed universality of terms such as financialization and neoliberalization. Work that engages with shared interconnections between the Northern and Southern urbanism elicit more on the ground research of the everyday austere conditions in North American cities, and in particular, metonyms of Southern urbanism when researching urban geographies in the North by looking back to the "heart of the empire" to locate moments of urban infrastructural tensions that challenge how we categorize these places and place cities globally. As Silver (2017: 2) argues, how can we look at cities like Detroit from the prism of African cities, rather than "the logical endpoint of Fordism and the deindustrialisation of the late 20th century." What is at stake here is a better relational understanding of how global trends of infrastructure inequalities are being shaped by distinct and shared processes of finance. More importantly, to trace how financialization operates differently in "different" cities shaped by specific economic and political histories to avoid positing a unified theory of financialization (Robinson, 2016).

Black geographies

Questions related to rethinking the narrow developmental categories of North-South research has been addressed by geographers' renewed interest in questions of race, racism, and racialization and its connections to space and scale by considering how Black geographies, are linked globally (McKittrick, 2011). This echoes Morrison's view (1992: 4) who suggests that we live in a "wholly racialized world" where racial formations, as Omi and Winant (1994) describe, exists in a dense matrix, operating at varying scales, networked with each other in formally and informally organized ways, enveloping and penetrating contemporary social relations, institutions, identities, and experiences. Put in another way, how race is given spatial expression remains "variable and shifting" based on new spaces of capital accumulation (Delaney, 2002: 7; Bledsoe and Wright, 2019). Space, then, works as a technology through which race 'operates' and is 'reproduced,' through capital's needs for new spaces of accumulation and the insistence that Black populations cannot occupy space legitimately. For example, historical trends of anti-Black violence in the St. Louis Metropolitan area, of which Ferguson is a part, perpetuates capital accumulation by relying on the disenfranchisement and premature ending of Black lives through processes of gentrification and policing (Bledsoe and Wright, 2019: 15).

Jackson and Smith (1981) were some of the first geographers to begin interrogating the spatialized dimensions of blackness and whiteness. Through several collections of essays, they put forth the argument that racial segregation cannot be studied in a vacuum from its relationship to wider economic and political processes. Moreover, they maintained that race needs to be studied historically and spatially and as part of a dialectic relationship between human agency and social structures. Their work was influential to the field of Black geographies in proposing that racism has explicitly a territorial dimension that requires geographers to study the complex interweaving of social relations, such as the intersections between racialization and political economy. Jackson (1987) demonstrates in his later works that the geography of racism is evident at a variety of scales including the international, national, sub-national, and urban scales. Similarly, Delaney (2002) argues that racialization is not just reflected in spatiality, but instead, spatialities constitute and/or reinforce aspects of racialization (7). Race, then, according to Delaney (2002), "is what it is and does what it does precisely because it is given spatial expression" (7). Race and place matter, and geographers' engagement with race and racialization has enriched our understanding of how space and scale works to maintain power. Taking the centralization of race seriously, both analytically and politically, in topics of geography has mostly been informed by critical theories of race and Black geographies scholarship that are engaging with questions of scale, belonging, and displacement (Price, 2010, p. 153). Kobayashi and Peake (2000) for instance describe racialization as a process, "by which racialized groups are identified, given stereotypical characteristics, and coerced into specific living conditions, often involving social/spatial segregation and always constituting racialized places" (p. 393). In this sense, racialization is framed as always having a specific geographic dimension where inequalities between racial groups are operationalized through spatial relations (Bonds, 2013, p. 399).

Underlining these contributions and expansive framing of race and space, new emerging scholarship in Black geographies has also emphasized a historical and global relational approach to understanding the racialized functions of economic processes. For example, work is examining the everydayness of black's lives to contextualize how racial inequality is experienced socially and spatially across different historical trajectories and specific geographical and political contexts (Bledsoe, et al, 2017; Bledsoe and Wright, 2019; Brand and Miller, 2020). Further understanding and theorizing the relationships between race and space, whether as an analytical concept or through empirical inquiry, is a critical area where urban scholars can contribute to scholarship on other possible worlds and decolonial, collective futures (McKittrick, 2013)

The intersections of the Anti-Blackness and global capital North American cities share 'essential conditions with third world nations abroad,' namely 'economic underdevelopment, a heritage of colonialism and neocolonialism, and a lack of real political power and autonomy" (Stevens, 1998: 34). In this way, scholars have helped link racialized social relations both conceptually and historically to the spatial expansion of capital and economic processes. For instance, understanding how the current geographic management of blackness, race, and racial difference hinges on longstanding planation past and forms of imperialism (McKittrick and Woods, 2007).

McKittrick's (2006) work argues that racial oppression must always be understood not only as a political and social project but a spatial one as well. Black geographies are defined by McKittrick as "subaltern or alternative geographic patterns that work alongside and beyond traditional geographies and a site of terrain of struggle" (McKittrick 2006: 7) that are entangled processes of transatlantic slavery, colonialism, and capitalism. Black feminists have called for 'standpoint epistemologies', which demand for critical knowledge production situated and grounded in everyday lived experience to empower acts of resistance (Collins, 1990; Eaves, 2020; Richie, 2012, 129-3). As Katherine McKittrick states, "black matters are spatial matters", calling on scholars to identify multi-scalar and relational Black geographies across the globe on Black struggle and resistance. In this sense, space and place factor centrally in black lives both in the Global North and South (McKittrick 2006, xii). Particularly in relation to the urban, McKittrick (2011) utilizes the term “urbicide” to explain the deliberate death/decline of a city and conceptualizes how the very fabric of colonial relationships serves to mark black bodies as placeless entities, justifying their visible and invisible death in the city that works through capitalist systems.

Theories of Racial Capitalism

Employing critical theories of race to understand the omnipresent and spatial expression of racialization can help geographers explore how racialized difference is reconstructed and reproduced within financialized neoliberal governance across multiple and different urban worlds. By clarifying these mutual and interconnected processes of racialization working through capitalist relations, this can help to generate new understandings that re-articulate analytical comparisons of Northern and Southern urbanism. There is much to be gained by locating the particulars of racial capitalism to understand its global reach. Below I will outline my conceptual contribution that employs logics of racial capitalism to make sense of interactions of race and municipal finance that are producing conditions of urban informality and marginality in Black-majority cities.

Drawing attention to the multiple and overlapping ways in which infrastructure is governed and folded into wider neoliberalization processes, Black-majority cities constitute an attractive new node for financializing investor projects where their only option to finance repairs is through the bond market. Due to their economic vulnerability through urban conditions of white flight and disinvestment that categorize these cities as having a higher risk of default, Black-majority cities have had to pay to municipal bondholders higher interest rates on their bonds Geographers have rarely focused on the relationship between race and municipal finance, and therefore, have overlooked the functioning of government debt and the overall municipal bond market in legitimating and accruing white racial advantages based on the role that race plays in structuring assessments of municipal creditworthiness (Jenkins, 2020).

To that end, municipal debt is essential to the development of white America and the underdevelopment of Black America, most visibly in Black-majority cities (Jenkins, 2020;

Jenkins, 2021). The racial implications of this have meant these municipalities have been under fiscal stress in managing their debt obligations that has led to long-term austerity measures, such as increasing the cost of local services and reducing the quality of services for their majority-Black residents. In doing so, these finance mechanisms have worked to dispossess Black households from basic needs of survival, such as water. Comparing this to Global South countries, debt and finance have also worked to structure the living conditions of racialized populations through means of disposability and dispossession.

While financial capital is integral to the funding of local public goods and services, this chapter finds that the 2008 financial crisis has further deepened the uneven development of Black-majority cities. Through predatory subprime lending that targeted Black and Latino neighbourhoods, Black-majority cities are experiencing ongoing revenue shortfalls due to a decline of property taxes (Ponder, 2017; Wyly, et al, 2009) and an increasing of Black household debt (Aalbers, 2011; Seamster, 2019). The impacts on Black-majority cities following the recent financial crisis, in turn, leads us back to recent work on racial capitalism, and how the dramatic growth of financial markets and the imposition of financial logics are not simply an economic phenomenon, but are social–spatial processes to which racism/racialization, historical and contemporary, are inextricably linked (Kish and Leroy, 2015).

Austerity urbanism, I argue, is the post-crisis urban governance strategies of fiscal discipline by reducing public services to restore financial markets and renew the value production cycle of financialization by imposing debt burdens on the public sector who bear the costs of financial recessions. What we are currently witnessing, even after financialization created the conditions of the global economic crisis, is a further financial deepening of cities under austerity. This is understood by the tightening grip of bondholder value rationalities, such as municipal governments'' increased dependency on municipal bond markets and an emergence of gatekeeping bond practice surveillance and other risk management and monitoring roles of credit-rating agencies through debt collection practices. What makes this round of austerity distinctive in Black-majority cities is through processes of local state-restructuring that are operating on already convoluted terrains produced by the racialization of the municipal bond market, and “under historically and geographically distinctive conditions and in the context of already neoliberalized configurations of (local) state power and (urban) politics” (Peck, 2015: 2).

In this chapter, I am concerned with how urban marginality is shaped by mechanisms of racialized dispossession as a form of racial capitalism that work through both the Global North and South. While some scholars are concerned with the historical role of slavery in relation to capitalist production (Baptist, 2014; Singh, 2016) others use racial capitalism to discuss specific ‘moments’ when capitalism deploys strategies for extraction based on racial hierarchies (Jenkins, 2018; Wang, 2018). This includes contemporary capitalism’s relationship to mass incarceration (Davis, 2003; Gilmore, 2007), policing (Balto, 2020; Kelley, 2017; Wang, 2018) and racialized poverty (Marable, 2015). To better understand how the informality of Black-majority cities living through financialization, this chapter draws together work on financialization alongside work of racial capitalism (Jenkins, 2018; 2020; 2021; Bledsoe and Wright, 2019) and urban governance, particularly emerging literature around the racialized unevenness of austerity urbanism, the environment, and municipal finance (Bonds, 2019; Pulido, 2016; Ranganathan, 2016; Ponder, 2017) in order to operationalize urban geographies of racial capitalism working through infrastructures in the Global North.

Racial capitalism has been defined as the production of racialized difference in tandem with the production of capital – usually through mechanisms of violence (Ralph and Singhal, 2019: 851). Scholars use racial capitalism to describe how racialism merged with capitalism to describe the origins of industrial capitalist development through slavery and colonization (Bhattacharya, 2019; Kelly, 2017; Robinson, 2000 [1983]) and to highlight how coercion is integral for capital investment (Baptist, 2014; Gilmore, 2002; Johnson, 2017; Robinson, 2000). Capital only realizes its value when it is producing and working through relations of inequality among human groups, and these forms of accumulation require dispossession, disposability, and unequal divisions of human value. According to Lowe (2015: 150), capital expands itself by “seizing upon colonial divisions, identifying particular regions for production and others for neglect, certain populations for exploitation and others for disposal.” What both Robinson (2000) and Lowe (2015) elaborate as racial capitalism includes: setter colonialism, slavery, genocide, incarceration, immigrant exploitation, and forms of racial warfare. In this way, capitalism is not external to racialization, racial differences, and/or racial formations – but depends on them to survive. There is much to be gained from this work that draws on theories of racial capitalism to make sense of recent urban fiscal crises (see Ponder and Omstedt, 2019; Danewid, 2019). How capitalism depends on racist ideologies and anti-Blackness to realize itself serve as a powerful tool to locate connections between the raced expressions of financialized capital and the forces that work dispossess and extract value from racialized beings in both globally – contributing to understandings of shared urban marginality across the North and South (Bledsoe et al., 2019; Silver and McFarlane, 2019).

Attention to the urban particularities of racial capitalism is an underdeveloped approach in Geography. Work in Black geographies and those researching racial capitalism offer an important lens to understand and operationalize how financial and economic processes, along with forms of neoliberal urban governance, are operating through finance and municipal debt and reproducing forms of marginality in Black urban spaces. The following sections outline two elements that have characterized urban marginality in Baltimore, Detroit, and St. Louis, through case studies of local water shut offs and affordability. First, we describe the precariousness of Black households and the embodied aspects of water disconnections. Secondly, this chapter outlines the informal practices and makeshift infrastructures used by Black households living at the margins that has been produced by apparatuses of finance and austerity working through racial capitalism.

Context: the financialization of water and the case of shut offs

Household water insecurity has long been a topic researched in the Global South (Castro, 2004, 2007, 2008; Gandy, 2004; Bakker, 2010; Ranganathan, 2014; Sultana, 2020), with some trends in North America that looks at the correlations between water insecurity and race, mostly focused on rural contexts (Mascarenhas 2007; Patrick 2011; McDonald and Grineski 2012; Balazs and Ray 2014; Jepson and Vandewalle; Eichelberger 2017; Deitz and Meehan, 2019). However, apart from Pulido (2016) and Ranganathan (2016), few have examined household water insecurity in North American cities operating within broader financialized trends in cities and how water is governed as a financial asset rather a public good.

In countries such as Bolivia, Brazil, South Africa, Nigeria, Ghana, and Malawi, familiar stories and images of water insecurity via water shut offs through neoliberal experiments have been unfolding for several decades under IMF structural adjustment programmes. For instance, researchers have looked at the privatization of water in Soweto that contributed to increasing water prices and water disconnections affecting 275,000 households in 2003 alone (Bond and Dugard, 2008: 8). Others such as Adams (2017) have researched the formation of public-private partnerships to manage water services and the rise of water disconnections in Lilongwe, Malawi that followed.

Water disconnections have just recently come to the forefront in Global North cities, most visibly following 2008 when U.S municipalities were in a deficit crisis and utilizing austere measures to balance budgets. Water disconnections unfolded in Detroit beginning in 2014 that brought international media attention to the crisis which framed water shut offs a "humanitarian crisis" (Carmody, 2014). The UN accused the city of human rights violations where experts stated, "if these water disconnections disproportionately affect African-Americans they may be discriminatory, in violation of treaties the United States has ratified" (Kwesell, 2014). In 2014, shortly after filing the largest municipal bankruptcy in U.S history, the city launched a massive water shut off program that has disconnected at least 170, 000 households as of 2019. Other cities such as New Orleans, have one of the highest water shut off rates in the country, disconnecting water services at a rate of nearly 20% in 2017 (Food and Water Watch, 2018: 4). Research conducted on water shut offs in the United States has found that the highest disconnections are disproportionately concentrated in Black-majority cities where low-income households in Black-majority cities pay higher water bills than majority white cities (Food and Water Watch, 2018: 9). Other low-income residents in Black-majority cities, such as Baltimore and St. Louis, have been experiencing degrees of water shut offs and a heightening affordability crisis. Baltimore shut off 42, 000 households'' water in 2016, and St. Louis shut off water to nearly 21, 000 households in 2016, their highest number of shut offs recorded.[55]

[55] City of Baltimore Freedom of Information Requests, 2019; City of St. Louis Freedom of Information Requests, 2019

Water system upgrading is an impending political and financial issue, particularly for older, post-industrial Black-majority cities who have 100-year-old water and sewer systems and are no longer supported by a federal state that perceives the provisioning of infrastructure as one of its main responsibilities, but one that should be provided by decentralization. From the 1980s onward there has been a devolution of federal and state responsibilities for water and sewerage services onto local governments. The implications of this roll-back neoliberalism (Peck and Tickell, 2002) were made clear in 1995, when the EPA released an updated pollution control policy regarding combined sewer overflow (CSO) systems. EPA-enforcement actions have resulted in consent decrees specifying mandated investments that municipalities need to spend to achieve compliance under the Clean Water Act (GAO, 2017).

Replacing the state as the major source of funding for cities in need of infrastructural repair and renewal is the interest-seeking $3.8 trillion municipal bond market (SEC, 2020: 51). Black-majority cities are still economically and fiscally struggling from the racialized remnants of white flight, deindustrialization, and subprime mortgage foreclosures. Water utilities in Black-majority cities have been forced to find money in the municipal bond market to pay for water infrastructure and service provision. To manage their debt obligations, Detroit, Baltimore, and St. Louis have used municipal debt instruments in the form of public-private partnerships, interest rate swaps and advance refunding with the intention of trying to “get by” in a context of ongoing neoliberal state-rescaling and decade-long federal cuts to the State Revolving Program under the Clean Water Act and Clean Drinking Water Act to pay for water and sewer infrastructure.

Over the last decade, Detroit and Baltimore were left owing millions of dollars to banks from interest rate swap financial deals due to conditionalities in their contracts on debt repayments which had skyrocketed once federal interest rates had fallen. In St. Louis’ case, advanced refunding options were used to restructure their debt to pay for ageing sewer infrastructure. This financial tool has extended interest rate collection and debt payments in the long-term through lengthening a city’s debt over many decades that has contributed to increasing water and sewerage rates to meet these obligations.

Infrastructure-led development and falling tax revenues since 2008 have placed these cities in an increasing structural deficit. While Detroit went bankrupt, others privatized or outsourced water and sewerage services, and each city found new ways to generate revenue to make up for budget shortfalls by increasing water and sewer rates and enacting punitive debt collection practices in the form of water shut offs, housing foreclosures, and garnishing wages due to unpaid water and sewer bills. Thinking about how austerity is a relational debt governing technique that is "ultimately concerned with offloading costs, displacing responsibility; it is about making others pay the price of fiscal retrenchment" (Peck, 2012: 632), this chapter suggests that the relationship between debt recovery and debt financing for water and sewerage services indicates that increased municipal borrowing has deepened patterns of racialized austerity that are already being felt in poor households. The following section outlines the everyday experiences of urban marginality of Black households in Detroit, Baltimore, and St. Louis dealing with a deepening crisis of water disconnections and water insecurity.

Methodology

This research builds on fieldwork in Baltimore, St. Louis, and Detroit. These cities share common elements of water and sewer infrastructure disinvestment and a brewing water affordability crisis in the form of increasing water and sewer rates. The analysis is based on 62 semi-structured and narrative interviews, and participant observation carried out with government officials, municipal bond financial experts, water and social justice organizations, and households from November 2018 to June 2019. These interviews were selected to gain an understanding of how urban residents, urban governance, and municipal finance interact. In addition, data were collected from local policy documents and financial statements, and local and national media coverage in order to trace he local particulars of water insecurity tied to financial markets.

This chapter mainly draws from narrative interviews and participant observation, in particular, to build knowledge on how the financialization of water is "lived out" in cities by exploring the everyday realities of people struggling with water affordability and living without water. Narrative interviews allow for participants to talk and describe their experiences in the form of a story (Enosh and Buchbinder, 2005). Narrative interviews are used mostly when research involves asking participants to tell their stories on potentially sensitive and emotional topics (Guenette and Marshall 2009). Rather than assert or announce a series of questions, narrative interviews allow for more exploration and engagement by encouraging participants to engage with their stories on their own terms and giving them an "epistolary voice" to create new meaning and understandings (Guenette and Marshall, 2009: 86).

I conducted narrative interviews with nine households, as well interviewed and observed meetings with six organizations working on water-affordability issues across Baltimore, Detroit and St. Louis. Most participants identified as Black (100%), elderly (67%), and female (78%). Moreover, the majority were low-income households (67%) where their main source of income was from social security or a pension (67%) (Table 1 provides a demographic overview of all participants). Structured questions about the participants, and questions related to water affordability were first asked to build a demographic picture of those experiencing water affordability issues across all three cities. Interviews were conducted in the participants' homes and conversations began with an open-ended interview question which led to the participants telling their story and sharing their everyday experiences of not having water.

Table 9.1: Demographics of participants experiencing water insecurity

Participant Overview (n=9)

Demographics

Gender	%	**Marital Status**	%
Female	78%	Separated or widowed	67%

Male	22%	In a partnership or married	33%

Race/Ethnicity	%	**Age**	%
Black	100%	Between 18-30	0%
White	0%	Between 31-45	11%
Latino	0%	Between 46-64	22%
		Over 65	67%

Income

Annual income	%
Less than $10, 000	67%
$10, 000 to $30, 000	11%
$30, 000 to 45, 000.	11%

Participants on a fixed income (Pension or social security)	
Yes 67%	No 33%

Greater than 45, 000	11%

<u>Water affordability</u>

Their water has been shut off by the city in the last 5 years:	
Yes 89%	No 11%
Water and sewer debt currently owed to the city:	
Under $250	0%
Between $250 to $1000	22%
Between $1000 to $5000	22%
Over $5000	56%

With this research I seek to operationalize key strands of the vibrant, ongoing discussion surrounding the epistemological status of comparison in urban studies today (Robinson, 2016; Peck, 2014; Hart, 2016). In following Robinson (2016), Ward (2010) and Hart's (2018) model of relational comparison, this research begins from different nodes where ''critical ethnography and spatio-historical analysis of conjunctures and interconnections'' (Hart, 2018: 389), rather than bounded geographic entities, can highlight shared and relational processes of the financialization of Black-majority U.S cities.

Everyday experiences of living without water and living on the margins

This section explores the embodied aspects of financialization and the precarity that is produced to form everyday urban marginality in majority-Black cities through an examination of households' experiences living without water. There is an emotional, intimate, and bodily relationship between indebtedness and survival, and there are limits to financialization when debts are tended to at the expense of social reproduction and the consequences this has to everyday survival (Karaagac, 2019: 2). This elicits the question then, what happens when austerity squeezes people to their limits; when households are unable pay their debts and when vital public services imperative for survival, such as water, are no longer provided by the state? Echoing Deville (2015), this chapter argues that people and their livelihoods are used to replace debts owed in the form of dispossession and bodily degradation. The cost of financing and governing of water and sewer infrastructures in these cases fall onto residents in the form of higher water and sewer rates and water shut offs.

By financing public goods necessary for social reproduction, such as housing, health, or water, municipal governments allow people to become bound to financial logics and markets. In the case of water shut offs, people, and their right to access public services to survive are therefore compromised to pay for municipal debt. In this case, marginalized residents bear the consequences by not being able to properly clean, hydrate, and cook adequately to sustain our lives due to indebtedness. My research finds that water shut offs in Baltimore, Detroit and St. Louis has created precarious living conditions for households, and the experience of living without water has become unevenly embodied due to the gendered relationship to water (Sultana, 2020) where the emotional and physical burdens of not having water are placed onto to women. Through my findings (see Table 1), majority of participants experiencing water insecurity in each city were women that were living on fixed incomes, such as pensions or social security, that were not adequately being adjusted for inflation to match increasing water and sewer rates. These findings also indicate that these households carried significant debt owed to water departments, with more than half of participants interviewed owing over $5000 due to bills being unaffordable. Experiencing water shut offs has placed participants in precarious living environments that has deteriorated their health, relationships, caring responsibilities, and overall survival. Heightened water debt for Black households coincides with the "regressive redistribution strategy" of austerity where debt is re-downloaded onto the poor and marginalized.

According to studies by Circle of Blue (2020) there are racial disparities in residential water debt between Black-majority cities and white majority cities. For example, residential water debt ranged from $341 million in Chicago to only $568,427 in San Francisco (1).

Water shut offs have had a direct impact on participants' physical and mental health. Participants often mention the emotional stress, as well as the shame, of having to navigate everyday life without running or clean water. One Detroit resident, an elderly woman with chronic health issues, has been living without water for several years. Through her storytelling, she mentions, 'the anxiety and stress of not having water, having to carry and stock up on water jugs from the store or other places, and the embarrassment of having to call friends and families to ask to take showers never goes away."[56] Most participants were ashamed of their living conditions and often internalized the state of their living conditions and shifted blamed onto themselves for why their water has been shut off. Some participants have described how not having water has isolated their kids or grandkids from friends at school who felt humiliated of their situation and choose not to invite friends over in fear of being taken away from their family or not accepted by their peers. In a few cases, this deterred many families from reaching out to friends or families to ask for water or contributed to strained family relationships. Other participants have mentioned the stress of arranging to pick-up water from wherever they are able to get it on a daily or weekly basis and the emotional energy in figuring out where they can send their kids or grandkids to take showers.

Some organizations such as We the People and Food and Water Watch, have set up "water stations" at different locations in each city where families experiencing shut offs or water affordability issues could get access to free bottled water. Participants have described how exhausting this can be in having to organize time to pick up water, rather than just being able to turn your tap instantaneously. For example, while spending time with the Detroit Water Brigade, an organizer spent his time on the phone with residents who were under distress because of being shut off or at risk of being shut off. This organizer has described his experience of checking-in on residents without water: "It can be hard. I must be crisis counsellor at times, and a social

[56] Household Participant Interview, June 2019

worker, and usually, I am the only support outlet some families have."[57] For instance, an activist and educator who works with Empower Missouri in St. Louis, has mentioned that often water shut offs can be the main catalyst that leads to homelessness in St. Louis, stating, "if folks are having to spend all their money on water bills. How are they affording rent or mortgage payments?" This illustrates how water affordability can expose residents to other forms of precariousness.

In a 2017 study, community groups researched the complex emotional and social tolls related to water shut offs in some cities and found that "not only does having your water shut off significantly impact your mental health and your level of distress, but even the fear of having your water shut off" creates distress for low-income families (Gaber, 2017). This study in addition found that most households were worried they would not have enough water to meet their needs or drank water they thought might be unsafe for their health (Graber, 2017). The emotional burden of making impossible choices between using contaminated water or risk not having enough water posed challenges that affected the everyday survival of residents.

Families with kids or grandchildren mentioned stress related to potentially losing their kids or grandchildren due to not having water. Participants with kids or sole custody of their grandchildren mention this as their biggest fear. Activists across Baltimore, Detroit, and St. Louis revealed that there have been instances of children being taken away from homes due to not having water.[58] For example, an activist working for Brightmoor Connection Food Pantry in Detroit, that provides bottled water to households experiencing water shut offs, has claimed some parents will try and keep their children home from school out of fear they may unintentionally tell one of their teachers they have no water and would get Child Protection Services (CPS) call to the home. According to a reporter doing investigative work on water shut offs across U.S cites, "There are many cases where it results in children being taken out of the home because they're considered an unfit parent because their water is shut off for 72 hours. So, that can be traumatic for a kid and lead to anguish in family relationships."[59] Others have

[57] Detroit Water Brigade Organization Interview, May 2019
[58] Detroit city government official interview, May 2019; Interview with reporter in Baltimore, March 2019
[59] Food and Water Watch Interview, Rianna Eckel, April 2019

mentioned that when families need to receive water drop-offs that have been provided by various organizations, that they will usually schedule them to happen at night in order to avoid attention being drawn from neighbours who may call CPS.

Another key impact of water shut offs that accompany related stress is connected to participants' physical health. Many participants were over 65, and most mentioned having some sort of severe or chronic health condition. Not having running water means there is added physical stress of having to carry water jugs or buckets of water and risking their health. For instance, one participant explained their struggle:

> "I am disabled. My spine is deteriorating, it is swelled up right now. It's in overload, according to my doctor. My shoulder is messed up, too. So, when I carry water, I strain my spine. I'm doing more damage to my body to lift up all this water. I was carrying 5 gallons of rainwater buckets a day to clean and the flush the toilet."[60]

Here, this participant has articulated the physical toll on her body due to her indebtedness and no longer having access to water, and how her health is placed at risk in trying to carry water inside. Moreover, other participants have mentioned needing access to water in order to keep themselves clean to use medical equipment or to take their daily medication. One participant who has had their water shut off for over three months, has described the difficulties and risks she faces as someone with chronic health issues:

> "I'm on oxygen. And I'm on blood thinners, and four different blood pressure medicines. And I was just fitted for a new blood pressure machine. You have to constantly wash your hands, and keep the areas clean that you're using those machines in. That's my big oxygen tank over there. I have been using the portable one because I don't have the money to get the other one […] And I had cellulitis, we don't know where it came from. But, I've been on antibiotics. I have it right under my stomach and that's very painful, and you have to keep those areas clean. I haven't been able to do that either."[61]

Activists and local organizations have argued that water shut offs are a public health crisis and researched the health risks this can pose to wider communities. Food and Water Watch, a water justice organization that does campaigns around the prevention of water shut offs

[60] House Participant Interview, May 2019
[61]House Participant Interview, June 2019

described shut offs as a “death sentence” for families that has led to a deterioration of health and well-being, such as not being able to cook nutritional homemade meals that require the use of water or take care of personal hygiene. Similarly, Empower Missouri, who does work on racial and economic justice related to racialized poverty and water affordability in St Louis, has claimed the health inequities in the city are already deeply racialized – and water shut offs could be a major factor in leading to dire health problems:

> “In St. Louis City, if you live in an apartment where you're exposed to raw sewage, mould, insect fece, or without clean and running water, you have a much higher rate of having asthma, brain damage, lead poisoning, or other diseases. Poor households receive those impacts really disproportionately and with poverty concentrated in communities in colour, it takes a terrible toll on health inequities.”[62]

In 2014, the Detroit Community Research Collective, a group of local stakeholders, activists, and academics, to research and publish reports documenting the inequity and public health impacts of water shutoffs. They found correlations between waterborne illness diagnoses and zipcode blocks of water shut offs. The published results show patients with a waterborne illness were 1.42 times are likely to have lived on neighbourhood blocks that experiences water shut offs, and patients who lived on blocks that experienced a water shut off were 1.55 times more likely to have been diagnoses with a waterborne illness (Plum, et al, 2017). More recently, the public health impacts of water shut off came to light following the COVID 19 outbreak – where strong links were made between COVID 19 hotspots and neighborhoods in cities with high numbers of water shut offs (Klasing, 2020). Reports claim that residents without water “have been sharing or borrowing water at an alarming rate – 80% in one study – creating a transmission path for coronavirus, as well as hepatitis A, shigellosis, campylobacter, and giardia, all of which have been plausibly linked to the shut offs by health officials” (Ignnaczak, 2020).

The financialization of water in Black-majority cities has led to widespread shut offs across homes and has reshaped residents’ emotional and bodily relationship between indebtedness and care as is shown through the precarious conditions of survival, stress, and deterioration of health from those without water. In these cases, debt is not just a numerical

[62] Empower Missouri Organization, Interview, February 2019

abstract number that is owed, but it is something that is lived through. These examples expose the confines of financialization and municipal debt to everyday urban lives. Precarity, here, represents a state of material and social insecurity that is the product of specific forms of vulnerability and exposure induced through the financialization of Black-majority cities operating on and through legacies of uneven geographies of racial capitalism. This next section turns to the heterogenous ways in which Black residents have been able to come up with strategies for survival.

Informality and Makeshift Infrastructure

In this section, I discuss the gendered labour, practices, strategies, and materials that are central to the different forms of makeshift infrastructure s that households and communities have used to informally access water across Baltimore, Detroit and St. Louis. This resonates with a body of work that focuses on how urban spaces and infrastructures are reassembled incrementally, informally, and contingently (Simone, 2010; Silver, 2014; McFarlane, 2011). Although this this work emerges out of fieldwork conducted in Global South cities, there are strong similarities in the everyday informal infrastructures observed in households coping with water shut offs in Black-majority U.S cities. Informality is marked by systematic deprivation and the absence of necessities (water, electricity, sanitation, etc) required for viable urban life (Pithouse, 2006). Austerity measures in the form of increasing water and sewer rates, deepening residential water debt and water shut offs have created systemic water insecurity for Black urban residents. Through conditions of informality, differentiated strategies were used to access water. This section analyzes the kind of work necessary to connect and arrange materials, resources and practices in ways that persist access to water and survival.

My findings suggest that different households across each city used different strategies, understood as informal and makeshift infrastructures, by way of “getting by with what I got” to access water to complete day-to-day household needs. These forms bring together what Silver (2014) calls “incremental infrastructures” which describe the informal ways in which urban and household spaces are being reconfigured. For Silver (2014), this means shifting material configurations of infrastructure and resources that sustain urban life, such as energy, housing, and water, and are understood as “in-the-making” (790). In this section, I focus on the improvisation of materials and gendered labour as makeshift infrastructures to collect water.

Most participants have had their water shut off for several months, for some years, and repeatedly – and as a result, have been forced to find longer-term solutions to collect water. These solutions involve the transformations of material infrastructures (that I refer to informal and makeshift infrastructures) and also include the reproductive care work in homes and communities that can be read as a form of social infrastructure (Hall, 2020) as key to sustaining and accessing water for the household. This includes the gendered labour, time, energy, materials, and relationships that helped households access water and played a role in the social reproduction of the home and as practices of survival (See Figures 1-5).

There are gendered dimensions of water in terms of how women typically shoulder the responsibility of water-related activities under patriarchal norms and gendered divisions of labour (O’Neil, 2018; Crow and Sultana 2002; Truelove, 2018). In particular, feminist political ecology perspectives bring attention to the bodily scale of water-related inequalities, demonstrating how wider political and material factors are uneven embodies. This work considers unequal power relations shaping the ways water is unevenly governed and experienced along gender/class/race lines (Truelove, 2018). When women are present in a household the expectation is that they are primarily responsible for water collection considering that water itself and activities connected to water (cooking, collection, sanitation, hygiene, cleaning etc.) are often understood as women’s domestic work within the realm of gendered household roles and norms (O’Neil, 2018). More importantly, the everyday water practices and politics profoundly impact emotion and affect, producing not just material struggles for women but psych-social stress and anxiety (Truelove, 2018; Sultana, 2011). The task of water collection in situations of water insecurity therefore continues to be labour that is both undervalued for many women. Since it is mostly women who take on household tasks associated with water; the burden was placed on them to figure out new ways to collect water when it was shut off.

One participant has been living without water for over three years. Due to leaky and cracked underground water pipes running outside of her kitchen, the resident now owes the City of Detroit $5500 in water and sewer bills. In addition, it will cost her thousands of dollars to hire a plumbing service to repair her pipes. Since the damaged water pipes sit under her property, the water department has refused to send out technicians to fix anything as it is a City of Detroit bylaw that any water and/or sewer mains broken or in need of repair on a private property up until the sidewalk is the homeowner's responsibility to fix. According to We the People, there were homeowner's programs offered by DWSD in the past – but they have since been eliminated following the restructuring of the department after 2008. Unrepaired water pipes are a key reason that had led to significant water and sewer debt for many low-income households in Detroit who do not have the capital to fix the issue, combined with austerity budget cuts that have eliminated any governmental programs. This relates to the privatization of Detroit's water department in 2014 where services and programs were eroded as part of the city's bankruptcy restructuring plan. This not only means many households are left water insecure, but it has put a strain on living conditions. In this Detroit participant's house, water leakage has led to water damage throughout her house and in her kitchen that has led to mold underneath her cabinets.

As the participant invites me into her home, there sits five or six water empty water jugs on the porch. Her family regularly fill these at a family or friend's house. After sharing with me her story, her family tells me about the water system she has configured to "survive":
"About twice a week, I collect rainwater just to be able to flush my toilet. I was carrying those buckets inside until someone gave me a sump pump. So now I have a hose running through my bathroom window into buckets in the bathtub. I'm not proud of it, but I do what I gotta do. If I know it is going to rain, I'll hurry up and fill up all that I can."[63] The diagrams below show the different types of materials and informal water systems this participant and her family have configured to survive. By placing containers outside with a mesh net on top, she has been able to collect rainwater and trap any debris using nets. By connecting a sump pump from the rainwater container through a hose inside, she was then able to use the collected rainwater to flush her toilet, rinse her hands and clean the house. Some of the materials used, such as the sump pump, were given to her from a neighbour. By reconfiguring materials, pooling together resources, and drawing on community relations, water relief was made possible in spontaneous ways that are often found in informal settlements in Southern cities.

[63] Household Participant Interview, June 2019

Other ad hoc, makeshift infrastructures were found in St. Louis. When interviewing a single mother with three children who have had their water shut off for a few months, this second participant describes the number of jugs of water she collects from a community church in North St. Louis each week to be able to bathe her kids and clean: “It is usually about five or six, and I buy bottles of water from the store to drink and to cook with.” She explains how she was able to build a improvised shower in her bathroom. She bought a very large plastic bucket with a hole made in the bottom, copper pipe, and lever style tap that she bought at for $5 at a hardware shop to be able to start and stop the flow of water from the bucket. This participant describes her improvised shower as her own “DIY shower project” to her kids to light out of the situation for the interim period until her water gets turned back on by the city, “I’ve had a few medical bills to pay that has put me behind schedule on the water. I’m hoping to have the water back on next month.”

Figure 9.1: Improvised Rainwater Collection Using Sub Pumps, Detroit, Michigan. Photograph by the author.

Figure 9.2: Plastic bowls used for handwashing, Detroit, Michigan. Photograph by the author.

Figure 9.3: Rainwater Collection, Detroit, Michigan. Photograph by the author.

Figure 9.4: Water Storage Container, Detroit, Michigan. Photograph by the author.

In another case, a third participant, a widowed retiree that has caring responsibilities of her 10-year-old grandson has been without running water for four months. She currently lives off her monthly pension payments from Ford Motors which is just under $1000 per month. Currently, she owes $3500 in unpaid water and sewer bills to DWSD. The water and sewer department has told the participant they will not turn back on her water unless she provides an upfront payment of $1500, plus she would be forced to on a payment plan of $369 per month. The participant discusses the uncertainty of when she'll get water turned back on: "Right now, they're asking for a third of my income. I can't pay that, so I'm not sure when I'll get the water back on."[64]

This participant relies on her friends and family members for water to be able to drink, wash the dishes, flush the toilet, and to cook meals for her and her grandson: "My girlfriend lets me come over and use her Igloo. I drive over 30 minutes to get to her. That's what I rely on to live every day to cook and clean and do things around the house. Then we take about 5 or 6 bottles for replenishing. Yesterday my grandson used up all the water from the Igloo and didn't tell me. He doesn't understand but I needed it to take my medication."[65] (See Figure 5). She also discusses the arrangements she makes so that her grandson can take showers before going to school. This often involves her waking up early to bring her grandson to a family member or friend's house to take a shower and get ready before taking him to school.

Figure 9.5: Igloo Jug used to store water, Detroit, Michigan. Photograph by the author.

[64] Household Participant Interview, June 2019
[65] Household Participant Interview, June 2019

In Baltimore, a single mother was at risk of losing her home to tax sale because of a $909 unpaid water bill. She takes care of three children and is looking at options to borrow money from her relatives to put a down payment on her debt so that she can keep her home. Between 2012 and 2016, Naomi has also had her water shut off by Baltimore's Department of Public Works (DPW) three times and had been without water for several months when we spoke: "I had to keep asking my neighbours to fill up buckets of water for me." She describes that water shut offs in her neighborhood of West Baltimore are quite common: "There are so many other people in my neighbourhood who have had their water shut off. It's just something that happens when you don't have no money here."[66]

Despite widespread water shut offs, the participant and a few neighbours in Harlem Park have collaborated to help turn back on people in the neighbourhood's water informally. Sometimes when a family would get their water shut off by the city, "me and others will go back out and turn it back on ourselves. When water is shut off, [the city] takes pliers and turns off the valve. Some neighbours and me have figured out a way by finding the right equipment to switch it on, and so you just ask around for the right people who have the tools, then you just go out and turn back on the valve yourself."[67] In a few instances, there were moments described where neighbours would band together and stand in solidarity to block the city workers from turning off the valve to prevent a family from getting shut off.[68] These examples demonstrate the different ways in which participants are reconstructing financialized urban spaces within their neighbourhood and in their homes. In this case, such improvisations required the gendered labour of the participants and evolving networks with neighbours to connects households to water again.

The types of gendered labour involved around water-related activities, such as constructing provisional water systems, developing ways to informally turn on household water, and the relational and personal networks integral to the gendered caring responsibilities demonstrates not only the material improvisation of residents but also the social relations embedded in infrastructure. These emerging makeshift infrastructures symbolize the informality, poverty, and denial of water but at the same time demonstrate residents' and community resilience and ingenuity to survive. Household materials, such as buckets, containers, sub pumps, hoses, as well as the connections and social collaboration developed and maintained with the friends, neighbours, families, and community members were examples to help regularize water supply in the household necessary for social reproduction and urban survival. Such examples connects to work on infrastructure repair that envisions what a more sustainable urban future

[66] Household Participant Interview, March 2019
[67] Household Participant Interview, March 2019
[68] Household Participant Interview, March 2019

might look like. What does it mean to shift our focus away from a techno-deterministic logic of infrastructure innovation as the solution to a financial crisis, and toward a logic of repair rooted in collective over private consumption and in confronting climate change? For instance, Bhan (2019) sees repair as “restoring immediate function” over the “substantial material improvement” (p. 646) advocated by state practices of development. This means rethinking how collectively we might “fix” infrastructure failures not through new technologies or financial mechanisms, but rather through the collective everyday work of maintenance, caretaking, and repair. More importantly, If we want to better understand and apply maintenance as a restorative framework to infrastructure inequalities, we need to acknowledge women’s work, domestic and reproductive labor, and all acts of preservation and conservation, formal and informal (Mattern, 2018).

Conclusion

The everyday experiences of households surviving without water stems from levels of government treating water as a financial asset rather than a public good. Connecting this macro-economic trend with how it has unfolded household spaces, this chapter examines the financialization of water and sewer infrastructure in three Black-majority U.S cities following the 2008 financial crisis. In addition, this chapter highlights how the financial recession and its consequences in the form of downloaded debt onto poor Black households have subjected residents to mass water shut offs.

In this chapter, I have sought to provide a detailed account of how financial risks become embodied in urban citizens’ livelihoods to survive and its limitation to the social reproduction of the household in shaping how people live. I explore these limitations by providing personal accounts of precarious and informal living conditions shaped by urban water insecurity. I do this by drawing on how water insecurity has impacted participants’ physical health, emotional well-being, relationships caring responsibilities, cooking and cleanliness. This suggests how some Black-majority U.S cities are being pushed towards ‘surviving’ on the urban margins -- a testament that has long characterized Southern urbanism.

Here, I argue that by focusing on the micro, everyday financialization – we can uncover the invisible processes through which residents are impacted and moreover, navigate their conditions to better understand how financialized processes are "lived out" in these cities. By highlighting how municipal debt is felt and embodied by residents and the everyday actions through which households and communities can socially reproduce, this can reveal how poverty is shaped in this moment of financialized austere governance and its variegated dimensions in Black-majority cities.

This chapter has shown the failure of the state in providing service provision that I argue, is connected to the racialization of municipal finance. I try to highlight how urban marginality, precariousness, and informal infrastructures, becomes an important lens to open a series of ways of approaching how we can understand and examine everyday urban life across the North and South urban economies, rather than researching these places from a monolithic dichotomy. Understanding the financial, economic and political processes underlying who governs and controls access to urban infrastructure services requires a relational and multi-scalar approach to theorizing across multiple sites. Relational accounts concerning racial capitalism, for instance, can help situate the experience of places within wider historical racial capitalist systems, rather than universalizing claims and producing prescriptions for 'developed' and 'developing' countries (Robinson, 2003; Horner, 2019). Relations with other places and interconnected processes of global development must be considered when examining the "urban". In doing so, we can better locate moments of racialized infrastructural struggle that challenge how we categorize and situate cities globally. Thinking through Black-majority U.S cities and African cities dealing with mass water disconnections, such as Johannesburg (Baloyi, 2020), would allow us to work across variegated forms of neoliberal infrastructure processes by placing Black-majority U.S cities enduring mass water shut offs in the South to develop explanatory frameworks that move beyond rigid developmental distinctions and ways to intervene in these infrastructural politics.

Such cases that have been outlined can reveal the power of urban residents to challenge socio-economic and racial inequalities and reinvent conceptualizations of formal infrastructures characterized in North American countries. Doing so informs, for example, that both the challenges of urban life and the solutions to them are radically differentiated across regions, cities, and even within a household. Without an understanding of how everyday life is shaped on the margins in the U.S, it is difficult to see how life in this often precarious, informal, and uncertain context could be reproduced. Lastly, mobilizing contour lines between the deployment and outcomes of financialized austere agendas in Black-majority U.S cities has implications for how urban scholars challenge problematic modes of theorizing the racialized development of cities from a Western perspective. As Peake and Reiker (2013) point out, urban studies "extrapolates from 'exemplary' global north cases to the south, but never back again" (60). In this sense, comparative research across different urban worlds could be one way to learn about the informal and marginal-like conditions produced by processes of financialized urban austerity and forms of resistance and contestations that are reworking these processes in Southern cities as a way to inform similar environments unfolding in the United States.

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Chapter 10

Beyond Austerity: Concluding Thoughts

The motivations for undertaking this research project started with reading work on American-style austerity following the 2008 financial crisis across various disciplines. This sparked a key question, why isn't anybody talking about *race*? Considering how the financial sector, especially subprime lending, targeted racialized communities (see Wyly, et al, 2009), this brought a renewed interest to further investigate the particularized ways in which austerity touches down on everyday lives in Black-majority cities versus other cities. Focusing on the struggles of financing of water and sewer systems, as well as the more mundane everyday practices of informality from not having water, denotes the unequal expressions of austerity along racial lines. When asked about the racial politics of austerity in Detroit, local water justice activist, Demeeko Williams' response succinctly summarizes austerity's racialized conjunctures:

> "Austerity is when you can bankrupt a whole damn town, steal all its assets, pillage everything that we own, and give it to the white suburbs. Austerity is not treating the people fairly that have been living in the city for the past 30-40 years because you blame us as the problem when basically the problem has always been the structure of government. Right now, I'm locked in battle of fighting life or death poverty in this city. We're beyond austerity. When you have no water, no lights, no food, no medication, no access to jobs."

The unprecedented scale of infrastructure neglect and more importantly, infrastructure inequality, makes for a revealing case-study to assess how racialization happens through the regulation, governing, and financing of water and sewer infrastructures that has shaped the right to water in the U.S. These water crises are embedded within a larger system of racialized financialization and needs to be understood as a generalized process of racial capitalism. The central argument in this dissertation is that the financialization of water in Black-majority cities is rooted in the racialization of municipal finance that can be read as enabling force of racial capitalism. These embeddedness of racialized legacies and financial techniques present in each city's water infrastructure became the catalyst for implicating an ongoing water affordability crisis. Crisis, in this project, focused not so much on the catastrophic sort, but on the mundane, everyday level of navigating life on the urban margins without water.

Examining the racialization of municipal finance through a case-study of the financing and funding of water and sewer infrastructures, is one way to examine contemporary urban geographies of racial capitalism. Except for a few studies, bridging the gap between critical geographies of race and the neoliberalization of cities has often remained at the level of theories and concepts (see Roberts and Mohanti, 2010). In this project, I draw on government-level data of water services, media reports and policy documents. I also collected primary qualitative data through narrative household interviews, semi-structured expert interviews with community organizations, policy actors and financial consultants, and participant observation with water justice organizing efforts. This approach helps advance understandings of the significance of racialized processes, and more importantly, the study of race from a spatial perspective, to work on financialized austerity governance. In the remainder of this chapter, I briefly summarize and discuss the contributions of the project as a whole. I then provide some avenues for future directions that this research might look toward.

Research Summary

This project consisted of a multiple case studies approach to studying the financialization of Black-majority U.S cities and its role in the uneven redevelopment of water and sewer infrastructures. More specifically, I focused on the racialization of municipal finance in the context of water and sewer services and its impact on everyday urban lives in three cities: Baltimore, Detroit, and St. Louis. This dissertation argues that each of these water-based crises of infrastructure are collectively raced- and classed-expressions of financialized geographies. Regarding the question, how does financialization work through racial capitalism, this project posits that financialized austerity governance and municipal finance is fundamentally *raced.* In accordance with Black geographies scholars who theorize the racialization of space and the spatialization of race (Delaney, 2002: 8), this body of literature has revealed how geographies of race are embedded with other geographies of power (economic, political, cultural). The racialization of Black-majority cities has enlisted their status in the municipal bond market as *uncreditworthy* and *speculative* calculated through financial logics of "risk" that has structured and shaped the possibilities of municipal governments to access funds to pay for services and infrastructures, and as this chapter has shown, reinforces racial hierarchies through who gets access to public goods. The municipal bond market uses accounting devices to measure credit risks to assess the probability of default, which configure the conditions of the loan and the interest rates when lending to a municipality. However, as Ponder (2017:196) reminds us, "while the calculation of risk may claim to be accounting for the presence of poverty, which is problematic in its own right, this measurement can never really be extracted from historic and ongoing processes of racialization." Municipal bond practices of risk assessments, the identification, measuring, and trading of risks, and the categorization of risk and uncertainty, is not race neutral. In this way, municipal finance is irredeemably linked to racial capitalism, and thus, the racial implications of financialized austerity in Black-majority cities are made possible through the operationalization of risk. In thinking through financialized austerity governance as operating on socio-spatial relations of racial capitalism, financial risk has been the catalyst to measure for value production of racialized spaces under financialization, demonstrating the distinctive position of Black-majority U.S cities in encountering complex financial deals to fund water and sewerage infrastructure. The operationalization of risk in this project has been shown using speculative bonds, as was noted in chapter four, and the use of debt-collection practices as collateral, outlined in chapter five, to ensure value extraction in the bond market. Chapter six shows how financial risk touches down on everyday lives and remakes their everyday survival. In the next section, I summarize some of my findings and contributions of this work.

Capturing Chapter Contributions

The work completed in chapters one and two is relatively self-explanatory. The introduction provides a full overview of the project, research objectives and theoretical frameworks that were drawn out throughout each empirical chapter. Chapter two explains my research methods, and the explanations and justifications for using a relational urban comparison approach.

Chapter three elaborates on the concept of austerity urbanism and its racialized dimensions, on which this dissertation draws much of its theoretical framing. Providing an overview of urban austerity research, this chapter's main contribution is to situate the reader firmly in critical theories of race to better understand the "raced" nature of austerity and how these processes shape cities. In this chapter, I propose that critical theories of race (Kobayashi, 2014; McKittrick, 2011; McKittrick and Woods, 2007; Peake and Schein, 2000; Price, 2010) can provide an analytical framework for geographers to better understand the relations between race and urban governance through the lens of racial capitalism (Bledsoe, et al., 2019; Pulido, 2016; Ponder, 2021) by revealing how periods of neoliberalization are organized along racial lines and operate through and upon geographies of race and racial domination. As readers will have observed, the following empirical chapters contained some repetition of austerity framing.

Chapter four is an empirical analysis of fieldwork to develop contributions to literature on the financialization of cities. It draws on my expert interviews with government officials, financial consultants, and community organizations, to develop its main contribution, a consideration of how Black-majority cities are coping with paying for ageing water and sewer infrastructure in the context of declining state and federal support since Keynesianism. Studies have considered the onset of speculative financing in the development of U.S cities (Hackworth, 2007; Weber, 2010; Kirkpatrick and Smith, 2011), as well as the catalyst which created the conditions for austerity urbanism (Davidson and Ward, 2014). The fiscal predicament of deindustrialized, Black-majority cities in their struggle to meet EPA consent decrees can be read through these understandings. To manage water and sewerage municipal debt, these cities encountered complex financial arrangements in the municipal bond market that put a dire strain on water affordability to meet debt obligations. This work reveals the racialization of municipal finance as an important process to better understand the uneven development of Black-majority cities.

Chapter five is on the emerging water crises in Baltimore, Detroit and St. Louis created by speculative financial arrangements to fund water and sewer infrastructure, highlighting the institutionalization and the politics of municipal bond market practices around debt collection. I outline different ways each municipality has done this, through: water shut offs, tax foreclosures, and garnishing assets. I argue these practices were used to make up for revenue shortages in order to meet debt obligations following the 2008 financial crisis when municipal debt was increasing. I argue that these debt collection methods are based on municipal creditworthiness that operate though socio-spatial relations of racialization where municipalities out of pressure to stratify private creditors in their contractual obligations – resort to policing urban residents' owed water and sewer debt. This chapter attempts to contribute to how financialization is deeply tied to pre-existing racialized inequalities of city's creditworthiness based on credit risk factors, that increasingly include household debt delinquencies. This reinforces racial hierarchies in terms of who gets access to water and who does not.

The final, mostly-empirical chapter, chapter six, demonstrates how financialized austerity is "lived out" and how everyday lives post-2008 are being impacted and reshaped. By exploring the experiences of households living without water, I highlight the urban conditions of marginality that have been produced through the preciousness, informality, and the survival strategies used. Here, I shift focus from policymaking and government-focused expert interviews to participant observation with community organizations and narrative interviews with households to look at the everyday experiences of urban residents coping with water affordability and water insecurity that has been produced by a financial deepening of water and sewer services in the form of increasing water and sewer rates and debt collection programs that are contributed to local water services being used as a financial asset. This is a main contribution of this chapter, which tries to grasp these marginal conditions of the North within a Southern urbanism framework in an attempt to rethink the relational categories of the North and South that does not hold developmental frameworks as impermeable as a way to intervene in these infrastructural and austere politics. In other words, how can we research everyday urban life across the North-South divide, i.e locating "Southernism in the North" (Roy and Crane, 2015: 10).

One of the more challenging aspects of demonstrating this work on how these financialized and austere processes are "lived out" in cities is to show how community networks and community-led activism and mobilization are transforming and contesting these spaces. This is the main limitation within chapter six, which does not discuss the role of community organizations in remaking everyday experiences of water affordability and insecurity. Although my fieldwork included interviews with community-level and water justice organizations, findings mostly centered on households'' everyday struggles and strategies. These organizations were important in introducing me to participants of those struggling with water shut offs and other water affordability issues. However, my research did not fully address the role of water justice organizations in shaping how these processes are being resisted and altered at the local level, such as providing direct service delivery to residents, mobilizing campaigns and resources, and politically organizing to put pressure on governments.

Conceptual Contribution

The field of studying contemporary urban expressions of racial capitalism in American cities is relatively new in geography. More specifically, the comparative analysis of Black-majority U.S cities is unique and an understudied area in economic and urban geography. Although there is much work that currently engages with questions of race and capital, specifically, the racialization of municipal finance, much of it fails short of fine-grained empirical work. I am confident though that the work on finance and austerity in Black-majority cities will be further enriched by bottom-up comparative research in urban and economic geography the centers critical theories of race when studying state-restructuring processes in U.S cities. Focusing on the financialization of infrastructures and bringing existing literatures on urban financialization and austerity urbanism into conversation with geographies of racial capitalism extends both bodies of work, and provides a sustained, in-depth analysis that uncovers the historical and contemporary spatial expressions of racialization provided by scholarship in Black geographies. This dissertation's key contribution is to reinvent an approach that centers racial capitalism as best to understand *infrastructure inequality* when examining the relationship between state-restructuring and municipal finance. In engaging with different bodies of literature in urban and economic geography, this dissertation has provided two main contributions.

Firstly, I argue for an approach that offers a historically grounded analysis of infrastructure inequality in a way that centers race/racialization and emerging literature on racial capitalism into analyses of urban geographies of financialization and austerity urbanism (Jenkins, 2021;

Pulido, 2016; Ponder and Omstedt, 2019). This first contribution draws together perspectives from economic geography and critical geographies of race. Work in economic geography has been engaged with debates on the importance of governance and scale to understand global economic restructuring under capitalism. Broadly this is understood as the regulation approach that aims to understand the economic and extra-economic mechanisms which stabilize capitalistic societies. This approach in geography has theorized the state shifting from a form of Fordist/Keynesian regulation to a form of post- Fordist/post-Keynesian regulation. Moreover, such approach has been used to describe the neoliberalization of cities and different form of urban governance strategies that have emerged since (see Purcell, 2002; Peck and Tickell, 2002). The importance of this work theorizes neoliberalization as a *variegated* form of state-restructuring that produces "geoinsittional differentiation across places, territories and scales" (Peck, et al., 2012: 269). The concept of variegation draws attention to the uneven development trajectories produced by neoliberalization through the continuous collision between contextually specific neoliberalization projects and inherited, historical politico-institutional arrangements. This highlights the contextual embeddedness of neoliberal restructuring projects and the role of cities in the contemporary remaking of political-economic space. However, this body of literature fails to provide a comprehensive analysis of racial capitalist processes remaking spaces, in this case, the racialization of municipal finance, working in tandem with broader, politico-economic restructuring projects to study cities and more importantly, how these legacies are embedded in the built environment.

Applying a critical geography of race perspective to work on austerity urbanism makes a significant contribution in bringing theories of race/racialization into contemporary debates on the uneven development of cities that acknowledges the geographic function of blackness, race and racial difference and draws attention the spatialized legacies of racial capitalist processes (McKittrick, 2011: 953). Centering the historical uneven racialized development patterns in the United States, this dissertation reveals that financialized austerity as a mode of governance is in fact *racialized* as it operates through socio-spatial terrains of racial inequality and explains infrastructure inequalities within and between cities.

It addresses the *why* question of urban austerity impacts post-2008 on Black-majority cities. *Why* is that Black-majority cities were particularly hit hard by the 2008 economic crisis versus other U.S cities? Bringing these perspectives in conversation has reinvented this dissertation's work on neoliberal urban governance and builds upon past rounds of racialized discrimination as expressed through regimes of accumulation. Considering the geographic significance of the unevenness of space as essential to expansion of capitalism (Harvey, 2001), it is imperative to draw on theories of race/racialization to operationalize racial capitalism, i.e how capitalist production works through racialized difference and value, thereby, giving racialization a spatialized dimension and regulating the devaluation of certain people and spaces.

The case studies of three Black-majority cities in their search for savings through speculative financial tools to meet EPA regulatory requirements points to how analyses of the contemporary urban fiscal condition are in dire need of more comprehensive engagement with long-stranding, historical patterns of racial capitalism, while also attending to the racialization of municipal finance to understand the *unique* nature of financialization operating in Black-majority cities. This means there are common conceptual characteristics of each city, along with shared socio-spatial relationalities. Throughout chapter four and five, I show what this uniqueness looks like: which materializes as predatory and exploitative finance through high-risk financial tools and subsequent aggressive debt collection methods that followed in each city, creating the path for. It asks researchers to pay attention to how Black populations come to experience water and sanitation inequalities, as well as the new accumulation regimes targeting the infrastructures of social reproduction across Black cities. In particular, Black people are made vulnerable through continuous rounds of austerity budget cuts, scalar dumping of infrastructure responsibilities, and financialization of municipal bonds due to the absence of federal funding. The everyday unaffordability and insecurity of water for urban residents are increasingly operating through racialized finance markets and logics which strengthens the power of pre-existing and embedded racial hierarchies. Therefore, tracing the path-dependent and unevenness of the municipal bond market through the lens of racial capitalism draws attention to interwovenness of the spatialization of racialization and capitalist processes, a theorization that critical geographies of race have long brought attention to in urban and economic geography (see Jackson, 1981; Peak and Schein, 200; Delaney, 2002; Bonds, 2019). Such analytical tools illuminate how financial risk and precarity are tied to Black cities access to funding. Examining macro-level financial tools of debt management shows how contemporary racialized capital moves through and operates at the urban scale, but also how it impacts citizens lives in the form of who can afford and who gets access to water.

Relatedly, a second contribution to this work involves a relational theorisation of urban restructuring by expanding on the idea of austerity as a regressive redistribution debt strategy (Peck, 2014: 19) in the form of infrastructural downloading and exploring the differentiated governance mechanisms at work through forms of privatization, financial arrangements, increasing user fees, and service shut offs. Using water as an analytical prism has provided a useful perspective and platform by which relationality can be identified in the ways that major political-economic processes involving racialized capital - like neoliberalization, austerity, and financialization - unevenly unfold throughout the urban fabric. By tracing the downloading of fiscal responsibilities from macro-level financial markets down to the household level, this dissertation contributes to work on austerity urbanism by highlighting the material impacts of state-restructuring, rescaling, and downsizing, that shifts the locus of "risk" and responsibility onto the public, and the racialized poor. While there is much work which focuses on the localized nature of austerity and how cities have been impacted following the 2008 economic crisis, little work focuses on narrowing in on narrow-in on who "austerity bites" within cities themselves, and more importantly, in Black-majority U.S cities. This research therefore contributes to highlighting why certain marginalized groups experience the costs of austerity the way they do, particularly for racialized communities too fully interrogate the role of race in analyses of austerity urbanism.

Future Directions

There are many directions that this project could take. Below I note just a few. My first research objective is to gain a fuller understanding of how geographies of race and racial capitalism can inform processes of financialized urban austerity. This work could be expanded to a more a global scope to provide a more comprehensive understanding of spatial strategies of racial capitalism and systemic racism that are working through urban infrastructures, public services, and municipal finance. For example, water insecurity, affordability, and privatization, began to emerge as a trend in the 1990s and early 2000s in Global South countries following IMF structural adjustment programs., and still for many countries, persists today. Connecting these shared political-economic processes of the neoliberalization of water and sewer services in cities across the global under similar contemporary and historical conditions of racialization, empire and colonialism, would be important to examine.

Global Comparative Urbanism

As mentioned previously in this dissertation, there is a demanding need for more international comparative approaches on austerity urbanism and race to locate shared processes of geographies of racial capitalism. Work on austerity urbanism would benefit from broader investigations that connect forms of racial capitalism, imperialism, and colonialism to urban austerity across the global North and South. Instead of situating cities within bounded units, this dissertation follows Hart's (2018) emphasis on more research related to cities' relational histories and interconnected conjunctures referred to as "mutually constitutive processes" of thinking through race and racial capitalism as a structuring logic of urban governance, and anti-Blackness more generally, that is reproduced among different places globally in conjunction with the specific features of each place and where the outcomes are different. Thinking about the North through the South conceptually brings us closer to shared processes of racial capitalism that operates on a global scale through narrowing-in locally on its particular form of austerity as Gilmore (2020) has brought attention to.

This project echoes calls for more research into the urban edge, understood as "urbanization from below" (Derickson, 2015: 648) or what Ananya Roy recently referred to as "city's end." Understood both metaphorically but also materially, the urban edge functions as a means of linking disparate urban conditions across binaries of North and South, but also calls attention to the mundane financialized politics of water that are often made to feel invisible. Focusing on the dynamics of financialized infrastructure at the urban edge enables a focus on the mundane politics of profit accumulation that are often hidden from sight, i.e water shut offs, or makeshift and informal everyday infrastructures of survival (See Akers, 2015; Blomley, 2004; Desai and Loftus, 2013). Rather than suggest that cities end at their edges (See Angelo and

Wachsmuth, 2015), an interest in the edges of the city calls attention to dramatic processes of urban change. In accordance with this project's goal, future research should consider the "everyday functioning of racial capitalism" (Pulido 2016) that works through both Global North and South cities. This would mean rather than comparing the empirics of cities across the Global North and South, to focus on comparing water insecurity under similar and shared interconnections of financialized and austere conditions under racial capitalism across cities globally. Global South comparison of water-related crisis of safe, reliable and affordable water and sanitation shown in Black-majority cities can elicit a more pervasive geography of racialized water poverty that connects to broader questions of the relationship between financialization and race/racialization on a global scale and draw out its variegated urban expressions (see Ranganathan, 2020). Using theories of racial capitalism is useful for urban geographers interested in "thinking cities relationally" (Jacobs 2012) in an age of racial injustices. Doing so, requires a global urban relational comparison to elucidate forces of global relational and territorial linkages. Studying water insecurity in cities is one way to carve out the geographically-specific dimensions and constitutive forces of racial capitalism and illuminating what sorts of changes are possible in specific spatio-historical conjunctures.

Figure 10.1: Living on the margins, East Detroit, 2019

Source: Photo taken by author

Infrastructural Inequalities and Climate Change

The focus of my research looks at the financing of ageing water and sewer infrastructure, that has become an important topic for policymakers in seeking sustainable mitigation and adaptation responses to urban built environments in an age of climate change. From crumbling urban water systems to fossil-fuel based electrical grids and private developers vying to finance renovations, a new cartography of post-crisis urban infrastructure is upon us. This means that water and sewer infrastructure is likely to be more susceptible to break-down with climate change.

Throughout this dissertation, the concern for EPA consent decrees regarding combined sewer overflow has been framed as a pressing environmental issue, more specifically, a climate crisis issue, that has been the result of increasing stormwater flooding in waterways due to more frequent rainfalls (EPA, 2008). An important avenue for future research would be to further interrogate and uncover how a contemporary juncture of urban governance, finance, and environmental issues, articulates with long-standing issues of urban infrastructural decay under the duress of climate crisis (see Bigger and Millington, 2019; Knuth et al., 2019; Knuth et al., 2020). Currently, we are amid a global health pandemic marked by COVID-19 and research is just beginning to examine how this will impact local governments' fiscal budgets and city services (Davidson and Ward, 2020) and what this means for climate mitigation and adaption for local policy-makers. Firstly, investigating future climate change impacts on water and sewer systems in Black-majority U.S cities would be one avenue and secondly, municipal financing arrangements around managing risks associated with climate change. Taken together, the conceptual frameworks of financialized racial capitalism and urban political ecology could allow for the tracing of how new and emerging forms of municipal "green finance" are shaping socio-ecological conditions in Black-majority cities (see Bigger and Millington, 2019). For instance, exploring the racialized impacts of the recently used "pay-for-performance" Environmental Impact Bonds (EIBs) in Atlanta, Washington, D.C and New Orleans to finance water, sewer, and stormwater infrastructure (Hall, 2017). What I have shown throughout this dissertation is the importance of race-connected practices of finance when engaging in a spatial understanding of the reproduction of racial capitalism through water infrastructure. Bringing this perspective to a project on green infrastructural finance has the capacity to inform research about the boundaries between financialized growth, climate risk, systemic racism, and urban sustainability. Considering how its built environment is suspectable to climate threat and the forefront of infrastructural and austerity struggles, more focus is needed in the coming years to examine the consequences of climate change to these cities and what this means for the institutionalized and extractive forms of racial oppression that are shaping the built environment under the duress of a climate crisis.

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Appendices

Appendix A: Sample Interview Questions

1. From your experience, what has been the most important changes related to water policy/programs?

2. In your view, what are the biggest challenges facing Baltimore/Detroit/St. Louis when it comes to the funding and servicing of water and sewerage services?

3. How has government cuts in funding to water for local governments over the years affected the service provision of water in cities? What have been the consequences?

4. What are the financing options/arrangements available to fund Baltimore/Detroit/St. Louis's capital improvement projects, or daily operations?

5. How do credit rating agencies impact Baltimore/Detroit/St. Louis's ability to finance capital improvement projects, or other operational and maintenance services?

6. Why is demand for better-maintained water infrastructure and new investment not being met under current policies?

7. Can you talk a little bit about Baltimore/Detroit/St. Louis' water shut off policy?

8. What do you think is the best policy/program to prevent such shut offs in your city? What are some challenges to implementing it?

9. What were the main factors in your findings that hinder water affordability in these cities? Why are rates increasing?

10. How does race and racism play a role when it comes to the affordability and the accessibility of water throughout the U.S?

11. Given what we've talked about today, is there anything else you think I should know?

12. Are there any other people you think I should talk to?

Word count: 77581