Spring 2022

Water Remunicipalization: Insights and policy implications from Atlanta, Georgia case study

David L. Fretz
Fordham University, dfretz1@fordham.edu

Water Remunicipalization:

Insights and policy implications from Atlanta, Georgia case study

David Fretz

in partial fulfillment of the requirements for the Degree of Bachelor of Arts in the Fordham University Environmental Studies Department and Fordham University Honors Program at Rose Hill

Spring 2022

Abstract

This paper investigates the ways in which water remunicipalization and the natural right to clean drinking water has affected the livelihood of the population of Atlanta, Georgia. Looking at the failures of water privatization efforts across the globe within the context of the ecosystem resources that water provides, I show in chapter 1 that the privatization of water is antithetical to the core goals of water supply, and an increasingly pressing issue as climate change produces increasing water scarcity. In chapter 2, I analyze the efforts of utility privatization in general through the lens of political science, both in motivations, reasonings, and philosophies as well as the real-life outcomes that these efforts have on both institutions and individuals. In chapter 3, I examine the environmental philosophies surrounding water rights and the ways in which the natural entitlement of life to water is expressed in philosophical understandings and everyday life. In chapter 4, I apply these understandings to the case study of Atlanta, Georgia, USA, a city that attempted to privatize their water utility at the end of the 1990s. After a disastrous effort, the city remunicipalized less than five years into their twenty-year contract with private water utility United Water. In chapter 5, using lessons learned from the case study, I provide recommendations for confronting water privatization and aiding in water remunicipalization.

Keywords: water rights, remunicipalization, privatization, water scarcity, water management, climate change, Atlanta, Georgia.

Table of Contents

Introduction

There are these two young fish swimming along and they happen to meet an older fish swimming the other way, who nods at them and says: "Morning, boys. How's the water?" And the two young fish swim on for a bit and then eventually one of them looks at the other and goes, "What the hell is water?"

- David Foster Wallace

The ways in which humans interact with water are endless, and there are countless disciplines to frame one's perspective on water. Without water, we are nothing; most of life evolved out of species originating in water, where the first organisms came into coalescence. Entire civilizations were built around their access to water, entire nations have fallen because of the lack of access to water during environmental disasters such as droughts. The world's largest cities and metropolitan areas are virtually all found either on the coast or along a river, tributary, or some other form of water access; entire economies were developed off of trade through waterways. Hailing from Buffalo, New York, I know of the possibilities of economic success that being situated along waterways like the Great Lakes and the Erie Canal can bring to cities. On top of this, I know of the beauty and potential of water that natural wonders like Niagara Falls exhibit as brilliantly as the simplest creeks or streams.

Only 2.5% of the world's water exists as freshwater, and less than a third of this freshwater is not frozen in glaciers and polar ice caps; all things considered, there exists only one one-hundredth of a percent of the total volume of water that is accessible to human consumption.[1] In spite of this, this small percentage of the global water volume is enough to

[1] John M. Donahue and Barbara Rose Johnston, eds., *Water, Culture, and Power: Local Struggles in a Global Context* (Washington, D.C: Island Press, 1998).

support the entire world population multiple times over (if completely exploited). Yet, scarcity exists and consistent water supply is a pressing issue not only in developing nations but in developed nations with complex water infrastructures.

Private organizations play a key role in water supply internationally. In the United States, approximately 12% of the population is served by a private water system.[2] In many ways, privatization of water has failed the residents meant to be served, and in turn, remunicipalization has become a trend that has been increasing in prevalence across the globe.

In chapter 1, I will show the important ways in which water provides ecosystem services not only to humans but to the ecosystems that participate in the global hydrosphere, and show that while climate change is exacerbating water scarcity from a supply perspective, ever-increasing demand for water places water management as an incredibly important field of addressing and increasing water access. In the contemporary, post-Industrial-Revolution world, climate change has disrupted "our relations with water, whether through drought or flood, or contamination of our rivers, lakes, oceans, and groundwater."[3] In chapter 2, I will enter into the political perspective of water supply. Water is an incredibly complex resource to manage, and there are an incredibly many ways to approach supplying clean water to citizens. Water has been regarded traditionally in Western thought as a "public good with residents having a 'right' to nearly free water supply."[4] Thus, through the interpretation of water as a good, economic and subsequently political-economic frameworks are applied to its governance and the justification of its privatization, beginning with a turn in the mid 20th century. In chapter 3, following

---

[2] Elizabeth Douglass, "Towns Sell Their Public Water Systems — and Come to Regret It," *Washington Post*, July 8, 2017, sec. Health & Science, https://www.washingtonpost.com/national/health-science/towns-sell-their-public-water-systems--and-come-to-regret-it/2017/07/07/6ec5b8d6-4bc6-11e7-bc1b-fddbd8359dee_story.html.
[3] Ingrid Leman-Stefanovic, ed., *The Wonder of Water: Lived Experience, Policy, and Practice* (Toronto ; Buffalo ; London: University of Toronto Press, 2020).
[4] Lewis D. Solomon, *America's Water and Wastewater Crisis: The Role of Private Enterprise* (New Brunswick, N.J: Transaction Publishers, 2011).

traditions of environmental justice and the ways in which water is perceived through the lenses of human rights language and of water injustice, I will look towards the ethical dimensions of water and how water privatization intersects with these values. I will consider the ways water rights are perceived through legal, religious, and cultural lenses, and how gender plays a significant role in water injustice to inform the perspective on privatization. In chapter 4, I will use Atlanta, Georgia as a case study. Atlanta's complex history of not only racial injustice but racial water injustice lays a troublesome setting on which the privatization of their water system occurred, using insights from chapters 2 and 3 to stress both the political injustices and ethical injustices occurred. Finally, in chapter 5, I will offer policy recommendations that aim to improve water access through both remunicipalization efforts as well as actions in opposition to of privatization efforts.

Chapter 1: Ecosystem services and climate change's effect on water

Water is the most vital resource to the survival of humanity. It goes without saying that without water, humans, and more broadly life itself, stands no chance of survival. It is incredibly vital to a society's development that its water supply is safe, efficient, and accessible to all. In this chapter, I analyze the rising issue of water scarcity and the ways in which this is expressed through the developing world and argue that water privatization has failed as a solution to this pressing issue.

Water is the most fundamental building block by which ecosystem services are provided. The Millennium Ecosystem Assessment, which assesses the consequences of ecosystem change for human well-being, describes water as a fundamental provision resource.[5] It is important that these ecosystem resources are managed properly as they affect vast constituents of well-being, such as the health, social relations, security, and the basic materials for a good life.[6] As a provisioning resource, water is strongly linked to health and the basic materials for a good life, as well as serving as a resource with high potential for mediation by socioeconomic factors. In other words, if it is possible for a social or economic action to replace or improve the resource, then it has a high potential for mediation. As UN-Water notes, "water underpins most aspects of economies and sustainable development ... therefore, the valuation of water connects with ... human rights frameworks, with the 2030 Agenda for Sustainable Development and its five pillars ... and with Integrated Water Resources Management."[7] (These two concepts, sustainable development and Integrated Water Resources Management, will be addressed later in the

[5] Millennium Ecosystem Assessment (Program), ed., *Ecosystems and Human Well-Being: Synthesis* (Washington, DC: Island Press, 2005), http://www.millenniumassessment.org/documents/document.356.aspx.pdf.
[6] Millennium Ecosystem Assessment (Program).
[7] United Nations, *United Nations World Water Development Report 2021: Valuing Water*. (S.l.: UNITED NATIONS EDUCATION, 2021).

chapter.) Water and its subsequent supply connect deeply to the foundational aspects of both civilized society and the natural world.

Because of the Earth's changing climate, clean drinking water has become an increasingly scarce resource. Water scarcity is already a pressing global issue. Water scarcity is a collective term used to refer generally when water is scarce; that is, where there exists a lack of resources to meet demand.[8] Water stress, which is closely related to scarcity, is a concept measured through the "intensity of pressure put on water resources and aquatic ecosystems by external drivers of change," and is typically expressed in a relationship of use to availability.[9] The two most well-known measures of scarcity are the Water Crowding Index, which measures the annual resources per capita in a watershed, and the Water Stress Index, which measures the ratio of water withdrawals to resources; thresholds are developed in order to categorize exposure to water scarcity.[10] These measurements help understand not only the effects on water stress, but also socioeconomic relationships that are built atop water resources: "the higher the water stress, the stronger the competition between society's users and between society and ecosystem requirements."[11] These quantitative indicators and their understood connection to the deep socioeconomic systems show the complexity of the issue that exists within addressing water scarcity.

---

[8] Johan Rockström et al., "Future Water Availability for Global Food Production: The Potential of Green Water for Increasing Resilience to Global Change: WATER AVAILABILITY FOR FOOD PRODUCTION," *Water Resources Research* 45, no. 7 (July 2009), https://doi.org/10.1029/2007WR006767; Vasileios A. Tzanakakis, Nikolaos V. Paranychianakis, and Andreas N. Angelakis, "Water Supply and Water Scarcity," *Water* 12, no. 9 (August 21, 2020): 2347, https://doi.org/10.3390/w12092347.

[9] Joseph Alcamo, Martina Flörke, and Michael Märker, "Future Long-Term Changes in Global Water Resources Driven by Socio-Economic and Climatic Changes," *Hydrological Sciences Journal* 52, no. 2 (April 2007): 247–75, https://doi.org/10.1623/hysj.52.2.247; Rockström et al., "Future Water Availability for Global Food Production."

[10] Simon N. Gosling and Nigel W. Arnell, "A Global Assessment of the Impact of Climate Change on Water Scarcity," *Climatic Change* 134, no. 3 (February 1, 2016): 371–85, https://doi.org/10.1007/s10584-013-0853-x.

[11] Alcamo, Flörke, and Märker, "Future Long-Term Changes in Global Water Resources Driven by Socio-Economic and Climatic Changes."

The estimated population of those living within watersheds exposed to water scarcity ranges between 1.6 and 2.4 billion people – nearly 40% of the global population.[12] This number is expected to increase to between 3.1 and 4.3 billion people, or up to 53% of the global population, based on population growth alone. Based on several different models, Gosling and Arnell project that "0.5 to 3.1 billion people are exposed to an increase in water scarcity due to climate change" as the sole cause by 2050.[13] The Intergovernmental Panel on Climate Change additionally projects, with very high confidence, that water scarcity, amongst other risks, will continue to increase in risk for urban areas globally; this projection extends with high confidence to rural areas as well.[14] Additionally, in the United States, climate change "is challenging existing water management practices by affecting water availability and demand and by exacerbating competition among uses and users," which, as discussed, is measured by water stress indicators.[15]

Additionally, wealthier nations are less likely to be affected as "poorer communities and nations will be harder hit by climate change impacts." This is not only because they may be more likely to be affected by the direct impact of climate change, but also because they are more likely to be unable to respond and adapt to climate change.[16] For those living in impoverished conditions, lack of clean drinking water and safe sanitation has cost the lives of over 2 million people annually, mainly through the transmission of diarrheal diseases.[17] Furthermore, the lack

---

[12] Gosling and Arnell, "A Global Assessment of the Impact of Climate Change on Water Scarcity."
[13] Gosling and Arnell.
[14] Intergovernmental Panel on Climate Change, R. K. Pachauri, and Leo Mayer, eds., *Climate Change 2014: Synthesis Report* (Geneva, Switzerland: Intergovernmental Panel on Climate Change, 2015).
[15] Georgakakos, A. et al., "Ch. 3: Water Resources. Climate Change Impacts in the United States: The Third National Climate Assessment" (U.S. Global Change Research Program, 2014), https://doi.org/10.7930/J0G44N6T.
[16] Pierre Mukheibir, "Water Access, Water Scarcity, and Climate Change," *Environmental Management* 45, no. 5 (May 1, 2010): 1027–39, https://doi.org/10.1007/s00267-010-9474-6.
[17] Frank R. Rijsberman, "Water Scarcity: Fact or Fiction?," *Agricultural Water Management*, Special Issue on Water Scarcity: Challenges and Opportunities for Crop Science, 80, no. 1 (February 24, 2006): 5–22, https://doi.org/10.1016/j.agwat.2005.07.001.

of fresh water access often leads to a cycle of poverty, malnutrition, and ill health, which compounds upon itself.

The IPCC puts forth that impacts of climate change on water resources include streamflow volume and variability, the seasonal availability of the general water supply, and accelerated glacier retreat.[18] Since 1960, the amount of water stored behind dams has quadrupled, with water withdrawals from lakes and rivers doubling in the same amount of time.[19] However, "most high-income countries have already reached the limit of their storage capacity and [have] transitioned" away from attempting further substantial increases in such capacity.[20]

As water supply becomes scarcer due to climate change, it becomes increasingly important that effective, efficient means of providing water to those who need it. While water scarcity is one issue, the problem of effective supply of water to consumers builds atop this issue its own separate challenges. Within water supply, both a demand problem and a supply problem exist.[21] Having now examined how the issue of water scarcity is approached from the supply side and how climate change is increasingly augmenting the challenges faced, I turn to the demand side as a facet of the scarcity issue.

As Rijsberman notes, "water scarcity at a national scale has as much to do with the development of the demand as the availability of the supply."[22] This is to say, not only does the impact of climate change cause an increase in the strain for a country's water supply to meet its demand, by reducing the supply, but also the raw increase in demand itself causing strain on the supply. Scarcity, then, in the context of clean water supply is "driven by a combination of three

---

[18] Nigel Arnell and Chunzhen Liu, "Hydrology and Water Resources," in *Climate Change 2001, Impacts, Adaptation, and Vulnerability* (Cambridge, UK: Cambridge University Press, n.d.).
[19] Millennium Ecosystem Assessment (Program), *Ecosystems and Human Well-Being*.
[20] Elke Kellner, "The Controversial Debate on the Role of Water Reservoirs in Reducing Water Scarcity," *WIREs Water* 8, no. 3 (May 2021), https://doi.org/10.1002/wat2.1514.
[21] Rijsberman, "Water Scarcity."
[22] Rijsberman.

principal forces, viz. depletion and degradation of the resource, population growth and unequal distribution or access," with many of these factors being highly influenced by political decisions and the capacity for the water supply to adapt to their conditions, not simply decreased water supply alone.[23]

Since the beginning of the 20th century, the world population has tripled, but water use has increased by six times.[24] In the U.S., water demand is expected to increase by an average of 26% between 2005 and 2060, compared to an increase of 8% in scenarios without climate change.[25] Demand-driven stress to water systems is especially impactful in water basins where resources are already limited.[26]Water demand is typically projected to increase, driven by rising incomes; not only is this observed in developing nations, where rising income implies increased access – in other words, the establishment of baseline water infrastructure allowing for fundamental water access increases water usage – but for developed nations as well, where access is less of an issue[27] As technology improves, more and more water is demanded for different purposes; for example, the U.S. electric sector draws more freshwater than any other sector annually, with more than 40% of water withdrawals being pulled for power generation[28]

Two main frameworks exist for approaching the issue of water management in the face of climate change: Integrated Water Resource Management (IWRM) and climate change adaptation. IWRM is primarily "a planning and decision-making approach ... focusing on the

[23] Mukheibir, "Water Access, Water Scarcity, and Climate Change."
[24] Rijsberman, "Water Scarcity."
[25] Georgakakos, A. et al., "Ch. 3: Water Resources."
[26] Ryna Yiyun Cui et al., "Regional Responses to Future, Demand-Driven Water Scarcity," *Environmental Research Letters* 13, no. 9 (August 2018): 094006, https://doi.org/10.1088/1748-9326/aad8f7.
[27] Rijsberman, "Water Scarcity."
[28] J. Macknick et al., "The Water Implications of Generating Electricity: Water Use across the United States Based on Different Electricity Pathways through 2050," *Environmental Research Letters* 7, no. 4 (December 2012): 045803, https://doi.org/10.1088/1748-9326/7/4/045803.

present."[29] the Global Water Partnership defines IWRM as "a process which promotes the coordinated development and management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems."[30] Three of the central principles that guide decision making in IWRM include:

1. "Fresh water is a finite and vulnerable resource, essential to sustain life, development, and the environment.
2. Water development and management should be based on a participatory approach, involving users, planners, and policy-makers at all levels.
3. Water has an economic value and should be recognized as an economic good."[31]

It is through these principles that specific, quantitative decisions are made using hydrological data.

Climate change adaptation, on the other hand, more greatly focuses on anticipation of the future.[32] While the two systems are different, there are means of integrating their principles together. Thus, climate change adaptation can be seen as an extension of the core tenets of IWRM combined with predictive models of climate. The three essential steps of climate change adaptation are as follows: "the first steps involve an impact or vulnerability assessment. The

[29] Fulco Ludwig, Erik van Slobbe, and Wim Cofino, "Climate Change Adaptation and Integrated Water Resource Management in the Water Sector," *Journal of Hydrology* 518 (October 2014): 235–42, https://doi.org/10.1016/j.jhydrol.2013.08.010.
[30] "International Decade for Action 'Water for Life' 2005-2015. Focus Areas: Integrated Water Resources Management (IWRM)," accessed May 14, 2022, https://www.un.org/waterforlifedecade/iwrm.shtml.
[31] Peter P. Mollinga, Ajaya Dixit, and Kusum Athukorala, eds., *Integrated Water Resources Management: Global Theory, Emerging Practice, and Local Needs*, Water in South Asia, v. 1 (New Delhi ; Thousand Oaks, Calif: Sage Publications, 2006).
[32] Ludwig, van Slobbe, and Cofino, "Climate Change Adaptation and Integrated Water Resource Management in the Water Sector."

second step is the design and the selection of a range of adaptation options. The final step is the evaluation of adaptation options."[33]

Water privatization as a solution to these issues is a fundamentally incongruent attempt at approaching the issue and has failed in addressing the matter at hand. While proponents of privatization argue that it promotes a more efficient means of supplying water, as will be discussed in chapter 2, such claims are often not true in the systemic application of privatized water. Privatizing water is in no way a movement towards any means of applying the foundational principles of IWRM or climate change adaptation.

[33] Ludwig, van Slobbe, and Cofino.

Chapter 2: Political philosophies of privatization of utilities

In this chapter I analyze the philosophies behind privatization, ways in which privatization has affected water utilities, and the resulting remunicipalization of water utilities which has brought control of water utilities back from private influence.

Privatization of a public utility refers to the "shift in control from the public to the private sector, through a transfer of ownership or management responsibility for ... infrastructure."[34] In the case of water privatization, this refers to the shift of ownership and responsibility for infrastructure relating to the supply of clean water to end consumers of that water. Privatization can happen along a spectrum of full public ownership to full private ownership – "public-private partnerships" (PPP) exist in which a blend of control exists between the two extremes.[35] It is important to note that this definition of privatized water does not particularly include "community groups, religious associations, cooperatives, and nongovernmental organizations" which, while not necessarily public, are almost always not-for-profit and exist outside a public-private dichotomy.[36]

Conversely, water remunicipalization is the negation of water privatization, in which the shift of privatization reverses to increase public ownership and responsibility of a utility or institution.[37]

Philosophies for privatization are raised along two main lines, one based in skepticism of the augmenting role of the government, and the other on the augmenting size of the government

---

[34] Karen J. Bakker, "A Political Ecology of Water Privatization," *Studies in Political Economy* 70, no. 1 (March 1, 2003): 35–58, https://doi.org/10.1080/07078552.2003.11827129.
[35] Bakker.
[36] Karen J. Bakker, *Privatizing Water: Governance Failure and the World's Urban Water Crisis* (Ithaca, N.Y: Cornell University Press, 2010).
[37] Martin Pigeon, *Remunicipalisation: Putting Water Back into Public Hands* (Amsterdam: Transnational Institute, 2012), http://www.municipalservicesproject.org/sites/municipalservicesproject.org/files/publications/Pigeon-McDonald-Kishimoto-Hoedeman_Remunicipalisation_Putting_Water_Back_in_Public_Hands_2012.pdf.

and subsequent inefficiencies of scale: "on the one hand, there were doubts on the opportunity to expand the role of the state, seen as limiting the space of individual autonomy" and "on the other hand, there was some sort of skepticism on the ability of a public enterprise to be efficient, being too prone to bureaucratic behavior."[38] In the early 20th century, "more and more economists were in favor of public enterprises," and thus the role of central government came to dominate local government, and public industry over private.[39] A shift occurred in the seventies in which the idea of privatizing the public utility sector became accepted, and since then privatization continued.

Beginning in the late 20th century, water authorities across the world specifically were faced with growing efforts to privatize.[40] As late as the early 1990s, the efforts for privatization were "framed as a simple rational-choice problem that can only be resolved by pricing water."[41] Two main rationalities were given in support of these ideas: the first being that the privatization of water delivery would decrease fiscal burden on local governments and allow for an overall less expensive method to a necessary outcome; the second being that privatization would increase efficiency of the water, "requiring a new emphasis on proactive, performance oriented, commercial management" of the utility.[42] Hardin's *The Tragedy of the Commons* was still fresh

---

[38] Giuseppe Bognetti and Gabriel Obermann, "LIBERALIZATION AND PRIVATIZATION OF PUBLIC UTILITIES: ORIGINS OF THE DEBATE, CURRENT ISSUES AND CHALLENGES FOR THE FUTURE," *Annals of Public and Cooperative Economics* 79, no. 3–4 (September 2008): 461–85, https://doi.org/10.1111/j.1467-8292.2008.00367.x.

[39] Bognetti and Obermann.

[40] Eduardo Araral, "The Failure of Water Utilities Privatization: Synthesis of Evidence, Analysis and Implications," *Policy and Society* 27, no. 3 (February 1, 2009): 221–28, https://doi.org/10.1016/j.polsoc.2008.10.006.

[41] Cory Fletcher, Anja van Heelsum, and Conny Roggeband, "Water Privatization, Hegemony and Civil Society: What Motivates Individuals to Protest About Water Privatization?," *Journal of Civil Society* 14, no. 3 (July 3, 2018): 241–56, https://doi.org/10.1080/17448689.2018.1496308.

[42] Richard Franceys, "Private Sector Participation in the Water and Sanitation Sector. Occasional Paper # 3." (Department for International Development, July 1997), https://www.ircwash.org/sites/default/files/Franceys-1997-Private.pdf.

in the mind of intellectuals, and private water was seen as a viable solution to address potential perceived dangers of water as a common resource.

The fiscal hypothesis proposes that governmental organizations are incapable of delivering service costs as effectively as private institutions and can neither produce the financial resources in order to expand service provision.[43] Markets, which state-owned institutions are more-or-less shielded from, are said to "exert a disciplining force on the managers of private firms."[44] That is, the efficiency-inducing effects of the market can be felt more strongly by private firms and not public ones, pushing private companies, and perhaps private water utilities, to produce their supplies more efficiently. In order to reach previously mentioned MDGs, it is estimated to cost anywhere from US$51 billion to US$102 billion on supply alone.[45] Thus, in order to produce the most accessible result, it is important that a solution which does not inflate already incredibly high costs is found.

In analyzing the fiscal responsibility of private companies when they are brought into the uptake of water utilities, it is found that "private water companies do not bring new sources and volumes of investment finance" and instead "rely heavily on the same sources as are available to the public."[46] Additionally, as water utilities went private, independent donors who funded water agencies decreased their funding of water infrastructure by 47%.[47] This is thought to be attributable to optimistic expectations of private sector success by donors. This is to say, privatization of water effectively decreased the inflow of funds from donors to specific water

[43] Araral, "The Failure of Water Utilities Privatization."
[44] David Hall and Emanuele Lobina, "Pipe Dreams - Failure of the Private Sector to Invest in Water" (Public Services International Research Unit, March 2006), http://www.psiru.org/reports/pipe-dreams-failure-private-sector-invest-water.html.
[45] Hall and Lobina.
[46] Hall and Lobina.
[47] Araral, "The Failure of Water Utilities Privatization."

causes, and at the same time takes from the same pool of funds already being used during public water management.

When considering the investment put towards extensions to unconnected households, Araral found that no investments were made towards these metrics.[48] New connections are inherently more important to regions with little existing networks, as access becomes a more important factor in determining the benefit of the utility. It is vitally necessary to the success of a water utility that access to water is first established to as many citizens as possible; improvements to existing networks that benefit only a small percentage of the population are inefficient investments in improving overall population benefit.

In regard to the second hypothesis, commercialization of water utilities had been thought to improve the efficiency of water utilities—that is, the measure by which water avoids going unaccounted for, produced but eventually lost before it reaches the customers "due to leaks, theft, unbilled consumption and inaccurate metering."[49] As Bakker notes, "efficient public water utilities did...exist, although they were often overlooked amid growing rhetoric condemning government provision."[50] However, proponents for privatization argue that fundamental incentive problems exist with public supply of water. As argued for the fiscal hypothesis, insulation from capital markets removes market discipline from promoting efficiency in water supply.[51]

However, when the results of privatization are analyzed in terms of efficiency, no significant systematic difference is found between public and private provision of water based on

[48] Araral.
[49] Araral.
[50] Bakker, *Privatizing Water*.
[51] Araral, "The Failure of Water Utilities Privatization."

metrics of efficiency and other performance measures.[52] This holds true in multiple parts of the world, ranging from Latin America, Africa, and Asia.[53]

Compounded on and catalyzed by these philosophical motivations, a large role was played by the World Bank and other large money institutions in the promotion of privatization. A reversal of policy occurred in the late 20th century, shifting away from advocating against loans for private water supply development, at the same moment in which the political support for privatization increased.[54] Originally water supply investment was discouraged "insofar as consequent reductions in mortality would reduce income per capita, and hence reduce quality-of-life indicators."[55] That is, promoting policies that encouraged population growth – in this instance, the promotion of drinking water access – decreased the per capita income available. After a move away from this policy, the "[Organization for Economic Cooperation and Development], the [International Monetary Fund], the World Bank and various international lending agencies and think-tanks" promoted privatization of utilities as a viable option, with hopes to "reap quick economic benefits out of privatization in the form of joint ventures."[56] In Atlanta, for example, even when United Water was "flat broke" and "hemorrhaging money," it still attempted to maintain its contract in order to improve its prospected of "courting other American cities in future privatization deals."[57]

With no clear, systemic advantage to privatization, remunicipalization has, albeit recently, become a trend across the water sector. I analyze two different metropolitan examples

---

[52] Araral.
[53] Araral.
[54] Asha Gupta, *Beyond Privatization*, Advances in Political Science (New York: St. Martin's Press, 2000).
[55] Bakker, *Privatizing Water*.
[56] Gupta, *Beyond Privatization*.
[57] Skye Borden, *Thirsty City: Politics, Greed, and the Making of Atlanta's Water Crisis* (Albany: State University of New York Press, 2014).

of water remunicipalization to show the global impact of privatization and the ways in which remunicipalization has occurred, to varying levels of success.

In Paris, France, the City Council of Paris voted to not renew contracts with Veolia and Suez, two companies which controlled billing of the Parisian water supply since 1860, and both water supply and billing since 1984.[58] (Suez also ran Atlanta's private supply company, United Water, which is discussed further in chapter 4.) While efficiency decreased over the time frame of privatized water in Paris, with the network's leaks being reduced from 22% in 1985 to 17% in 2003 and later 3.5% in 2009, tariffs on water increased greatly, over 265% between 1985 and 2009, compared to overall inflation of 70% in the same time frame.[59] Suspicions rose that Suez and Veolia were taking excessive profits, and officials worried over the loss of the technical knowledge of the water system held by the municipal government. Fierce negotiations with the private companies beginning at the turn of the century saw greater investments in water access and efficiency by Suez and Veolia, but Parisians were still financially opposed to rate hikes and politically opposed to privatized utilities. Ultimately, while campaigning for his second term as mayor of Paris in 2007, Bertrand Delanoë argued that "substantial savings could be achieved by taking [water supply] back in-house" and that it would enable "the city to manage water as a common good rather than being treated as private commodity." This campaign promise helped Delanoë win the election in 2008, and fully start the remunicipalization process.[60]

After transitioning back to public control of the water supply, the public Eau de Paris showed operating costs below expectations and boasted an 8% decrease in water tariffs, after years of private push for tariff hikes. Ultimately, Eau de Paris has "advanced gender equity in the

[58] Pigeon, *Remunicipalisation*.
[59] Pigeon.
[60] Pigeon.

workplace, improved the protection of upstream water resources through partnerships with farmers...promoted water conservation (despite its impacts on lowering water revenues), while at the same time creating a water solidarity fund to assist low-income households."[61] Furthermore, Eau de Paris has created multiple partnerships with other public water utilities to aid in development, such as a rehabilitation process in Burkina Faso.[62]

In Accra, Ghana, remunicipalization has seen less success. With a population over 2 million, Accra is a central hub for economic activities in the region; however, "in absence of public control over land and effective spatial planning Accra's development is characterized by socio-economic disparities, slums with high levels of poverty and the provision of roads and public utilities lagging behind the physical expansion of the city."[63] After pressure from donors to privatize its urban water utilities, Accra ultimately contracted Aqua Vitens Rand Limited (AVRL) for management responsibilities of its supply in 2006 in the form of a public-private partnership agreement, where a state-owned agency, GWCL, would be responsible for investments and long-term development.[64]

While the PPP agreement was formed with the intention of creation a partnership between the GWCL and AVRL, "in reality they acted as rivals because of conflictual standpoints about the agreement:" GWCL, having been portrayed as inefficient and corrupt, grew contemptuous of AVRL; additionally, the "roles of GWCL and AVRL ... were so confused and complicated that it was difficult to distinguish the accountability of each partner."[65] By 2011,

---

[61] David A. McDonald, "Remunicipalization: The Future of Water Services?," *Geoforum* 91 (May 1, 2018): 47–56, https://doi.org/10.1016/j.geoforum.2018.02.027.
[62] David Hall et al., "Public-Public Partnerships (PUPs) in Water," *PSI-TNI-PSIRU*, March 2009, 24.
[63] Lina Suleiman and Abdul Khakee, "Rethinking Water Reform Policies as a 'Wicked Problem' the Case of Urban Water Supply in Ghana," *International Planning Studies* 22, no. 4 (October 2, 2017): 320–32, https://doi.org/10.1080/13563475.2017.1291333.
[64] Suleiman and Khakee.
[65] Suleiman and Khakee.

"AVRL failed consistently throughout the contract period to meet its targets," including goals to reduce non-revenue water, improve water quality, amongst other targets.[66] Following these failures, control was returned back fully to the state.

In returning to public management, a two-year deadlock arose in which power was transferred first through an interim governmental structure before being fully reverted back to GWCL control.[67] This is argued to have contributed to the difficulties faced by the GWCL in its present attempts to manage the water utility. However, a public-public partnership formed with the government of Uganda has proved successful in providing insight into improvement possibilities in Ghana, with policies based on those found in Uganda being announced and subsequent public investments increasing as a result.[68]

The environmental factors of privatization must also be analyzed. When we reframe water from a political-economic to a political-ecological perspective, questions of ecological governances can be raised.[69] Opponents to privatization argue that "the profit motive may result in waste rather than stimulating efficiency, particularly where resources are abundant."[70]

[66] Leonard Shang-Quartey, "Post Privatisation Challenges of Public Water in Ghana," Transnational Institute, June 23, 2014, https://www.tni.org/en/article/post-privatisation-challenges-of-public-water-in-ghana.
[67] Shang-Quartey.
[68] Shang-Quartey.
[69] Bakker, *Privatizing Water*.
[70] Bakker.

Chapter 3: Environmental justice and water rights

In this chapter I examine the environmental philosophies surrounding water rights, water injustice, and the ways in which the natural entitlement of life to water is expressed in philosophical understandings and everyday life. In this way, I examine the plight of water access as not only a political-economy of thought in which further water development is a means to producing more capital, but as a method of reaching towards a more just global society. As Ostrom put forth in her well-known response to the tragedy of the commons, "socially cooperative solutions are often more efficient than market ones."[71] Water privatization is an issue of injustice through its ineffective management, as well as its foundational nature as a force of commercialization and marketization. Additionally, I look towards the negligent exclusion of vulnerable communities from their access to water as an act of environmental injustice, further supporting the argument of water access as a means by which of bringing about equity.

Water rights are best understood not as a singular, standard concept in which to universally apply to any case, but rather a framework of concepts that change depending on legal, cultural, customary, or religious contexts.[72] Beginning at its strictest definition, water rights are interpreted as "the right to use a share of water allocated to an individual, a water users' association, a company, or a district by a statal or para-statal agency or a community."[73] In this legal understanding of the concept, we are made to understand water as an endowment from a statal group to another entity; we are made to understand water in the same sense we understand other objects to be seen as property and to be overseen in the legal system by

[71] John Agnew, "Waterpower: Politics and the Geography of Water Provision," *Annals of the Association of American Geographers* 101, no. 3 (April 25, 2011): 463–76, https://doi.org/10.1080/00045608.2011.560053.
[72] Peter G. Brown and Jeremy J. Schmidt, *Water Ethics: Foundational Readings for Students and Professionals* (Washington, DC: Island Press, 2010).
[73] Brown and Schmidt.

property rights. This definition and the international discourse built off its perspective "assumes the primacy of state and even international laws over religious and local laws."[74] In analyzing the recent Supreme Court case decided in 2021, Florida v. Georgia, I show the legal perspective of water rights in the United States. In this case, water is treated as a means by which economic and ecological goals are achieved.[75] Considerations are made to each state's "fair share" of the different water flows which intersect the state lines and to the economic goals of the state first and the ecological protections which they have put in place second.[76]

Expanding away from the legal definition, I begin to reassess the frameworks and concepts of a human right to begin with, looking towards other religious and cultural traditions to inform our relationship to water. In the case of the three monotheistic religions of Christianity, Islam, and Judaism, water is associated with life and thus they call for its equitable sharing.[77] Pursuing a theological perspective of water, I approach through the Catholic tradition, using Zenner's insights into the role of fresh water in Catholic Social Teaching. Water has a deeply rooted religious nature in the Catholic tradition, and humans are considered[78] As a "good of creation," water is meant for everyone, "for the benefit of all people across time and space."[79] Zenner writes, "since the absence of sufficient fresh, clean water carves a jagged edge through a person's ability to survive, the magisterium of the Catholic Church has come to view fresh water as a fundamental human right, indeed, a right-to-life issue."[80]

---

[74] Brown and Schmidt.
[75] Florida v. Georgia (Supreme Court of the United States April 1, 2021).
[76] Florida v. Georgia.
[77] Emanuele Fantini, "An Introduction to the Human Right to Water: Law, Politics, and Beyond," *WIREs Water* 7, no. 2 (March 2020), https://doi.org/10.1002/wat2.1405.
[78] Christiana Z. Peppard, *Just Water: Theology, Ethics, and Fresh Water Crises*, Revised edition, Ecology and Justice, an Orbis Series on Integral Ecology (Maryknoll, New York: Orbis Books, 2018).
[79] Peppard.
[80] Peppard.

Expanding further out from water as a rights issue, I look towards water as a central medium for community relations. In the United States Southwest, "poor rural Hispanics and Native Americans viewed water not just as a resource or commodity, but rather as a part of their identity, solidary, and sense of opportunity... for many desert-dwellers, giving up water means forgoing a way of life."[81] Water is not just a good to which a right of use or possession is associated, but is a medium by which life is lived through. Entire groups of peoples rise and fall through their relationship with water: "how a people in an ... environment associate in order to develop, use, and govern water creates the sense of attachment and mutual obligation by which they recognize themselves as a community."[82] This raises an additional aspect of the communal nature of water: the mutually assured survival of each member of a society and the society as a whole rests upon the responsibility, in relation to water supply, that each individual has to each other. This responsibility underpins the political nature of water: "water's value as a vital medium for social and political relations within and across communities is underscored by westerners' concerns about losing jurisdiction over the waters that sustain them."[83]

It is important to frame anthropogenic water scarcity not only as an issue of a refusal of the natural right to water, if not only because of the issues which arise from this categorization, but additionally as an act of water injustice in order to best consider the exploitation and negligence which occurs in many such cases. An understanding is reached that the water crisis is "less a consequence of generalized scarcity than a manifestation of uneven power geometries."[84] It is clear to see that water scarcity is an issue in some areas and while less so in others; as

[81] Rutgerd Boelens, Tom Perreaultm, and Jeroen Vos, eds., *Water Justice* (Cambridge, United Kingdom: New York, NY, USA : Cambridge University Press, 2018).
[82] Clay Arnold, "Water and Moral Economy," *Journal of the Southwest* 59, no. 1 (2017): 60–82, https://doi.org/10.1353/jsw.2017.0006.
[83] Arnold.
[84] Boelens, Perreaultm, and Vos, *Water Justice*.

discussed in chapter 1, we look at the wealthiest countries on Earth and see infrequent scarcity issues, and we look at the poorest countries on Earth and we see frequent scarcity issues. It is also clear that these areas in which water scarcity occurs are quite frequently areas in which the marginalized, exploited communities of the world inhabit.[85] Water scarcity is constantly framed as an incredibly local issue; however, it is the collective human society that is suffering through the suffering of the individuals who are harmed and who frequently are victims of a lethal lack of drinking water. I first look towards examples of water injustices outside of privatization to shape and inform the ways in which water injustice is understood. Throughout the United States, as well as across the globe, water injustice exists not just on the plane of access, but throughout the complex continuum of water management, through "dam construction, hydroelectric power generation, irrigation, transportation, water quality, and cogeneration (desalination)."[86]

Gender is an additional axis along which water access produces inequal and unjust outcomes. The fourth central principle of IWRM that has not been touched on is that "women play a central part in the provision, management, and safeguarding of water."[87] As Crow notes, "water problems ... cannot be understood – nor can effective solutions be found – without an explicit realization that water realities are deeply gendered."[88] The experience of gendered water realities exists in many forms: women often hold the role of water gathering in many rural or informal settlements, being tasked with maintaining one of the most fundamental infrastructure roles; conflated with previous ideas of water as central to community relations, women are further placed in a role as agents of cultural transmission, as a "guardian of the family" and the

[85] UNDP, ed., *Beyond Scarcity: Power, Poverty and the Global Water Crisis*, Human Development Report 2006 (New York, NY: UNDP, 2006).
[86] Donahue and Johnston, *Water, Culture, and Power*.
[87] Mollinga, Dixit, and Athukorala, *Integrated Water Resources Management*.
[88] Ben Crow, "Urban Water and Sanitation Injustice: An Analytic Framework," in *Water Justice*, ed. Rutgerd Boelens, Tom Perreaultm, and Jeroen Vos (Cambridge, United Kingdom: New York, NY, USA : Cambridge University Press, 2018).

"conservator of society."[89] Furthermore, poor water access has gendered effects on sanitation as well, as "gendered demands 'levied on the female body' make defecation, urination, and managing menstrual hygiene a constant challenge for women and girls' dignity, privacy, security, and daily lives."[90] Thus, it is incredibly important that the relationship of gender be considered when prioritizing water access.

Water privatization is unethical not only in its general ineffectiveness, but its promotion of harmful neoliberal concepts of water as first strictly a good, and second a strictly economic good. In fact, "much of today's water deprivations are justified or presented on grounds of privileging efficient uses and users over inefficient ones."[91] And while positive effects of remunicipalization should not be ignored, many remunicipalization efforts may not be "explicitly anti-market in their objectives," and virtually all "continue to operate within a broader capitalist framework."[92] This oversubscription to concepts of the market further create acts of injustice in the denial of services to those who often have no control over the efficiency of their water usage. In fact, the consideration of those who protest water privatization is often cite the hegemonic ideas of water marketization as equally, if not more, important than the outcomes of water privatization in the first place.[93] Additionally, water pricing is framed as "economic injustice," further contextualizing the commercialization of a public utility as a form of injustice against the public.[94] The concept of the denial of a good is inherently built into the action of putting a price on that good; access is denied to those who cannot pay the set price. The denial of water is the strictest of water injustices.

---

[89] Mathilde VO, "The Role of Women in the Preservation of Intangible Cultural Heritage," *Institut Du Genre En Géopolitique* (blog), March 25, 2021, https://igg-geo.org/?p=3133&lang=en.
[90] Crow, "Urban Water and Sanitation Injustice: An Analytic Framework."
[91] Boelens, Perreaultm, and Vos, *Water Justice*.
[92] McDonald, "Remunicipalization."
[93] Fletcher, van Heelsum, and Roggeband, "Water Privatization, Hegemony and Civil Society."
[94] Fletcher, van Heelsum, and Roggeband.

The role of the World Bank and the ways in which they promoted water supply development must be examined. Beginning with policy recommending against investment out of avoidance of population growth and its effect on GDP statistics, it is immediately understood that the institution is foundationally built upon prioritizing, above all else, capital. Reduction in mortality rates is passed over in favor of economic growth per capita.[95] It understandable, then, to see the argument against privatization of water utilities made by those opposing on ideological grounds: the fundamental and historical prioritization of capital by market-based systems consistently and intrinsically deprioritizes human life as an ultimate goal.

[95] Bakker, *Privatizing Water*.

Chapter 4: Historical analysis of case study: Atlanta, Georgia

In this chapter, I use historical analysis to argue that the citizens of Atlanta, Georgia have consistently suffered from environmental racism entrenched within their city institutions. The privatization of their water supply is in line with this history of environmental racism. I look specifically at the interactions between United Water, the organization which brought about the privatization of Atlanta's water utility, and the population served as a case study of the failures of water privatization. This failure occurred along both political lines as well as along the guidelines of environmental justice. I further analyze the history of environmental injustice within Atlanta's water system throughout the past within the context of the broader environmental injustice which has occurred in Atlanta.

Atlanta, Georgia is home to the second largest majority black population in the country.[96] Atlanta's geographic location in the Southern US makes it unsurprising that there exists a history of racial, environmental injustice going back further than the 1999 United Water privatization of Atlanta's water supply. As discussed by McCreary and Milligan, it is impossible to analyze the environmental injustice of Atlanta without first a "thorough concern for the deep histories of white supremacy in the city," which are inherently and inextricably linked together.[97] While it should be understood without mention, the effects of slavery on the black population of Atlanta taints the roots of black history in America from the very beginning. It is impossible to discuss the lineage of injustice without tying it back to greatest American injustice to the black

[96] Thora Middleton, "Environmental Justice July Blog Series – Blog #3," Emory Office of Sustainability Initiatives, July 2020, https://sustainability.emory.edu/environmental-justice-july-blog-series-blog-3/.
[97] Tyler McCreary and Richard Milligan, "The Limits of Liberal Recognition: Racial Capitalism, Settler Colonialism, and Environmental Governance in Vancouver and Atlanta," *Antipode* 53, no. 3 (2021): 724–44, https://doi.org/10.1111/anti.12465.

population brought here unwillingly. This has without bounds impacted every way of life within the city of Atlanta. In 1850, African slaves outnumbered free black citizens, 493 to 18.[98]

In 1864 the city of Atlanta was burned to the ground as a part of the conclusion of the Civil War. More than 3000 buildings were destroyed, leaving a mere 400 buildings left standing. The burning of Atlanta remains the only time in American history that a major US city was destroyed by an act of war.[99] As Heynen discusses, "African-American [labor] was essential to create cities along the logics of white supremacist goals."[100] This paradox, the use of black labor to further white goals, e.g. the continued segregation and diminishment of the black population of Atlanta both in size and in political authority, is a continued and repeated dynamic of racial capitalism that extends temporally both forward and backward in time, and geographically across the entire globe.

Beginning in the 1930s, the Federal Housing Administration and the Home Owner's Loan Corporation started encouraging practices of redlining that discouraged loaning to neighborhoods marked as minority.[101] Redlining in Georgia served to continue racial segregation which had already occurred under "Jim Crow" segregation ordinances, and to "keep racial groups apart and define their respective rights, privileges, and social status."[102] Thus, Black citizens of Atlanta were mainly relegated to low-lying areas which were flood-prone, making them riskier and less desirable than most sections of the city.[103]

---

[98] National Park Service: Atlanta, "African-American Experience-Atlanta," A National Register of Historic Places to Travel, accessed February 25, 2022, https://www.nps.gov/nr/travel/atlanta/africanamerican.htm.
[99] Nik Heynen, "Uneven Racial Development and the Abolition Ecology of the City," in *Urban Political Ecology in the Anthropo-Obscene: Interruptions and Possibilities*, ed. Henrik Ernstson and E. Swyngedouw, Questioning Cities (London ; New York: Routledge, Taylor & Francis Group, 2019).
[100] Heynen.
[101] Middleton, "Environmental Justice July Blog Series – Blog #3."
[102] Heynen, "Uneven Racial Development and the Abolition Ecology of the City."
[103] Heynen.

Within this context of injustice, by the beginning of the 20th century, "race and water were already thoroughly intertwined in Atlanta."[104] Black communities were consistently situated closest to the most dangerous and toxic sewage flows, and subsequently were disproportionately suffering from water-borne, diarrheal diseases. In 1900, a typhoid epidemic caused by negligent sewage infrastructure and underdeveloped water supply systems erupted within Black neighborhoods. Even after the construction of the first sewage treatment facilities, black communities were still at the epicenter of water pollution. As the white population fled the city during the desegregation movements of the mid-20th century, they moved north, literally upstream of black communities, building upon already poorly maintained and badly polluted waterways that continued to fortify the relationship between "racialized communities and the flows of sewage, stormwater, and toxins."[105]

The privatization of Atlanta's water supply system is thus situated within the city's racist historical context. We can immediately recognize the process as a continuation of Atlanta's tradition of water injustice.

In 1997, Atlanta entered into agreement with United Water to take privatized control of their waterworks system. As previously touched upon in chapter 2, United Water was purchased by Suez, the company that maintained Paris's private water supply before their own remunicipalization only years after Atlanta. United Water promised to cut costs both in the billing of water to its customers as well as in the operation costs of the utility; in its bid to operate the maintain the water system, United Water promised to pay $21.4 million per year, less than half the $49.5 million that the city was spending annually.[106] United Water additionally

[104] McCreary and Milligan, "The Limits of Liberal Recognition."
[105] McCreary and Milligan.
[106] Solomon, *America's Water and Wastewater Crisis*.

pledged to improve infrastructure and reduce lost water in the system. However, these performance metrics was weighted much less than cost of operations, with 30 of 100 points weighted towards cost and only 5 of 100 points towards performance capabilities in the evaluation of bids.[107] When United Water took over, they inherited from the city "140,000 customer accounts, 1.5 million customers both inside and outside of Atlanta," "479 employees," and assumed responsibility for "operating and maintaining two drinking water treatment plants, twelve water system storage tanks, seven zone transfer pumping stations, 25,000 fire hydrants, and about 2,400 miles of network pipes." On top of this, the city had incomplete data on the exact location or condition of water mains which further augmented the difficulty of implanting repairs.[108]

Issues quickly arose with management of the utility. In 1999, United water faced a multitude of challenges within their first year of operation in Atlanta, including 4,000 past due work orders, 7,000 requests for service, and a water main break that interrupted service for 200 homes. Additional problems arose in 2000 and 2001 as customers complained of erratic customer service, low water pressure, brown tap water, and boil-water advisories.[109] In those same years, tests of the city water supply failed national turbidity standards. Testing agencies found lead in 7.5% of tested homes and measured concerning – although below the failure rate – levels of carcinogenic haloacetic acids and coliform bacteria.[110] In the same report, the National Resources Defense Council described "major threats to the city's water supply," which included "polluted runoff from urban, urban, suburban, and agricultural areas" and "more than 1,400

[107] Solomon.
[108] Geoffrey F. Segal, "The Atlanta Water Privatization: What Can We Learn?," Georgia Public Policy Foundation, accessed February 22, 2022, https://www.georgiapolicy.org/news/the-atlanta-water-privatization-what-can-we-learn/; Solomon, *America's Water and Wastewater Crisis*.
[109] Solomon, *America's Water and Wastewater Crisis*.
[110] Erik Olson, "What's on Tap? Grading Drinking Water in U.S. Cities" (Natural Resources Defense Council, June 2003), https://www.nrdc.org/sites/default/files/atlanta.pdf.

identified potential point source polluters, including hundreds of fuel and hazardous waste facilities and more than 100 large industries using hazardous chemicals," describing source protection as poor.[111]

Because of the history of segregation in Atlanta, its lasting impacts on the geographic distribution of black Atlanta citizens, and the areas in which this segregation has left Atlanta's black communities, water privatization had inequal impacts that resulted in worse outcomes for these marginalized communities. While water quality complaints were consistent around the city, boil water advisories during United Water's time were frequently experienced in the areas of the city with the highest population of Black Atlantans: water mains in these areas, like most other areas in Atlanta, were often years behind on repairs and not being addressed by United Water at the time.[112]

During this time period of 2000 to 2001, before the termination of the contract in 2003, public perception of United Water fell; consequently, perceptions of the Atlanta city government suffered as well. In September of 2000, an inquiry was called for by Atlanta City Council, citing a large number of complaints ranging from unrepaired leaks, lagging water meter installations, and inaccurate water line marking for utilities digging; the Atlanta City Council called for this audit to include "termination provisions."[113] That is to say, the City Council was prepared, less than two years into service, to terminate the contract signed by United Water to operate and maintain the water supply. Atlanta officials noted that the ratepayers of Atlanta blamed the city

---

[111] Olson.
[112] Borden, *Thirsty City*.
[113] "Water Inquiry Requested," *Atlanta Journal*, September 1, 2000, sec. p. 42, https://infoweb.newsbank.com/apps/news/document-view?p=AAHX&docref=image/v2%3A148CCD75565FA964%40AAHX-1810582E795D8742%402451789-180BF7CA15F6926A%4041-180BF7CA15F6926A%40.

directly for the shortcomings of United Water, calling the privatization a "significant political cost."[114]

It is through the concepts established in chapters 2 and 3 containing both political and ethical frameworks that I address the privatization of Atlanta's water supply. The consistent mismanagement of Atlanta's water supply by United Water, not only in its role as a water utility but exacerbated by its role in the privatization of public utility, shows both political and ethical errors. As discussed in chapter 3, the fundamental ideology taking place within the action of commercialization and marketization of water is inherently unjust.

Beginning at the bidding stage, the overemphasis of cost versus capacity to perform, weighing the former at six times as important as the latter, shows negligence on the side of United Water for prioritizing cost over access, but even more so on the city of Atlanta for establishing such a guideline for bids in the first place. While cost is important, cutting costs through a reduction of employees, their level of training, and the number of repairs done is regrettable. Such cost reductions put the health of Atlanta's citizens at risk. Furthermore, the fundamental capitalistic concept of taking a profit from water commercializes a basic human necessity, whereby the private companies' profit is valued over the public service goal of obtaining a reliable, clean source of drinking water.

Next, the attempts to reduce costs consistently lead to worse outcomes. It is inherent to the marketization of a utility that efficiency and reducing costs are prioritized. The failure to improve conditions for those without access or insufficient availability proves a bad enough offense, but to actively mismanage and continuously ignore failing infrastructure to a point where thousands of residents are receiving boil water advisories is negligent. Not only is this an

[114] Douglas Jehl, "As Cities Move to Privatize Water, Atlanta Steps Back," *The New York Times*, February 10, 2003, sec. U.S., https://www.nytimes.com/2003/02/10/us/as-cities-move-to-privatize-water-atlanta-steps-back.html.

unethical treatment of the residents of Atlanta, but it is politically unviable and is what caused massive public backlash both against the Atlanta city government as well United Water itself.[115]

[115] "Water Inquiry Requested."

Chapter 5: Water in movement – solutions: water justice and public reform

In this chapter I offer policy-based solutions to addressing water scarcity through the lens of the public-private utility debate. As central to the thesis of this paper, remunicipalization should be sought for in as many instances as possible. However, remunicipalization and increased governmental autonomy over the core services for its citizens does not necessarily imply increased access, increased quality, or increased availability, all which are central to providing clean drinking water to citizens; it is important that these metrics see improvements whenever possible.

To begin, it has been made clear that water utilities are best maintained by public, statal institutions. Public institutions must be strengthened both in efficacy and in trust: policy that promotes funding of public utilities should be put in place. As seen in Atlanta, a private organization may have full control of a water utility, but the public's confidence in their government is directly impacted by the private utility's decisions. Therefore, remunicipalization and subsequent improvements towards water utility operation both increases efficacy and trust in government.

In instances of privatized water, it is important that guidelines are established for remunicipalization and general fundamental water access, which should be the end goal of each instance of privatized water supply. By using the UN's Sustainable Development Goal on water, progress can be made from a starting point that, while "imperfectly conceptualized and inconsistently formulated," offer a foundational framework to build from.[116] Recommendations for expanding the SDGs include revising current targets to reflect the need for broader

[116] Jamie Bartram et al., "Policy Review of the Means of Implementation Targets and Indicators for the Sustainable Development Goal for Water and Sanitation," *Npj Clean Water* 1, no. 1 (April 26, 2018): 1–5, https://doi.org/10.1038/s41545-018-0003-0.

investment goals from a variety of sources and a recognition of the need of governmental leadership and cooperation.[117] Furthermore, centralizing tenets of environment justice and promoting a "sense of sacredness of life" creates the need "for some form of collective, rather than individual, stewardship."[118] Promoting water justice in the form of increased water access, improved quality, and consistent availability should be prioritized in the development of a successful water system.

Additional insights into the remunicipalization process can be gained by looking towards the case studies analyzed in chapters 2 and the primary case study found in chapter 4. As seen, remunicipalization does not occur in the same way across different cases, and the outcome of the process is naturally not identical. In many cases, the smoothest transitions occurred when contracts between governments and private utilities expired and were not renewed, versus being terminated early; however, in the primary case study of Atlanta, Georgia, it became clear that terminating early was the most effective option that could be taken. [119] Thus, while entering into private water agreements is not advised, it is best to maintain shorter contracted terms in such cases in order to minimize transitional struggles from private to public. Ideally, private water contracts should be ended as quickly as safely possible.

Policy should be put in place, either through intra- or inter-institutional means, to allow for more direct oversight of water utility policy and remediation of errors and faults. Looking again towards the Atlanta case study, an important moment occurred when United Water was given 90 days to fix specific issues in the system. In the case of private contracts in the U.S., specific performance is a contract remedy which requires the breaching party to perform the

[117] Bartram et al.
[118] Bakker, *Privatizing Water*.
[119] Pigeon, *Remunicipalisation*.

promised contractual duty.[120] Whereas a contract exists between a statal agency and a private firm, no such clear agreement is in place between a public utility fully operated by a government and its own government. Thus, where the city government was able to recognize a disparity between the promised goals and the actual results, and formally and juridically request this disparity to be solved, this process does not necessarily exist within a fully statal agency. As discussed in chapter 3, public utilities are not infallible and are also subject to errors and shortcomings. Thus, policy which puts in place legal frameworks for enforcing the performance of a utility would reduce such shortcomings that benefit from contractual privileges.

Public-public partnerships should be promoted in which mentorship is able to be provided from one statal agency to another. In the case of Ghana and Uganda, partnership was able to result in policy changes which began to increase capacity by over 50 million gallons.[121] However, water policy is not always easily transferable between states and involves many factors which can affect successful implementation. Creating successful partnerships with similar governmental and geographic contexts are important; additionally, where the adaption of specific policy becomes difficult due to strong differences in these factors, successful public-public partnerships can still exist: Paris's Eau de Paris's multiple international partnerships have proved successful, and additional partnerships from other regions around France have offered policy advice as well as training partnerships to groups in Italy, Morocco, Tunisia, Bolivia, Uruguay, and Sri Lanka.[122] Governments, thus, should look for internal public-public agreements that can improve water utilities within their own nation based on internal successes, and look to make partnerships that can expand upon both parties policy goals. Alliances of pro-municipalization

[120] Alan Schwartz, "The Case for Specific Performance," *Yale Law Journal* 89, no. 2 (1980 1979): 271–307.
[121] Shang-Quartey, "Post Privatisation Challenges of Public Water in Ghana."
[122] Hall et al., "Public-Public Partnerships (PUPs) in Water."

should be "willing to engage in debates about the failures of some public service provision and to address perceptions that public sector workers have not always operated in the interests of all, especially marginalized groups."[123]

This also brings attention to the fact that public utilities are not always successful in their attempts to provide water to their residents. Strict improvements to water supply and access are always important, no matter public or private. One important improvement to water access is increased investment in wastewater treatment, which is effective both in developed nations where domestic water usage is typically excessive and wastewater is excessively produced, as well as in developing nations where levels of water pollution are high and treatment of this water increases supply for the entire system.[124] Soft path water management, referring to the "use of improved water management techniques rather than large physical investment in new water infrastructure such as dams, canals, and well fields," puts stress on efficient water management which increases the "economic quantity" of water.[125]

Where remunicipalization is not possible, or where privatization offers the only means by which to extend access through some combination of internal or external pressures, market-based solutions may still be able to provide beneficial policy insights. Bakker suggests a rethinking of the role of privatized actors, saying that, "private sector provision ... cannot sustainably supply water to the urban poor, much less address broader issues of water governance; nor can private capital finance network extensions on a significant scale. But private actors do have a role to play (in providing, for example, expertise and innovative technologies."[126] In this sense, private

[123] David A McDonald and Erik Swyngedouw, "The New Water Wars: Struggles for Remunicipalisation," *Water Alternatives* 12, no. 2 (2019): 12.
[124] Donald E. Agthe, R. Bruce Billings, and Nathan Buras, eds., *Managing Urban Water Supply*, Water Science and Technology Library, v. 46 (Dordrecht ; Boston: Kluwer Academic Publishers, 2003).
[125] Agthe, Billings, and Buras.
[126] Bakker, *Privatizing Water*.

actors can be thought of as extensions of tools that public water utilities can use in order to address specific deficiencies within their own systems.

Bibliography

Agnew, John. “Waterpower: Politics and the Geography of Water Provision.” *Annals of the Association of American Geographers* 101, no. 3 (April 25, 2011): 463–76. https://doi.org/10.1080/00045608.2011.560053.

Agthe, Donald E., R. Bruce Billings, and Nathan Buras, eds. *Managing Urban Water Supply*. Water Science and Technology Library, v. 46. Dordrecht ; Boston: Kluwer Academic Publishers, 2003.

Alcamo, Joseph, Martina Flörke, and Michael Märker. “Future Long-Term Changes in Global Water Resources Driven by Socio-Economic and Climatic Changes.” *Hydrological Sciences Journal* 52, no. 2 (April 2007): 247–75. https://doi.org/10.1623/hysj.52.2.247.

Araral, Eduardo. “The Failure of Water Utilities Privatization: Synthesis of Evidence, Analysis and Implications.” *Policy and Society* 27, no. 3 (February 1, 2009): 221–28. https://doi.org/10.1016/j.polsoc.2008.10.006.

Arnell, Nigel, and Chunzhen Liu. “Hydrology and Water Resources.” In *Climate Change 2001, Impacts, Adaptation, and Vulnerability*. Cambridge, UK: Cambridge University Press, n.d.

Arnold, Clay. “Water and Moral Economy.” *Journal of the Southwest* 59, no. 1 (2017): 60–82. https://doi.org/10.1353/jsw.2017.0006.

Bakker, Karen J. “A Political Ecology of Water Privatization.” *Studies in Political Economy* 70, no. 1 (March 1, 2003): 35–58. https://doi.org/10.1080/07078552.2003.11827129.

———. *Privatizing Water: Governance Failure and the World’s Urban Water Crisis*. Ithaca, N.Y: Cornell University Press, 2010.

Bartram, Jamie, Clarissa Brocklehurst, David Bradley, Mike Muller, and Barbara Evans. "Policy Review of the Means of Implementation Targets and Indicators for the Sustainable Development Goal for Water and Sanitation." *Npj Clean Water* 1, no. 1 (April 26, 2018): 1–5. https://doi.org/10.1038/s41545-018-0003-0.

Boelens, Rutgerd, Tom Perreaultm, and Jeroen Vos, eds. *Water Justice*. Cambridge, United Kingdom: New York, NY, USA : Cambridge University Press, 2018.

Bognetti, Giuseppe, and Gabriel Obermann. "LIBERALIZATION AND PRIVATIZATION OF PUBLIC UTILITIES: ORIGINS OF THE DEBATE, CURRENT ISSUES AND CHALLENGES FOR THE FUTURE." *Annals of Public and Cooperative Economics* 79, no. 3–4 (September 2008): 461–85. https://doi.org/10.1111/j.1467-8292.2008.00367.x.

Borden, Skye. *Thirsty City: Politics, Greed, and the Making of Atlanta's Water Crisis*. Albany: State University of New York Press, 2014.

Brown, Peter G., and Jeremy J. Schmidt. *Water Ethics: Foundational Readings for Students and Professionals*. Washington, DC: Island Press, 2010.

Crow, Ben. "Urban Water and Sanitation Injustice: An Analytic Framework." In *Water Justice*, edited by Rutgerd Boelens, Tom Perreaultm, and Jeroen Vos. Cambridge, United Kingdom: New York, NY, USA : Cambridge University Press, 2018.

Cui, Ryna Yiyun, Katherine Calvin, Leon Clarke, Mohamad Hejazi, Son Kim, Page Kyle, Pralit Patel, Sean Turner, and Marshall Wise. "Regional Responses to Future, Demand-Driven Water Scarcity." *Environmental Research Letters* 13, no. 9 (August 2018): 094006. https://doi.org/10.1088/1748-9326/aad8f7.

Donahue, John M., and Barbara Rose Johnston, eds. *Water, Culture, and Power: Local Struggles in a Global Context*. Washington, D.C: Island Press, 1998.

Douglass, Elizabeth. “Towns Sell Their Public Water Systems — and Come to Regret It.” *Washington Post*, July 8, 2017, sec. Health & Science. https://www.washingtonpost.com/national/health-science/towns-sell-their-public-water-systems--and-come-to-regret-it/2017/07/07/6ec5b8d6-4bc6-11e7-bc1b-fddbd8359dee_story.html.

Fantini, Emanuele. “An Introduction to the Human Right to Water: Law, Politics, and Beyond.” *WIREs Water* 7, no. 2 (March 2020). https://doi.org/10.1002/wat2.1405.

Fletcher, Cory, Anja van Heelsum, and Conny Roggeband. “Water Privatization, Hegemony and Civil Society: What Motivates Individuals to Protest About Water Privatization?” *Journal of Civil Society* 14, no. 3 (July 3, 2018): 241–56. https://doi.org/10.1080/17448689.2018.1496308.

Florida v. Georgia (Supreme Court of the United States April 1, 2021).

Franceys, Richard. “Private Sector Participation in the Water and Sanitation Sector. Occasional Paper # 3.” Department for International Development, July 1997. https://www.ircwash.org/sites/default/files/Franceys-1997-Private.pdf.

Georgakakos, A., P. Fleming, M. Dettinger, C. Peters-Lidard, Terese (T. C.) Richmond, K. Reckhow, K. White, and D. Yates. “Ch. 3: Water Resources. Climate Change Impacts in the United States: The Third National Climate Assessment.” U.S. Global Change Research Program, 2014. https://doi.org/10.7930/J0G44N6T.

Gosling, Simon N., and Nigel W. Arnell. “A Global Assessment of the Impact of Climate Change on Water Scarcity.” *Climatic Change* 134, no. 3 (February 1, 2016): 371–85. https://doi.org/10.1007/s10584-013-0853-x.

Gupta, Asha. *Beyond Privatization*. Advances in Political Science. New York: St. Martin's Press, 2000.

Hall, David, and Emanuele Lobina. "Pipe Dreams - Failure of the Private Sector to Invest in Water." Public Services International Research Unit, March 2006. http://www.psiru.org/reports/pipe-dreams-failure-private-sector-invest-water.html.

Hall, David, Emanuele Lobina, Violeta Corral, Olivier Hoedeman, Philip Terhorst, Martin Pigeon, and Satoko Kishimoto. "Public-Public Partnerships (PUPs) in Water." *PSI-TNI-PSIRU*, March 2009, 24.

Heynen, Nik. "Uneven Racial Development and the Abolition Ecology of the City." In *Urban Political Ecology in the Anthropo-Obscene: Interruptions and Possibilities*, edited by Henrik Ernstson and E. Swyngedouw. Questioning Cities. London ; New York: Routledge, Taylor & Francis Group, 2019.

Intergovernmental Panel on Climate Change, R. K. Pachauri, and Leo Mayer, eds. *Climate Change 2014: Synthesis Report*. Geneva, Switzerland: Intergovernmental Panel on Climate Change, 2015.

"International Decade for Action 'Water for Life' 2005-2015. Focus Areas: Integrated Water Resources Management (IWRM)." Accessed May 14, 2022. https://www.un.org/waterforlifedecade/iwrm.shtml.

Jehl, Douglas. "As Cities Move to Privatize Water, Atlanta Steps Back." *The New York Times*, February 10, 2003, sec. U.S. https://www.nytimes.com/2003/02/10/us/as-cities-move-to-privatize-water-atlanta-steps-back.html.

Kellner, Elke. "The Controversial Debate on the Role of Water Reservoirs in Reducing Water Scarcity." *WIREs Water* 8, no. 3 (May 2021). https://doi.org/10.1002/wat2.1514.

Leman-Stefanovic, Ingrid, ed. *The Wonder of Water: Lived Experience, Policy, and Practice*. Toronto ; Buffalo ; London: University of Toronto Press, 2020.

Ludwig, Fulco, Erik van Slobbe, and Wim Cofino. "Climate Change Adaptation and Integrated Water Resource Management in the Water Sector." *Journal of Hydrology* 518 (October 2014): 235–42. https://doi.org/10.1016/j.jhydrol.2013.08.010.

Macknick, J., S. Sattler, K. Averyt, S. Clemmer, and J. Rogers. "The Water Implications of Generating Electricity: Water Use across the United States Based on Different Electricity Pathways through 2050." *Environmental Research Letters* 7, no. 4 (December 2012): 045803. https://doi.org/10.1088/1748-9326/7/4/045803.

McCreary, Tyler, and Richard Milligan. "The Limits of Liberal Recognition: Racial Capitalism, Settler Colonialism, and Environmental Governance in Vancouver and Atlanta." *Antipode* 53, no. 3 (2021): 724–44. https://doi.org/10.1111/anti.12465.

McDonald, David A. "Remunicipalization: The Future of Water Services?" *Geoforum* 91 (May 1, 2018): 47–56. https://doi.org/10.1016/j.geoforum.2018.02.027.

McDonald, David A, and Erik Swyngedouw. "The New Water Wars: Struggles for Remunicipalisation." *Water Alternatives* 12, no. 2 (2019): 12.

Middleton, Thora. "Environmental Justice July Blog Series – Blog #3." Emory Office of Sustainability Initiatives, July 2020. https://sustainability.emory.edu/environmental-justice-july-blog-series-blog-3/.

Millennium Ecosystem Assessment (Program), ed. *Ecosystems and Human Well-Being: Synthesis*. Washington, DC: Island Press, 2005. http://www.millenniumassessment.org/documents/document.356.aspx.pdf.

Mollinga, Peter P., Ajaya Dixit, and Kusum Athukorala, eds. *Integrated Water Resources Management: Global Theory, Emerging Practice, and Local Needs*. Water in South Asia, v. 1. New Delhi ; Thousand Oaks, Calif: Sage Publications, 2006.

Mukheibir, Pierre. "Water Access, Water Scarcity, and Climate Change." *Environmental Management* 45, no. 5 (May 1, 2010): 1027–39. https://doi.org/10.1007/s00267-010-9474-6.

National Park Service: Atlanta. "African-American Experience-Atlanta." A National Register of Historic Places to Travel. Accessed February 25, 2022. https://www.nps.gov/nr/travel/atlanta/africanamerican.htm.

Olson, Erik. "What's on Tap? Grading Drinking Water in U.S. Cities." Natural Resources Defense Council, June 2003. https://www.nrdc.org/sites/default/files/atlanta.pdf.

Peppard, Christiana Z. *Just Water: Theology, Ethics, and Fresh Water Crises*. Revised edition. Ecology and Justice, an Orbis Series on Integral Ecology. Maryknoll, New York: Orbis Books, 2018.

Pigeon, Martin. *Remunicipalisation: Putting Water Back into Public Hands*. Amsterdam: Transnational Institute, 2012. http://www.municipalservicesproject.org/sites/municipalservicesproject.org/files/publications/Pigeon-McDonald-Kishimoto-Hoedeman_Remunicipalisation_Putting_Water_Back_in_Public_Hands_2012.pdf.

Rijsberman, Frank R. "Water Scarcity: Fact or Fiction?" *Agricultural Water Management*, Special Issue on Water Scarcity: Challenges and Opportunities for Crop Science, 80, no. 1 (February 24, 2006): 5–22. https://doi.org/10.1016/j.agwat.2005.07.001.

Rockström, Johan, Malin Falkenmark, Louise Karlberg, Holger Hoff, Stefanie Rost, and Dieter Gerten. “Future Water Availability for Global Food Production: The Potential of Green Water for Increasing Resilience to Global Change: WATER AVAILABILITY FOR FOOD PRODUCTION.” *Water Resources Research* 45, no. 7 (July 2009). https://doi.org/10.1029/2007WR006767.

Schwartz, Alan. “The Case for Specific Performance.” *Yale Law Journal* 89, no. 2 (1980 1979): 271–307.

Segal, Geoffrey F. “The Atlanta Water Privatization: What Can We Learn?” Georgia Public Policy Foundation. Accessed February 22, 2022. https://www.georgiapolicy.org/news/the-atlanta-water-privatization-what-can-we-learn/.

Shang-Quartey, Leonard. “Post Privatisation Challenges of Public Water in Ghana.” Transnational Institute, June 23, 2014. https://www.tni.org/en/article/post-privatisation-challenges-of-public-water-in-ghana.

Solomon, Lewis D. *America’s Water and Wastewater Crisis: The Role of Private Enterprise*. New Brunswick, N.J: Transaction Publishers, 2011.

Suleiman, Lina, and Abdul Khakee. “Rethinking Water Reform Policies as a ‘Wicked Problem’ the Case of Urban Water Supply in Ghana.” *International Planning Studies* 22, no. 4 (October 2, 2017): 320–32. https://doi.org/10.1080/13563475.2017.1291333.

Tzanakakis, Vasileios A., Nikolaos V. Paranychianakis, and Andreas N. Angelakis. “Water Supply and Water Scarcity.” *Water* 12, no. 9 (August 21, 2020): 2347. https://doi.org/10.3390/w12092347.

UNDP, ed. *Beyond Scarcity: Power, Poverty and the Global Water Crisis*. Human Development Report 2006. New York, NY: UNDP, 2006.

United Nations. *United Nations World Water Development Report 2021: Valuing Water*. S.l.: UNITED NATIONS EDUCATION, 2021.

VO, Mathilde. “The Role of Women in the Preservation of Intangible Cultural Heritage.” *Institut Du Genre En Géopolitique* (blog), March 25, 2021. https://igg-geo.org/?p=3133&lang=en.

Atlanta Journal. “Water Inquiry Requested.” September 1, 2000, sec. p. 42. https://infoweb.newsbank.com/apps/news/document-view?p=AAHX&docref=image/v2%3A148CCD75565FA964%40AAHX-1810582E795D8742%402451789-180BF7CA15F6926A%4041-180BF7CA15F6926A%40.