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The Confluence of Domestic and International Law in the Institutionalization of the Human Right to Water

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Abstract:
The norm of the human right to water has emerged over the past two decades and grown in international specificity and support. Finnemore and Sikkink’s theory of norm life cycles appears to explain the rise in prominence of this norm. As I gathered data on domestic water policy to explore this theory, my data allowed me to identify a discrepancy in the expected norm formation and institutionalization timeline dominant in constructivist international relations scholarship on human rights norms. Rather than a top-down norm internalization process from the international level, instead we see the norm recognized in domestic law before appearing internationally. I argue that the content of the norm has been mutually constituted by both the domestic and international levels through this process, and the norm that exists at the international level does not match either the initial international version of the norm, or the various initial domestic versions of the norm. In this project, I analyze existing state laws and systematically disaggregate the key elements of the human right to water contained in each, in order to try to explain the mutually constitutive norm emergence process that I argue is taking place in relation to the human right to water. Using a dataset of water laws I gathered and categorized, I analyze the associations between elements of the human right to water, as well as their associations with expected control variables. Additionally, I present case examples from the US and India as a plausibility probe for my argument.
The Confluence of Domestic and International Law in the Institutionalization of the Human Right to Water

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A Dissertation
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Chapter 1: Introduction

After several years of extreme drought, California’s governor declared a drought state of emergency on January 17, 2014 (State of California 2014). California’s water woes only increased, however, with unprecedented restrictions on water use and curtailing of water use rights following in 2015 and 2016. The drought state of emergency lasted until April 2017 (State of California 2017).

In Detroit, Michigan, thousands of residents have faced water shut-offs for non-payment in the face of ballooning water bills. A U.S. Bankruptcy judge found that there was no “right to water” under Michigan or U.S. law that would bar the shut-offs (Snell and Pardo 2014). The UN’s special rapporteur on the human right to water and sanitation declared that the shut-offs were a violation of the human right to water (UN Office of the High Commissioner for Human Rights [OHCHR] 2014).

Northwest of Detroit, in Flint, Michigan, a change in water supply from Lake Huron to the Flint River (made as a financial austerity measure) resulted in the rapid degradation of lead pipes and the poisoning of thousands of residents with toxic levels of lead (Carmody 2016). Although Federal and State authorities are investigating and prosecuting violations of the United States Safe Drinking Water Act, many residents still lack access to clean piped water, and do not trust governmental reports of improved water quality.

In Ireland, hundreds of protests erupted all over the country in 2014 and 2015 as austerity measures changed the way public water was provided and funded (Piggot 2015). The Irish government responded to the right to water protests first by capping the amount to be charged, and then eventually eliminating the water payment scheme and issuing refunds to those who had paid (Citizens Information 2018).
In India, a decade of controversial Supreme Court decisions have allowed further construction on the Sardar Sarovar dam, creating further displacement of indigenous peoples, justified by the dam’s necessity to fulfill the right to water for people in Gujarat, (Narmada Bachao Andolan v. Union of India 2000).

In February 2018, Cape Town, South Africa declared that due to population growth and extreme drought, “Day Zero” when the city will have to shut off taps to homes and businesses is rapidly approaching. Originally projected for mid-April, officials now hope “Day Zero” can be delayed but see it as inevitable (Welch 2018).

Water is having a moment in the public consciousness right now, both in developing and developed countries. Issues of water quality, the affordability of water, the duty of the state to provide water, the responsibilities of individual water users to conserve, and the role of private providers have become subjects of public debate worldwide. Many of these debates are integrally related to the conceptualization of the human right to water.

The idea of a human right to water has increased in theoretical as well as international legal recognition over time; however, domestic water policy and action are required to actually increase access to clean water in practice. Typically, in trying to understand how new international human rights norms become domestically internalized and institutionalized, we expect to see a top-down norm diffusion and socialization process (Cortell and Davis 1996; Finnemore and Sikkink 1998; Risse and Sikkink 1999; Goodman and Jinks 2005). In this dissertation, I argue instead that these top-down theories do not fully explain domestic policies that support the human right to water.

I argue that the human right to water has emerged from a mutually constitutive norm creation process between the domestic and international levels, rather than a top-down norm
diffusion process from the international to the domestic level. Water has always been integral to local and national governance – regardless of whether or not access was instantiated as a human right (Gleick 2000; Salzman 2005; Herrera 2017). Empirically, this has resulted both in some commonalities in water policies, as well as significant variation between policies across countries and at the sub-national level. This dissertation demonstrates the process of mutually constituted norm diffusion from the domestic level to the international level, as well as from the international level to the domestic level. On a policy level, I argue that moving towards a human rights frame for access to clean water is both consistent with local variance, as well as instrumental to increasing access to clean water worldwide.

Access to Water and Human Rights

The necessity of clean and safe freshwater for every aspect of life is hard to overstate. Indeed, fresh water resources have been harnessed and regulated by human societies long before the rise of the modern nation-state. Although global access to a basic water service has increased to 89% in 2015, 844 million people still lack even the most basic access to an improved water source. Moreover, access to an improved water source does not guarantee affordable access to sufficiently safe water, and there are at least 2.1 billion people who lack these aspects (UN-Water 2018, 9).

On the basis of human need, access to clean drinking water has been identified as an international development goal, as part of the Millennium Development Goals in 2000 and now as part of the Sustainable Development Goals launched in 2015 (UN-Water 2018). However, as Alston (2005) reminds us, a development goal does not have the same normative force as a human right.
I do not aim in this dissertation to make the argument for why a human right to water should exist, or should be recognized; that case has been convincingly made relatively recently by several other scholars, including Inga Winkler (2012) and Pierre Thielbörger (2014). Internationally water is now recognized as a human right in at least a normative sense, and increasingly in a legal sense as well, as discussed below. Ultimately, my intention is not to make a theoretical defense of the human right to water, but instead to explain the development and diffusion of the norm over time and across countries, primarily through the lens of norm life cycles and norm diffusion and socialization (Finnemore and Sikkink 1998; Keck and Sikkink 1998; Risse and Sikkink 1999).

Finnemore and Sikkink (1998) proposed the idea of a norm life cycle, in which international norms emerge and are promoted by norm entrepreneurs, then begin to be more frequently recognized both at the international level and by states in a norm cascade, and then finally they become internalized through state-level institutionalization and habituation. With regard to the human right to water, I follow in the footsteps of previous scholarship (Bob 2002, Hertel 2006, Krook and True 2012, Zimmerman 2016) questioning and complicating the norm life cycle model. As I demonstrate in my study of domestic legal water policies, many elements of the human right to water existed before the international concept of a human right to water had cohered. Rather than a story of a few domestic-level norm entrepreneurs taking the human right to water to an international level in order to pressure domestic governments to recognize the right, the process of emergence and institutionalization for the human right to water is more convoluted. Because much of the norm development and emergence for this norm has taken place at the domestic policy level and then moved up to the international level, I argue that the content of the norm has been mutually constituted by both the domestic and international levels.
through this process, and the norm that exists at the international level does not match either the initial international version of the norm, or the various initial domestic versions of the norm. Now that the norm has been firmly established at the international level, however, I believe we are seeing the altered norm begin to diffuse back to the domestic level, working toward internalization.

I define the human right to water as a universal entitlement to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic uses. This definition comes initially from the 2002 General Comment on the Human Right to Water by the Committee for Economic, Social, and Cultural Rights (CESCR). In chapter three I explain in detail how this definition has changed and evolved as the international norm behind it has developed, but this basic definition is the essence of what I mean when I talk about the human right to water.

For the purposes of this research, I follow Thielbörger’s (2014, p. 122) lead and treat the right to water and the right to sanitation as related but separate rights. Although there are excellent advocacy and theoretical arguments for uniting these rights (Winkler 2012, 170-180), in terms of policy analysis, the policies are frequently separate. In fact, the addition of sanitation to the human right to water norm is a good example of how the norm has changed at the international level from its initial appearances at the domestic level.

Although some of the legal justification for the recognition of a human right to water is based on its implicit presence in treaty law, water does not begin to be explicitly mentioned as a human right in treaty law until the 1979 Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW)¹, and the only vaguely. The 2002 General Comment

¹ Article 14(2)(h) of CEDAW provides: “States parties shall take all appropriate measures to eliminate discrimination against women in rural areas in order to ensure, on a basis of equality of men and women, that they participate in and benefit from rural development and, in particular, shall ensure to such women the right: ... (h) To
15 by CESCR is the beginning of the international institutionalization of a human right to water. Over the past 15 years there have been numerous other indications that the norm of a human right to water was internationally cascading (Finnemore and Sikkink 1998), such as the 2008 appointment of a Special Rapporteur by the Office of the High Commissioner for Human Rights (OHCHR), and the 2010 UN General Assembly Resolution. (see Figure 1 for a detailed timeline).

Even though support for a human right to water has been “found” in older human rights documents, I argue that we are still looking at a new norm in the international cascade phase. My research helps us to understand the processes of international and domestic institutionalization for the human right to water. By looking at how the human right to water does not fit predictably into the existing model (and variations) of the norm life cycle, my research helps to explain the institutionalization processes at both the domestic and international level of similar norms, such as other economic rights.

Figure 1.1: Timeline of International HRtW Legal Events

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enjoy adequate living conditions, particularly in relation to housing, sanitation, electricity and water supply, transport and communication”.
My Project

How do human rights become recognized and respected by states? This question is at the heart of human rights research and advocacy. Recognizing rights at the international level—whether through "hard law" (such as UN human rights conventions and other treaty law) or through "soft law" (such as UN General Assembly resolutions) is really only one step towards rights realization. Human rights require domestic institutionalization and enforcement.

Ultimately, international recognition of a human right to water may be less important than the internalization of that right by states.

Initially, I began this project trying to better understand how the human right to water was translated and institutionalized into domestic policy. I was looking not just at the assumed

---

2 Domestic laws are a necessary but insufficient part of respecting and fulfilling human rights. Especially with
domestic home of rights (i.e. national constitutions) but also at corresponding statutory law as well, which is less frequently studied as a source of human rights (Minkler 2009, Richards and Haglund 2015).

I set out to find patterns and commonalities between countries that had adopted human right to water laws, but as I surveyed and coded legal data from over 100 countries, what I found was that countries had not necessarily adopted the human right to water as a coherent concept into their constitutional and statutory laws. Instead, they had created water policies over time that sometimes contained aspects of what we now know as the human right to water. Sometimes these laws framed access to water as a human right, but not always. Even when they did frame access to water as a right, these policies did not always contain everything now included in the international human right to water.

Domestic influence over water policy is not necessarily progressive or even compatible with the human right to water, however. I argue that a rights framework around water policy is an important policy goal, and that the existence and content of that norm has been influenced by domestic norms. However, that influence has not always been in the direction of working toward greater rights. Arguably, many of the states that were excluded from my study had influences that were not conducive or sympathetic to a rights frame.

Finnemore and Sikkink’s (1998) norm life cycle model has been examined and amended by many international relations scholars. The motivations and mechanisms of norm entrepreneurs has been questioned and expanded up with Keck and Sikkink’s (1998), “boomerang” model, Bob’s (2002) “gatekeepers”, Hertel’s (2006) “backdoor moves” and Fukuda-Parr and Hulme’s (2011) “message entrepreneurs.” Scholars have tried to understand why some norms fail to internalize (Bailey 2008), or even begin to cascade (Bob 2009), or meet
with resistance from some activists (Hertel 2006). Additionally, research has been done on the process of domestic socialization of norms (Goodman and Jinks 2003; 2005) and on how the framing of norms can affect its internalization (Payne 2001). Further research, included by Sandholtz (2008) and Krook and True (2012), has emphasized not only the complex processes involved of adopting and translating norms into practice, but the dynamic nature of norms themselves.

Although Finnemore and Sikkink (1998, 893) suggest that international norms can be initiated at the domestic level and then spread up to the international level and then cascade down into greater domestic institutionalization, they primarily focus on the top-down process of norm institutionalization. The norm may start with domestic actors but it becomes more powerful when it moves to the international realm, and then begins to be domestically institutionalized, as evident in Finnemore and Sikkink’s (1998, 895-6) discussion of women’s suffrage. This top-down view of norms has been challenged, however. Sandholtz (2008, 103) argues that norm conceptualization changes through a cyclical or dialectical process. Krook and True (2012, 106) reject the “static conceptualization” of norms, and instead point to the dynamism of norm development as part of the explanation for different levels of diffusion and internalization. Additionally, when these and other contributors to scholarship on norms evolution explore domestic institutionalization, they tend to begin by assessing whether or not the right is recognized in the constitution (Law and Versteeg 2011; Minkler and Prakash 2017; Jeffords and Gellers 2017), rather than looking at statutory laws.

My research builds upon this earlier work, looking specifically how the norm of the HRtW deviates from the expected “top-down” approach to norm diffusion and domestic
institutionalization. I also demonstrate that looking solely at the constitution for legal protection of rights misses major legal protections for elements of the human right to water.

In chapter two, I explore the various literatures this project engages. First I look at how the study of human rights in general (specifically the divide between civil and political rights and economic and social rights) has led to an incomplete understanding of human rights as a whole, as well as the complexity added by the recognition of the indivisibility of human rights. I then explain a variety of the frames used for water policy, including a human rights frame, a development frame, a property frame, and an environmental frame. I then argue the benefits of using a human rights frame to discuss the issue of water policy. Finally, I describe the research around measuring human rights and how my research fits into this conversation.

In chapter three, I present my original empirical research on domestic water policies around the world. I collected and coded water laws (both constitutional and statutory) from 113 countries. I coded each policy for various aspects of the human right to water. I explain how I created my data set, and fit it into the timeline of the development of the human right to water initially presented in this introductory chapter. Using my data and an example of legal language changing over time, I demonstrate the mutually constitutive norm formation process that I argue has been central to the contemporary emergence of the human right to water.

In chapter four, I explain my coding scheme in detail, using examples from the policies, and describe the data on the elements of the human right to water that I coded. In this chapter I demonstrate the wide variety of water laws, both constitutional and statutory, across the world and over time. Some aspects are common or nearly universal, like laws protecting water quality. Others, such as protection from disconnection, are rarer, or practically non-existent (despite being identified as part of the human right to water by scholars such as Winkler, or Thielbörger).
In chapter five I move back toward my original question, looking for patterns in how different aspects of the human right to water cluster within and across countries. I use a polychoric analysis to determine the relationship between different aspects of the HRtW and I find significant overlap between certain aspects of the HRtW, such as access and quality, while others are more isolated, such as affordability. Additionally, I use logistic analysis to test the association between the elements of the HRtW, both combined and individually, and expected control variables.

In chapter six I make the policy case for why framing access to clean water as a human right advances efforts to increase access in practical terms, and engage in a plausibility probe for my theory of mutually constitutive norm construction. I justify the rights frame in relation to other possible frames (such as a development frame or an economic frame) using comparative case examples. These include: two cases related to the United States’ lack of legal recognition for a human right to water and two cases related to India’s recognition of a constitutional right to water by its Supreme Court but the incomplete institutionalization of water as a human right. Together, the case studies demonstrate why and how a human rights approach to water is necessary but not sufficient to protect access to water; rights discourse must also be interpreted in the context of the development of domestic water policy to be effective. The dissertation thus contributes to a new theoretical framework for understanding multi-level, mutually constituted norms evolution.

My concluding chapter explores the implications of my research not only for our general understanding of how new rights are developed and disseminated but also for practical policy implementation. I close by exploring the next possible steps in this research and how this data on water policies could potentially be used by policymakers and human rights advocates alike in
their respective efforts at ensuring clean access to water for the 2.1 billion people who still lack it globally.
Chapter 2: Contextualizing the Human Right to Water

Human rights theory, in part, anchors my study of the right to water – in particular, the distinction between having a right fulfilled and having a material condition met. Impediments to accessing water can be both overt and structural. Though the literature on human rights during the Cold War years was overtly divided between types of rights (i.e., civil and political rights emphasized by the West, and economic, social, and cultural rights by the Soviets and their allies)3 there is a contemporary turn toward recognizing the interdependence of rights – as recently as 2017 by the UN Special Rapporteur on Extreme Poverty and Human Rights Philip Alston. Alston (2017) specifically highlights the ways in which poverty and lack of economic and social rights fulfillment leads to the absence of civil and political rights for many people. The interdependence and indivisibility of all human rights is a key component to understanding the need for domestic law that institutionalized the human right to water.

The right to water is only one framework for meting out access and implementation of water policy. This chapter grapples with different frameworks, including a human rights framework, the development framework, a property framework, and an environmental framework. By way of background, I briefly outline the major lines of debate – beginning with the relationship between the right to water (as an economic right) and other human rights. I then discuss the bases of alternative frameworks and defend the use of a human rights framework. Finally I discuss the long literature attempting to measure human rights, and explain how my study of the right to water fits into this scholarship.

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3 This division reflected the Cold War political compromise that took the unified Universal Declaration of Human Rights (UDHR) and split it into two different treaties, the International Covenant on Civil and Political Rights (ICCPR) and the International Covenant on Economic, Social, and Cultural Rights (ICESCR).
Human Rights Divided

There has been a tendency, especially among United States-based human rights policymakers, to treat civil and political rights as distinct from and of greater urgency than economic, social, and cultural rights (Hertel and Minkler 2007). Even important European human rights philosophers such as Maurice Cranston (1967) considered civil and political rights to be traditional human rights because of their origin in natural law. Additionally, Cranston considered civil and political rights to be enforceable in part because he argued that they require only a commitment by the government not to interfere with those rights (i.e., negative action). Economic, social, and cultural rights, according to this logic, are considered unenforceable (and perhaps not even human rights) because they require positive action on the part of the state to fulfill them.

The positive/negative rights distinction has been challenged on a number of fronts, however. Donnelly (2003, 30) argues that even the most classically negative rights (for example, the right to be free from torture) nevertheless require positive action on the part of the state, such as police training and education. Many other political and civil rights require extensive (and expensive) institutions to be created by the state in order to fulfill those rights (Copp 1992). The right to a timely and fair trial (another traditional civil and political right) requires a functional judicial system that operates under the rule of law and has enough courts to hear cases in a timely manner.

Donnelly (2003, 30) also argues that, at times, positive rights may be best fulfilled by negative government action. The right to water provides a clear example. When governments actively disconnect water users from service (either for reasons of non-payment of service fees or
for the users’ attempts at using non-sanctioned sources), the government itself takes an action that prevents or removes access to water. By not acting in these circumstances, governments would respect the human right to water. Ultimately, Donnelly concludes that all human rights have both positive and negative dimensions.

Shue ([1980] 1996, 52) artfully deconstructs the positive/negative dichotomy of rights, and suggests that rights in fact have the correlative duties to avoid depriving, to protect from deprivation, and to aid the deprived. This concept is similar to the “respect, protect, and fulfill” framework that undergirds international treaty law concerning state responsibilities for human rights. This framework lays out the state’s negative duties to respect rights and not violate them; its positive duties to protect rights and prevent violation by other actors; and its added positive duties to fulfill rights by creating an enabling environment for their promotion.

Osiatynski (2007, 59) identifies a distinction between rights and freedoms rather than between civil and political rights, and economic and social rights. He argues that rights are demands against the state that require action on the part of the state; transcending the rights “camps,” he includes both economic rights and political rights in this category. He points out that rights such as political participation require the state to organize elections, which are both costly and time-consuming (Osiatynski 2007, 59). He also argues that although freedoms do not require any action by the state, they are basically meaningless without enforcement by the state. Using this distinction, there is not much difference between traditional civil and political rights, and economic and social rights.

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4 Water users can be disconnected for various reasons, including for non-payment of bills or for being a non-sanctioned connection, usually in slums. Both are usually legal reasons for disconnection, but if the users do not have access to water otherwise, the enforcement of such law results in a rights violation. Obviously arbitrary or malicious disconnection by the government would also be a rights violation.

5 The “Respect, Protect, Fulfill” framework originated in the Maastrict Guidelines (1998) and is further explained in the CESCR general comments 12 (the right to adequate food), 13 (the right to education), 14 (the right to the highest attainable standard of health), and 15 (the right to water).
Osiatynski (2007, 60) does point out one seemingly crucial difference between economic rights and political rights. Political rights cannot be provided for oneself. If someone attempts to buy political rights (such as the right to vote or to hold office) the result is corruption. However, many economic rights can be provided through work, and only the most vulnerable members of society need assistance from the state. This difference is troubling to Osiatynski, because it seems unjust that some people would have to work in order to meet their basic needs met while others would simply have those needs fulfilled by the state.

These theoretical debates within human rights theory shadow the context in which water policy has developed since the 1940s vis-à-vis rights. There is room to see access to water as a right, but many theorists as well as policymakers and citizens alike view access to water as integral to satisfying basic needs, not rights. This discussion, in turn, taps into the question central to distinguishing between having a right fulfilled and having a material condition met. I argue that even when the material need is met, the right is not necessarily fulfilled. I explore this distinction further in the following discussions of the frames surrounding water policy.

**Different Frames**

Human development and human rights are analytically distinct concepts (despite occasional conflation in the popular press or public discourse), but much of water policy has been caught up between the two frames. They are rooted in very different views of responsibilities. Although development and rights activists may have similar goals, including minimum subsistence for everyone, proponents of a development-oriented approach do not see the state as necessarily responsible for providing this basic subsistence. For example, Stiglitz and Charleton (2005) argue that fairly and thoughtfully implemented trade policy can be beneficial for development, which will ultimately raise the standard of living across the board. However,
this is not a rights-based argument. The state is responsible for implementing the necessary trade reforms, which will encourage development, which will ultimately provide a minimum subsistence, but there is no direct moral responsibility on the state to do so. Although these approaches might provide people with minimum subsistence, it is not guaranteed, and there is no recourse if people do not receive minimum subsistence. Even direct state provisioning will not necessarily fulfill a human right. For example, building and maintaining the infrastructure for piped water can certainly work toward fulfilling the human right to water, but it is not enough to fulfill the right on its own. If there is not any way to assure that the water is clean and safe to drink, the right is not fulfilled. If the state is legally able to stop providing that water, the right is not fulfilled. A right allows the rights bearer to make a claim against the state (the duty bearer) if the water is not provided, or if it is not drinkable.\(^6\)

The state has had a role in providing drinking water since the Roman aqueducts (Salzman 2005). Large scale piped water and sanitation infrastructure were developed primarily during industrial development in the Western world, either by private entities or by the state (Salzman 2005). Improving access to water and sanitation has been recognized as an important part of development for the post-colonial world since the second half of the twentieth century, with the United Nations declaring the 1980s as the International Drinking Water Supply and Sanitation Decade. Providing drinking water, especially in places where water was more difficult to access, has continually been part of the duties of an effective state. However, as capitalism developed and the emphasis on markets increased, the emphasis on water development moved from a state responsibility to a private sector-led initiative (Salzman 2005, 24). Along with many resources, water has often been treated as a private commodity (Salzman 2005, 24; Dublin Principles 1992).

\(^6\) The respect, protect, fulfill framework is the basis of all human rights, and while material provision of clean water would is part of fulfillment of the right, the duty to fulfill is requires “appropriate legislative, administrative, budgetary, judicial and other measures toward the full realization of such rights” (Maastrict Guidelines 1998).
Water as an economic good, or private property is a historically common frame. Scott and Coustalin (1995) provide a detailed history of the evolution of water rights that is firmly rooted in an economic frame. Their definition of a water right “the right to use or enjoy the flowing water in a stream” is conceptually different from the idea of a human right to water (Scott and Coustalin 1995, 821). However, I must emphasize that private property and property ownership, in and of itself, is not antithetical to human rights. Article 17 of the UDHR states: “(1) Everyone has the right to own property alone as well as in association with others. (2) No one shall be arbitrarily deprived of his property.” However, that right, like all rights, must be balanced against other human rights, and does not mean that anything and everything could be treated as property. The legitimacy of owning water has been a major source of contention with regard to the framing of the human right to water. Baer (2015) points back to various struggles against water privatization as a catalyst for the global campaign for a human right to water. Bakker (2008 434-5) rightly points out that the transition from treating water as a common pool resource to a delimited, regulated resource includes many different institutional frameworks, some of which are more compatible with the idea of water as a human right than others.

Finally water is also discussed through an environmental frame, where the focus is on water as a common pool resource for human use, as well as the ecological role and consequences of water policy. Water policy decisions may be concerned with environmental ethics (Collins-Chobanian 2000) or the rights of future generations (Hiskes 2009). Additionally, an environmental frame can take a strong focus on specific policy, such as climate change risk.

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7 The right to property was frequently cited as one of the many justifications for chattel slavery, and one of the many barriers to elimination of the practice of treating human beings as property. Article 4 of the UDHR, declares slavery to be a human rights violation: “No one shall be held in slavery or servitude; slavery and the slave trade shall be prohibited in all their forms” and the validity of that article is not challenged by article 17’s right to own property. “All human rights are universal, indivisible and interdependent and interrelated,” according to the Vienna Declaration and Programme of Action (1993, I(5)), which means that rights must be interpreted in a consistent fashion.
mitigation, and related policy drivers (Boyer et al. 2016). Water management has become increasingly technical and reliant on experts. Haas (1992) suggests that as policy reaches this level of technical knowledge increases the influence of epistemic communities. Epistemic communities can produce and provide necessary information to policy makers, but their information comes through the filter of their own wider worldviews, which in turn can institutionalize those views if the epistemic community is sufficiently influential within a governmental bureaucracy (Haas 1992, 4).

It is important to point out that none of these frames are exclusive, and it is highly unlikely that any state will have water policy based solely within one of these frames. Bakker (2008 442-4) dissects the binary of the commons/commodity and public/private debate and points out that service delivery is increasingly moving toward hybrid management models. Similarly, Winkler and De Albuquerque (2010) stress that water privatization is not necessarily the enemy of the human right to water, but rather a potential tool for fulfillment (with oversight and regulation). There are benefits and costs (and winners and loser) under each framework. I explore some of these costs and benefits below, and make the case for why I believe including a human rights frame is important for water management. However, even if states want to integrate a human rights frame, it must be integrated into the existing framework, whether that is primarily environmentally-driven, property-driven, development-driven, or already rights-driven.

Although some states continued to publicly fund water development projects, such projects were often focused on generating hydropower or managing flood control or irrigation rather than supplying drinking water. The World Bank and other international organizations also provided loans for major water development projects such as dam building or infrastructure improvement. However, along with that funding came other requirements to privatize water
supply systems (Nelson and Dorsey 2008; Baer 2015; 2017). Privatization is sometimes part of an economic frame, because it is about who owns the water and who is allowed to use it, but privatization can also suggested in the context of a development frame such as in the Dublin Principles, as a way to more efficiently provide water, or an environmental frame as a way to encourage conservation through pricing. However, even if privatization allows for a more responsible or efficient use of resources at a higher level, there are individual-level concerns, which is the level of human rights violation or fulfillment.

One of the problems with primarily private development of water supplies is that unless tiered pricing or subsidies are used, the cost of water becomes prohibitive for very poor people, who may then turn to unclean water sources. Another problem with private water development is that providing clean water to rural villages is frequently not cost effective, which puts the primary emphasis on urban water development, rather than universal access (De Albuquerque and Winkler 2010, 170). There is a high disparity between access to improved water sources for urban and rural populations. Of the 780 million people who lack access to an improved water source, 653 million live in rural areas, over 80 percent of the total (WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation 2012, 12). These problems do not necessarily mean privatization is anti-human rights, but rather that the human rights framework can highlight the individual and community level concerns with privatization.

Alongside the push for privatization of water supply systems and an emphasis on development goals regarding water, we have also seen the emergence of a human rights discourse surrounding water. Although the HRtW itself was not fully developed internationally until after the 2003 General Comment, human rights in general (but especially regarding an
adequate standard of living, food, and health) have been part of the context in which water institutions have developed at the state level.

Access to clean water was originally discussed primarily within a development frame, before eventually gaining a foothold as a human right. Despite similar-seeming goals (to increase access to clean water) the advocates of each approach have not always tended to work well together, even after the advent of “rights-based development” theory and corresponding policy approaches (Russell 2010; Nelson and Dorsey 2008). Rights-based development, or a human rights based approach to development, is the practice of using rights language (and corresponding concepts) in the context of development goals. However, sometimes this language shift is not followed by a change in beliefs or policies (Eyben 2003). Even when the rights-based approach is sophisticated, there are still major issues with regards to specificity and implementation (Alston 2005, 802-804).

Water practitioners who view access to water through the development framework may see little added value by invoking a human right to water, and many potential harms from doing so. Specifically, the human rights framework typically fits within a system of international agreements (which Conca (2006, 6) calls “the regime approach”), which has thus far proven to be inadequate to solve many pressing global and local water problems. Rights-advocates, by contrast, view the developmentalist position as not going far enough to guarantee adequate protection because people in need of water lack standing as legal claimants in many contexts, unless the development projects are accompanied by legal guarantees. Conca (2006) points to the disconnect and contentious in the early 2000s between global water policy specialists and water anti-globalization activists.

Miller (2017, 64) notes that some agencies differentiate between a rights-based approach and a human rights-based approach, with the former being more strictly limited to legal rights, and the latter being a broader more conceptual human rights approach. However, the phrase “rights-based” is typically used as a short hand for human rights based.
Development specialists identify several problems with using a human rights approach to increase access to clean water. Some development specialists consider human rights advocates to be ineffective at implementing policy, sometimes hindering actual progress and overly politicizing the issue of access to water (Russell 2010, 11-12). Indeed, NGOs often have been more successful in pressuring governments to halt active human rights violations than in encouraging them to take positive action towards increasing human rights (Nelson and Dorsey 2008). Development practitioners also criticize rights advocates for overly politicizing water issues, even going so far as to characterize rights advocates of being “inflammatory” (Russell 2010, 7; 11).

Additionally, the human rights conception of water can be overly broad, which misses complexities in specific contexts. As Alston (2005 803-4) points out, many human rights bodies and mechanisms are underfunded, and sometimes “the recommendations emerging from them are not at all operational and some of them are not especially well-grounded.” Although the human rights community has been working hard to correct these deficiencies over the past two decades, the stereotype of a “head in the clouds” human rights advocate with little practical experience persists. Development practitioners also critique rights-standards stemming from incorrect technical knowledge (Russell 2010, 12).

Although water development practitioners may dislike the politicization of water access, access to water often is a political issue: minority, poor, or other disenfranchised groups lack access at higher rates than majority populations in many states⁹, even after large segments of the population have gained access. Governments count on the silence and inaction of citizens and

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⁹ For example, Filčák, Szilvasi & Škobla (2018) draw attention to the massive disparity in access to clean water the Roma face in Europe (this study specifically in Slovakia). According to the Indian Health Service in the US (2016), 6.5% of Native Americans and Alaskan Native homes lack access to a safe water supply, as compared to less than 1% of the overall US population.
refrain from using their resources to improve access to clean water. The decision of a
government to allow these levels of inequality to persist is a political choice, one that many
policymakers assume will be without electoral consequences. Politicization of water may be
detrimental in some cases, such as when governments treat water provision as a clientalist good
to be supplied (Herrera 2017) but politicization can also undergird social movement activism to
push recalcitrant governments to take action (Epp 1998).

Politicization, indeed, is one of the key benefits of a human rights framework. Guzzini
(2005) refers to politicization as the imagining of alternatives. The rights framework provides a
foundation for mobilization to demand rights. Moving water provision from the realm of
bureaucracy or service provision into the realm of politics often just recognizes the existing level
of contestation over water resources planning and use (Warner and Wegerich 2010). Using a
human rights framework requires respecting the inter-related human rights in the course of
realizing a targeted right (Russell 2010, 13). This is where the indivisibility and interconnected
nature of human rights rise to the fore. A human rights approach is not just about the outcome, it
is also about the process, which serves to protect other human rights (Russell 2010, 13).

Just as having a material need met is not the same as having a right fulfilled (Alston
2005), having a having a right to something is not the same as having the thing itself. The legal
right to clean water does not provide that clean water itself. Access to clean water without a right
leaves people vulnerable to having access to the resource withdrawn at any time. Implicit (and
often explicit) in a right is support for a legal remedy and redress (Russell 2010, 13). If access to
water is interrupted, having a right to water provides the basis for a legal claim. And while legal
claims may delay or be disruptive to large-scale development projects (such as the Sardar
Sarovar Dam in India that I discuss in chapter 5), legal claim-making is nevertheless integral to protecting rights, which is not the same as simply meeting basic needs.

Development goals are utilitarian in nature and can target particular sub-populations or be framed in terms of thresholds of fulfillment, rather than as universal guarantees (Stewart and Deneulin 2002, 65; Nyamu-Musembi and Cornwall 2004, 3; Winkler 2012, 215). Human rights, by contrast, are universal, not utilitarian. Respecting, protecting, and fulfilling a human right (including an economic right, such as the right to water) thus entails more than simply providing the thing itself.

A human rights framework moves the provision of water from the realm of governmental discretion or benevolence into the realm of legal entitlements and claims (Winkler 2012, 214). It creates process requirements such as participation and accountability, not just because they will (hopefully) lead to better outcomes but because rights are held by people who exercise their agency in the process of realizing their human dignity (Winkler 2012, 215). Eyben (2003, 2) page number) argues that “understanding participation as a right, rather than an instrument for greater aid effectiveness, has been one of the biggest shifts in agency thinking in recent years.”

**Development and Rights: Competing or Complementary Goals?**

There are both costs and benefits to solely approaching the provision of drinking water through a development or rights-based frame. The most problematic aspect to the development framework is the lack of accountability and the lack of mechanisms to address violations to access. If the government or third parties interfere with access to water, a development frame provides no way to challenge that interference. This problem is highlighted in the wider context of economic development, because many development projects have interfered with access to water, such as the Three Gorges Dam in China or the Tehri Dam in India (Watts 2011; Feldman
A rights framework provides support for legal remedy (Russell 2010, 13). If access to water is interrupted, having a right to water provides the basis for a legal claim.

Privatization of water resources in the name of economic development has limited access to water when very poor people have been priced out. Water is necessary for economic development beyond drinking water – expanding irrigation and industrial uses of water are major development goals. However, if drinking water is not privileged and protected above those other uses, an overemphasis on development writ large interferes with individual rights-holders’ access to water for drinking and domestic uses.

Both the development and the rights approaches have the potential to emphasize local needs. Development is frequently responsive to the specific domestic context and uses expert practitioners to develop infrastructure projects (Russell 2010). The rights framework requires participation by local actors, which helps to protect other human rights (Russell 2010, 13). A development frame can provide access to greater resources. Although some villages are best served by smaller scale water projects, providing access to clean and safe drinking water primarily requires larger scale infrastructure projects, which is the purview of development specialists. Access to improved water sources has been increasing worldwide, which is largely due to development projects.

One of the potential problems with trying to address the need for water through an international human rights framework is that there is no enforcement mechanism for the right to water internationally (Russell 2010, 7). Additionally, individuals do not have international standing to sue for violations in international courts or arbitration fora. A rights framework must also be domestically institutionalized to be effective.
Water practitioners on the development side criticize rights advocates for overly politicizing water issues, even being “inflammatory” (Russell 2010, 7; 11). Although water development practitioners dislike the politicization of water access, access to water is often a political issue, with minority, poor, or other disenfranchised groups lacking access. Governments depend on the silence and inaction of citizens if they choose not to use state resources to improve access to clean water. Politicization of water may be detrimental when governments are genuinely trying to improve access, but it is necessary if governments are blatantly ignoring the needs of their populations. The rights framework provides a foundation for mobilization to demand rights (Epp 1998). Using a human rights framework also requires respecting other interconnected human rights in the realization of a targeted right (Russell 2010, 13).

Ultimately, even if a state were to ground its water policy in human rights terms, it could still have pre-existing policies on the books and corresponding institutions that had been influenced by a non-rights based development framework. This is not necessarily a problem if the state has the political will and capacity to align the frameworks (or at least render them complementary to each other). These policy and institutional legacies thus inform how water institutions evolve over time.

**Measuring Human Rights**

This dissertation forges a synergy between development theory and human rights theory (specifically, theory on economic and social rights) and centers empirically on the measurement of the right to water as a human right. Measuring human rights is critical to evaluating their effectiveness and the level of state compliance with corresponding duties. However, measuring human rights, especially cross-nationally, remains challenging.
Recognition, measurement, and enforcement of economic, social, and cultural (ESC) rights have lagged behind civil and political rights for many reasons. ESC rights had a difficult time achieving theoretical legitimacy, especially in the Cold War environment, and the treaty monitoring body for the ICESCR took much longer to establish than that for the International Covenant on Civil and Political Rights (Hertel and Minkler 2007, 14). Measuring ESC rights was seen as particularly difficult due to the positive dimensions of rights fulfillment, rather than simply measuring instances in which the government failed to respect a right. Consequently, many of the early measures of human rights were of civil and political rights, rather than economic, social, and cultural rights.

Measuring Enjoyment of Rights

Chapman (2007) details the history of attempts to monitor ESC rights and is, herself, the originator of both the core obligations approach and the violations approach to measuring ESC rights. The core obligations approach identifies certain elements of ESC rights that require immediate action on the part of the state, and are not subject to progressive realization (Chapman 2007, 152). These core obligations include non-discrimination, equal treatment for men and women (both de facto and de jure), and that a “significant number of individuals” within the state not be deprived of basic needs (Chapman 2007, 152). One advantage of the core obligations approach, or the related minimum state obligations approach, is that it provides a clear line for monitoring compliance. A disadvantage, however, is that a floor for compliance can easily become a ceiling (Chapman 2007, 154). This approach could eliminate many of the features of human rights, such as participation and the ability to seek redress, rendering it akin to a list of development goals, without careful construction. However, MacNaughton and Foreman (2014,

10 Such as the CIRI Human Rights Project (Cingranelli and Richards), The Political Terror Scale (Gibney), and the Physical Integrity Rights Scale (Poe and Tate).
provide two examples of thoughtful human rights impact assessments for the right to health effects of trade agreements which require transparency, participation, and non-discrimination, which integrates the further process dimensions of ESC rights.

The violations approach attempts to measure ESC rights in a similar way to civil and political rights – by analyzing varied instances of ESC violations including “(1) violations resulting from actions and policies on the part of governments; (2) violations related to patterns of discrimination; and (3) violations taking place due to a state’s failure to fulfill the minimum core obligations contained in the Covenant” (Chapman 1996, 24). Chapman proposed this approach as a way to address the conceptual fuzziness of the baseline for economic rights fulfillment. The process of setting a baseline is complicated, however, by the fact that ESC rights fulfillment often takes a significant commitment of resources and that states have widely divergent level of existing resources at the outset. Accordingly, ESC rights can be realized progressively over time, as long as there is no discrimination and the state takes steps to “the maximum of its available resources” (ICESCR, art. 2 para. 1) to address deficiencies and protect against retrogression (i.e., undermining previously attained levels of fulfillment).

Measuring progressive realization has been difficult (Chapman 2007) and some states have taken advantage of the ambiguity and thus avoided their human rights duties (Randolph, Fukuda-Parr, and Lawson-Reemer 2010). Nevertheless, the last two decades have been a period of rapid evolution of statistical approaches to measuring economic and social rights – and this evolution dovetails with conceptual and legal advances on the specification of a right to water.

For example, the Social and Economic Rights Fulfillment Index (SERF Index) was developed to measure the “progress” of progressive realization (Fukuda-Parr, Lawson-Reemer, and Randolph 2009; Randolph, Fukuda-Parr, and Lawson-Reemer 2010). This innovative
approach takes into account the fulfillment of the right from both the duty-bearer and rights-holder’s perspectives (Randolph, Fukuda-Parr, Lawson-Remer 2010). Although they acknowledge that the right to water is a right unto itself, they use water and sanitation indicators to proxy the right to adequate housing in low and middle income countries (Fukuda-Parr, Lawson-Remer, and Randolph 2009, 203, 205).\textsuperscript{11}

*Measuring the Institutionalization of Rights*

Landman (2004) differentiates between measuring rights in principle and rights in practice. Rights in principle are international and domestic legal guarantees for those rights. Rights in practice are the rights “actually enjoyed and exercised” by people within a country. While measuring the right to water in practice is important, measuring the *right in principle* is essential for a full understanding of the right. In this dissertation, I thus focus on measuring the human right to water in principle – specifically by identifying the legal guarantees for the right to water in differing jurisdictions cross-nationally.

One of the primary ways states have attempted to protect human rights is through creating and joining international treaties. Ideally, states become party to human rights treaties because they intend to abide by the treaty and want to protect the human right of their citizens. Realistically, states have multiple motivations for joining human rights treaties, including international reputation and virtue signaling (Hathaway 2002). Moreover, states are composed of multiple actors, often with competing goals and motivations. So even if some state agents are fully in favor of abiding by human rights treaty obligations, other state actors may not share that view.

\textsuperscript{11} Given the many flaws with using the “Access to an improved water source” indicator to actually measure access to clean drinking water, it may actually be better used as a proxy for adequate housing, because it is largely a measure of whether a household has piped water, not necessarily the cleanliness of it (De Albequerque and Winkler 2010, 167)
Given the multiple possible motivations for joining human rights treaties, many scholars have tried to evaluate the effectiveness of being a party to a human rights treaty on human rights outcomes. Most of these studies have been focused on civil and political rights rather than economic and social rights, suggesting that ratification of human rights treaties such as the International Covenant on Civil and Political Rights (ICCPR) and the Convention Against Torture (CAT) tend not to be robustly related to higher levels of compliance (Keith 1999; Hafner-Burton and Tsutsui 2005, 2007; Hathaway 2002; Landman 2005, 2006; Neumayer 2005).

Clark (2017) recently found more promising results looking at ratification of CAT and human rights performance related to torture. Specifically, when combined with UN country-specific criticism, countries that have ratified the CAT are more likely to respond by decreasing torture violations, with even greater effects in democratic countries (Clark 2017, 10-11). She treats treaty ratification not as a one step, static condition, but as a feature within a dynamic process of international and domestic assessment (Clark 2017, 3). This dissertation, while not looking at the effectiveness of treaties, builds on Clark’s theory that enforcement of human rights is a process that requires the interaction of both the international and domestic level of law and governance.

Sandholtz (2012) found mixed results depending on the model he used. In a model with just control variables, ratification of the ICCPR was associated with better human rights performance, but increasing the total number of human rights treaties was associated with overall worse human rights performance. Additionally, Sandholtz (2012) tested the effects of domestic variables, such as an independent judiciary and the constitutional status of treaty law. He found that domestic variables were required for treaty membership to make a difference, which suggests that domestic politics is a crucial variable for human rights treaties to work. This
dissertation advances Sandholtz’s observation concretely by focusing on the co-constitution of the right to water at multiple policy levels, through the interplay of international and domestic policy implementation.

Research has also been conducted in general on whether constitutional rights provisions were associated with better human rights outcomes. Alston (1999) argues that almost all constitutions contain some protections for human rights. But the existence of constitutional rights guarantees is not necessarily related to actually respecting human rights (Alston 1999, Keith 2002, Keith et al. 2009, Law and Versteeg 2011). Kaletski et alia (2016) use a sophisticated study looking at constitutional guarantees and the enforceability of provisions to account for economic and social rights compliance (measured with SERF). Their study shows potential effects for enforceable constitutional guarantees, most strongly for the human right to health. This study furthers the idea that the language and specific legal provisions matter when it comes to institutionalizing human rights.

The human right to water does not fit easily into much of this existing literature, because the primary treaty that protects the human right to water is the ICESCR – and it does not do so explicitly, but rather by extension (i.e., through provisions on the right to an adequate standard of living, to food and housing, and the right to the highest attainable standard of health in articles 11 and 12). The ICESCR is a treaty with very high membership and hence, is quite likely to be used for virtue signaling (Hathaway 2002). Additionally, the lack of an explicit reference to water suggests that states may be less motivated to protect the right to water specifically as one of their ICESCR treaty obligations. But as I detail in later in this chapter (in the Domestic vs. International Law section), legal protection for the human right to water is not found solely (or even primarily) in international law. Rather, I believe that domestic law -- not just constitutional
law, but statutory law as well -- is where we can find the legal protections for the human right to water.

In this dissertation, I focus on measuring the human right to water in principle, because understanding how a right is conceptualized and codified will necessarily guide our assessment of the enforcement of those policies. The protection of a right within the law is an important part of protecting human rights, and the legal conceptualization of the right can help focus advocacy efforts and eventual realization.

**Human Right to Water Research**

Even before measurement can begin, the human rights in question must be conceptualized and operationalized (Chapman 1996, Landman 2004). My conceptualization begins with the basic definition provided by the 2002 General Comment by the Committee on Economic, Social and Cultural Rights (CESCR): “The human right to water entitles everyone to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic uses” (CESCR 2002, para. 2). This definition is rooted in the CESCR’s 2002 finding that a human right to water is implicit in the ICESCR because “An adequate amount of safe water is necessary to prevent death from dehydration, to reduce the risk of water-related disease and to provide for consumption, cooking, personal and domestic hygienic requirements” (CESCR 2002, para. 2).

The importance of water was first signaled in international law in the Geneva Convention Relative to the Treatment of Prisoners of War: “Sufficient drinking water shall be supplied to prisoners of war” (Geneva Convention 1949, art. 26). Although the Geneva Conventions are humanitarian law and do not apply outside situations of conflict, they are an important early
piece of human rights law and they signal an early understanding of the necessity of water, even in a limited way.

The human right to water is *implicitly* recognized in the International Covenant on Economic, Social, and Cultural Rights (ICESCR) under articles 11 (the right to an adequate standard of living, the right to food, and the right to housing) and 12 (the right to health) (Winkler 2012, 45-46). Winkler (2012, 49) also argues that a minimum amount of water for survival is also implicitly provided by the International Covenant on Civil and Political Rights (ICCPR) under the right to life (article 6). However, the right to water is never explicitly mentioned in any of the foundational human rights documents.\(^\text{12}\)

The first *explicit* mention of a human right to water was the Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW). The treaty, which was adopted in 1979 and entered into force in 1981, includes access to water as part of the adequate standard of living. “All women have the right to enjoy adequate living conditions, particularly in relation to housing, sanitation, electricity and water supply, transport and communications” (CEDAW 1979, 14(h)). This treaty recognizes that there is a human right to water as part of a right to adequate living conditions, but does not specify its contents, only indicating that water supply is essential.

The Convention on the Rights of the Child (CRC), which was adopted in 1989 and entered into force in 1990, recognizes the right to clean drinking water as part of the right to health. State parties to the treaty are obliged:

\[\text{T]o combat disease and malnutrition, including within the framework of primary health care, through, inter alia, the application of readily available technology and...}\]

\(^{12}\) For a very detailed discussion of the foundations of the human right to water in international law, see Winkler (2012) chapter 3.
through the provision of adequate nutritious foods and clean drinking-water, taking into consideration the dangers and risks of environmental pollution. CRC 1989, 24(c)

This treaty also recognizes the human right to water, linking it to the human right to health, and specifying that it should be clean drinking water, and recognizing the dangers of environmental pollution to water quality.

Finally, the Convention on the Rights of Persons with Disabilities (CRPD), which was adopted in 2006 and entered into force in 2008, includes a right to equal access to water in the requirement for an adequate standard of living and social protection:

States parties recognize the right of persons with disabilities to social protection and to the enjoyment of that right without discrimination on the basis of disability, and shall take appropriate steps to safeguard and promote the realization of this right, including measures: (a) To ensure equal access by persons with disabilities to clean water services, and to ensure access to appropriate and affordable services, devices and other assistance for disability-related needs. CRPD 28 2(a)

This treaty links the right to water to the enjoyment of the right to social protection without discrimination, indicating that receiving clean water services is a standard societal expectation. The treaty specifies that the water must be clean, and specifies services, pointing to an obligation to provide a regular supply of water.

**Domestic vs. International Law**

Because there is not a treaty focused on the human right to water, and because the treaties that do include it tend to be treaties with high membership, being party to a relevant treaty is not a good way to measure variance in legal protections among different states, either at the national
or subnational level. Measures of the right in principle for the human right to water primarily capture constitutional guarantees (Law and Versteeg 2011; Minkler 2009; Jeffords 2013). These measures are incomplete in several ways. First, they are centered at the national level and tend to count only constitutional guarantees. Second, these measures typically count the mention of a right to water, rather than the specific policy mechanism necessary for implementing the human right to water.

The real place that human rights have their greatest impact is when they are translated into domestic policy. Cingranelli and Richards (2007, 218) define human rights policies as “what governments say they are going to do to protect human rights. Such policies are contained in national statutes, executive orders, administrative rulings, and judicial decisions.” Minkler (2009) argues that domestic legal constraints can have a greater effect on a government’s willingness to spend resources improving human (specifically economic) rights. He argues that constitutional protection indicates the public’s interest in economic rights and limits the ability of a policymaker to make decision errors (Minkler 2009, 27). Kaletski et alia (2016) find that only enforceable constitutional guarantees seem to affect the fulfillment of various economic rights. Bassiouni (1993) explores the congruence between international human rights instruments and national constitutions with regard to protections for people in the criminal justice system. He argues that international human rights gain power and legitimacy when they are recognized nationally, and that the convergence of both international and national recognition of the right gives it the most firmly grounded legal standing. Hillebrecht (2014, 19) argues, in turn: “Many scholars seem to agree that domestic, not international, institutions are the linchpin to securing human rights.” My work takes these insights as its point of departure, and also engages
Finnemore and Sikkink’s (1998) norm life cycle as a causal model, in order to explain how the human right to water became domestically institutionalized as a norm in multiple states.

Norm Life Cycle

Finnemore and Sikkink (1998) proposed the concept of a “norm life cycle” as a three-stage process. The first stage is the norm emergence phase; the second involves a norm cascade; and the third entails norm internalization (Finnemore and Sikkink 1998, 895). The theory envisions key states as “norm leaders” who are persuaded to adopt new norms by “norm entrepreneurs.” As the norm becomes more widely adopted, the cross-national adoption process hits a tipping point at which it cascades and the norm rapidly becomes more widely adopted. The cascade depends, in part on increased domestic support for the norm in state after state. The desire to be in alignment with international norms can drive state-level adoption of the new norm. Finnemore and Sikkink (1998, 900) argue that in general, in order for a norm to reach a tipping point and begin the second phase, the norm must be institutionalized in international rules and organizations. In the final stage in the norms life cycle, the norm becomes widely internalized (which includes domestic legal institutionalization) and few, if any, states oppose the norm.

Finnemore and Sikkink (1998, 893) theorize about how domestic norms are intertwined with international norms, specifically that calls for international norm adoption will be framed within domestic norms, and that there is essentially a “two-level norm game” that links the domestic and international level. They specify that domestic norm influences will be strongest early on, and will be overtaken “one a norm has become institutionalized in the international system.” Despite acknowledging the role and importance of domestic norms, they still view the bulk of norm adoption happening after the norm has been institutionalized at the international level.

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13 Finnemore and Sikkink (1998, 893) are referencing Putnam 1988 and Evans, Jacobson, and Putnam 1993 when they discuss this two-level game.
level (Finnemore and Sikkink 1998, 900). If the norm has been internationally institutionalized prior to the cascade phase, it can then be increasingly institutionalized by the states, which will filter the norm through their own domestic norms, but still start from largely the same definition of the international norm.

My work challenges the top-down nature of norms evolution. Although Finnemore and Sikkink (1998) allow for some domestic reach in the norm emergence stage, they see that influence as limited to a few domestic actors, the “norm entrepreneurs” not the bulk of states. Once the norm begins to cascade and moves toward internalization, it is driven specifically by the international version of the norm. However, particularly with regard to the right to water, the process of rights institutionalization is not necessarily top-down, translated from international norms to domestic law. Often, state laws already provide the protections guaranteed by international human rights law, and even may have been the inspiration for the international human right (Bassiouni 1993). At other times, a state signs and ratifies a human rights treaty, which might be self-executing, or may require further legislation for full institutionalization. Goodman and Jinks (2003) find that incorporating human rights into domestic law is subject to a number of different factors and is difficult to explain fully; they emphasize the importance of examining domestic law to gain a fuller understanding of how to implement human rights treaties.

Empirically, this dissertation examines domestic water policies cross-nationally; doing so reveals that most domestic water policies were not a result of the institutionalization of an international norm of a human right to water. Most states have had water laws in place prior to the recognition of a human right to water (i.e., prior to ratification of the ICESCR). This means that the process of institutionalization of the right to water has not been top-down in all countries.
States have not developed water policy as a result of ratifying the ICESCR or other international law. Instead, various types of water use laws have been passed over time, many of which are contain some elements of what we know as the international human right to water, and some of which are unrelated to any idea of a right to water. Looking back toward the context in which these water laws were being passed, with a persistent divide between ESC rights and civil and political rights and the rival frames of development versus rights, it makes sense that water laws would vary significantly across countries and even by sub-national jurisdictions.

Finnemore and Sikkink (1998, 895) argue that norm entrepreneurs are active at the domestic level and that states create domestic policy both in response to domestic norms entrepreneurs and to match a norm that enhances their reputation as “norm leaders”. But my cross-national analysis of water policies reveals a different story with respect to the human right to water. States have already developed water policies for reasons of domestic interest, although some of them contained various elements of the human right to water. However, state institutionalization began to cascade about a decade before any of the elements of the human right to water were specified or defined at the international level. This is not a clean cascade from norm leaders to norm followers. However, once actors at the international level began doing more than recognizing that a vague right to water might exist and moved to specifying and defining the contents of that right in the context of international treaty law, we do see an increase in institutionalization from the states. Additionally, after international institutionalization we begin see popular actors within states that have not recognized or institutionalized a right to water calling upon international actors in an attempt to sway their domestic governments -- just as Finnemore and Sikkink (1998, 893) would expect. For the human right to water, this a more complex trajectory than the norm life cycle model assumes.
Some of this complexity might be best explained by the epistemic communities approach, which Haas (1992, 4) says “suggests a nonsystemic origin for state interests” and can coordinate state behavior even without a strong top-down international approach. Water management is an important part of domestic governance, and epistemic communities have arisen to advice policy makers. So some of the commonalities we see between national level policies prior to a strong international framing may be due to the influence of these epistemic communities. However, these epistemic communities of water experts have tended not to be significantly influenced by a human rights framework. Instead, the rights framework has flourished among social activists and protesters (Conca 2006, 2). And yet, different elements of the HRtW are present in state policy prior to an international consensus on the norm on the HRtW, and an international consensus has emerged on the HRtW, which suggests that the technical knowledge of epistemic communities is not a solo counter-explanation to the norm life cycle. Rather, spread of policies by epistemic communities is likely one of the pieces of the puzzle in understanding water policy.

Part of the reason for this complexity is that the human right to water includes, but goes further than simply providing access to water, or guaranteeing clean water. These are both essential parts of the human right to water, but states have had an interest in these specific provisions for a variety of domestic reasons, rather than in response to international pressure, for a long time. But we do not see only these development-friendly elements of the human right to water in state laws prior to the international institutionalization; we see other aspects of the human right to water as well.

This dissertation thus complicates the norm development/emergence story. Finnemore and Sikkink (1998, 898) suggest that the state does not really become involved until the norm cascade phase. But as this dissertation demonstrates that the norm of the right to water is
emerging not primarily from non-state actors, but through domestic practice in combination with increasing international recognition of the right. In this project, I analyze existing state laws and systematically disaggregate the key elements of the human right to water contained in each, in order to try to explain the mutually constitutive norm emergence process that I argue is taking place in relation to the human right to water. The following chapters outline this data analysis framework and presents key findings.
Chapter 3: Conceptualizing the Human Right to Water

This chapter lays out the methodology central to my original comparative analysis of right to water law in cross-national perspective, spanning 113 countries across multiple world regions. A brief explanation of the inductive process involved in developing the research design reveals both the complex variety of legal instruments and the range of normative reference points encountered in my research.

As discussed in Chapters 1 and 2, this dissertation contributes to the evolving scholarship the right to water by teasing out the process of domestic institutionalization of the human right to water. I began my research by trying to collect and analyze domestic water laws and constitutions that protected elements of the human right to water from countries all over the world. In the process, I found that many of the laws and constitutions that protected elements of the HRtW came before the HRtW began gaining international traction and support. This unexpected chronology then pushed me into further investigating the process of international norm formation, because this case did not seem to be a straightforward example of an internationally-driven norms life cycle (i.e., emergence ->norm cascade -> norm internalization) as laid out by Finnemore and Sikkink (1998). In this chapter I explain how I obtained the data for my dataset, as well as what is included and what is not, and then how this data provides empirical evidence for a mutually constitutive norm construction process between domestic and international levels.

Initial Research

I developed a coding scheme\textsuperscript{14} to compare the legal instruments on water that I collected, and I employed this schema to analyze an initially small random sample of legal instruments to

\textsuperscript{14} To code the domestic legal instruments, I chose a cross-section, coding whatever the law was in effect in 2010. I then coded dichotomously whether the state had constitutional provision related to the HRtW, as well as whether the
determine the viability of the project. I chose fifteen countries randomly and searched for their statutory water laws and constitutional provisions for any of the elements of the human right to water. To locate the relevant water laws, I used *The Human Right to Safe Drinking Water and Sanitation in Law and Policy – A Sourcebook*, assembled by WASH United, Freshwater Action Network, and WaterLex (WASH United et al. 2012). I then used The World Law Guide as well as governmental and sub-national (i.e., ministry-level) websites to locate other relevant laws.

All 15 countries had statutory laws regarding water, and six of those countries also had constitutional provisions regarding water. Eight countries had statutory law or constitutional law that used *rights language* to guarantee water provisions. Six countries had *rights guarantees* within statute laws, but not within their constitutions (if a constitutional provision was present), and two countries with constitutional provisions did not use rights language in those provisions (see appendix for further detail). Additionally, most of the legal provisions I coded for were present, including protections against pollution and pathogens, access guarantees, non-discrimination provisions, and participation guarantees. This result supports the idea that rights-language is not the exclusive province of constitutions, and that to find laws that recognize and protect the human right to water, we must look within national statutory law as well as constitutional law.

This initial sample of fifteen countries is not a unique subsection, but was rather meant as an initial test of my initial premise, that elements of the HRtW could be found not just within constitutions, but within statutory law, and therefore statutory law would need to be coded as

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state had a statutory provision related to the HRtW. I then coded the following provisions dichotomously for each state, a 1 if the provision was present, a 0 if it there was no rights language, direct or explicit reference to water, prohibition from disconnection, protection against pollution, access guarantee, non-discrimination guarantee, protection for existing access, a minimum amount of water guaranteed, specific protections for prisoners, specific protections for other vulnerable populations, specific protections for traditional or indigenous groups, and a participation guarantee. Based on the laws I coded, I further developed my coding scheme for the full dataset (see fn 13 below).

well as constitutional law to properly assess the state of domestic institutionalization of the HRtW.

My initial hypothesis -- that laws containing elements of the human right to water are found in both statutory law and constitutional law – was thus borne out. So, I proceeded to code\(^\text{16}\) the rest of the 96 countries contained in the WASH sourcebook. I then verified the integrity of the WASH sourcebook coding by cross-checking the laws I had located against the laws I could find through the United States Law Library of Congress.\(^\text{17}\) I coded all the countries with names beginning with A, B, and C listed and largely found that the WASH sourcebook was accurate for the countries it contained, although it was not fully complete for all countries that had laws that contained an element of the HRtW. Ultimately, I coded 113 countries, with 105 of those countries having constitutional or statutory laws that contained an element of the HRtW. I fully explain my coding schema in chapter four. This chapter, instead focuses on the discrepancy I found when initially trying to fit my data into Finnemore and Sikkink’s norm life cycle theory.

**Linking Empirics and Theory.**

In analyzing whether or not the norm formation of the HRtW fits into Finnemore and Sikkink’s norm life cycle, I began by assessing how the timing of these water laws fit into the

\(^{16}\) I continued with my original coding scheme using a 2010 cross-section. The full coding scheme with examples is included in chapter 4. I then coded dichotomously whether the state had constitutional provision related to the HRtW, as well as whether the state had a statutory provision related to the HRtW. In this round of coding, I recorded the years all of the provisions were passed, including the year an original law was passed and the year of its amendment to the version in effect in 2010. I then coded the following provisions dichotomously for each state, a 1 if the provision was present, a 0 if there was not: rights language, direct or explicit reference to water, prohibition from disconnection, protection against pollution, protection against pathogens, access guarantee, non-discrimination guarantee, protection for existing access, a minimum amount of water guaranteed, specific protections for prisoners, specific protections for other vulnerable populations, specific protections for traditional or indigenous groups, participation guarantee, access to information guarantee, and a provision prioritizing drinking water over other uses. I added the provisions for affordability, access to information, and prioritizing drinking water over other uses based on the language I saw in the laws I coded previously. At the time I began this project, the HRtW was not fully institutionalized at the international level, and there was not yet a single definition to test against.

timeline of the emergence of the norm internationally. As evident from the timeline presented and discussed in Chapter 1, the legal basis for the human right to water goes back not only to the late 1940s with provisions on health in the Universal Declaration of Human Rights (UDHR), but also to the explicit inclusion of a right of access to drinking water for prisoners of war in the Third Geneva Convention (1949). Its legal basis continued with the International Human Rights Covenants, which were adopted and opened for signature in 1966 and then entered into force in 1976.\(^{18}\) Even though water was not explicitly mentioned in either treaty, in 1977 the UN held an international water conference in Mar del Plata which resulted in the acknowledgement of a human right to water, at least as a cultural or group right.\(^{19}\)

In 1979 the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) was adopted by the UN General Assembly and opened for signature, entering into force in 1981. CEDAW explicitly recognized water supply as a requirement for an “adequate” standard of living to which women had a right to without discrimination (CEDAW 1979 14(2)(h)). In 1989 the UN Convention on the Rights of the Child (CRC) was adopted by the UN General Assembly and opened for signature, and then entered into force in 1990. The CRC included an explicit mention of clean drinking water as a necessary provision to ensure the health of children (CRC 1989 24(2)).

In 1992, two international conferences recognized clean water as a human right. The first was the International Conference on Water and Sustainable Development in Dublin (Dublin Conference) and the second was the UN Conference on Environment and Development in Rio

\(^{18}\) General Comment 15 by the CESCR (2003) makes clear that the rights to an adequate standard of living and the right to health in articles 11 and 14 of the ICESCR require a human right to water as well. Additionally, Winkler (2012, 50-55) makes a convincing and well-supported legal argument that the right to life in article 6 of the ICCPR also requires a human right to water. Therefore, both International Covenants are referenced as legal bases for the right (although neither of them makes an explicit reference to water).

\(^{19}\) “All peoples, whatever their stage of development and social and economic conditions, have the right to have access to drinking water in quantities and of a quality equal to their basic needs” (Mar del Plata 1977, Resolution II (a)).
The Dublin Conference recognized that there was a basic right to have access to affordable clean water (Dublin Conference 1992, Principle 4). The Rio Summit referred back to the earlier resolution at Mar del Plata Water Conference that all peoples have a right to access drinking water. And in 1993, the first UN World Water Day was celebrated on March 22. Water was mentioned as a right in several other conferences throughout the 1990s before finally being legally found to be a treaty-guaranteed right by the Committee on Economic, Social, and Cultural Rights in General Comment 15 in 2002.

The 2002 General Comment was a major step in the international norm formation of the HRtW, because more than just mentioning its existence, the General Comment identified the legal basis for the right and outlined State parties’ obligations based on the right, and what would constitute violations. This is the first major work at the international institutional level to define this norm. The previous inclusions of a human right to water, even when explicit, were limited to a single sentence with a vague and broad recognition of a right. Krook and True (2012, 109) highlight imprecision as a particular, and intentional, trait of international norms, because vagueness can make it easier for states to sign onto conventions. However, even when treaty language is left vague, other agencies, such as treaty monitoring bodies and special rapporteurs or independent experts are able to more fully develop the legal concepts. In part, that is what General Comment 15 is doing, interpreting the previous vague mentions of a right to water. However, they are also finding it implicitly included in past treaties and making an argument for why water should be legally recognized as an internationally human right, not just attempting to further explain it.

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20 The CESCR General Comment 15 was decided and written in December 2002, and published in January 2003, which accounts for different dates being used in describing this document.
In 2005, the ECOSOC Sub-Commission on the Promotion and Protection of Human Rights adopted Draft Guidelines for the Realization of the Right to Drinking Water and Sanitation. These guidelines were meant to provide guidance for states to implement the human right to water and sanitation, and would be an example of norm promotion from the international level. The assumption behind these guidelines matches the assumption found in most of the research on norm diffusion: that the norm is defined at the international level and then states must be persuaded to include that norm within their domestic laws.

The rest of the first decade of the 21st century has numerous Human Rights Council decisions and reports and resolutions recognizing and further defining the human right to water, and the appointment of an independent expert on the Human Right to Water and Sanitation, who then became a special rapporteur. Finally, in 2010, the UN General Assembly passed a resolution formally recognizing a human right to water and sanitation. The General Assembly resolution, while not legally binding, is still phrased as a call to action and allowed states to publicly support and recognize a human right to water.

Figure 1.1 (included in chapter 1) shows the timeline of the international development of the HRtW. Looking only at the international level, the human right to water seems to neatly follow Finnemore and Sikkink’s norm life cycle. There are vague, ill-defined mentions of the right, until 2002 when it is better defined and refined throughout the decade, culminating in the General Assembly resolution in 2010. However, when we look at domestic laws that contain at least one element of the human right to water (HRtW laws), we see a different story. That altered history is one of the the central contributions of this dissertation, mapped out through careful empirical attention to the content of national law, cross-nationally and compared to the content of international hard and soft law with regard to water
The domestic water laws I coded were the laws in effect in 2010, the year I used to set my coding range. However, although I started looking at essentially a single-year sample set in 2010, I also noted the year the law in effect was passed, as well as the year the original law was passed if the most recent version itself was an amended version of an earlier law. For example, in the United Kingdom, the national water law in effect in 2010 was the “Water Industry Act”, which was originally passed in 1991, but was last amended (prior to 2010) in 1999. Therefore the UK is noted as having an original law year of 1991, and a current law year of 1999. I altered my original research design of assessing the state of domestic institutionalization of the HRtW in 2010 as it became clear through my coding that many of the domestic water laws I was coding pre-dated the 2002 General Comment which defined the HRtW norm internationally.

As Finnemore and Sikkink (1998, 897, 905) point out, normative institutional change is not introduced into a vacuum but rather, involves evolution or change over time. Therefore, if there was an earlier water law that formed the basis for an amended law that provided an element of the human right to water, my coding scheme allows for recognition of such legal continuity. Even if the original law did not contain any elements of the HRtW, it provided the basis for the subsequent evolution of law grounded in the HRtW. Both dates are thus potentially relevant to understanding norm evolution (i.e., the emergence of the norm and its evolution through state-level policy). Unfortunately, I do not currently have access to the content of the original versions of most of the water laws, and therefore my analysis of the contents in chapters four and five is still based on the contents of law in 2010.

The bar graph below shows the number of states that enacted laws in each year that contained an element of the human right to water, compared with when their original water law was enacted. These nationally-based dual enactment points are juxtaposed with the international
The timing shown in this graph suggests several characteristics of domestic water laws worldwide. Many states passed water laws in the 1980s and 1990s. There could be global causes for this uptick in water laws, such as the growing environmental movement or waves of decolonization and the end of the cold war, which led to new constitutions. Or there could be
individual domestic political explanations for why these laws increased at this period of time. Ultimately I am not seeking to explain why water laws increased in the 1980s and 1990s, but to explain how this earlier domestic policy boom challenges the top-down assumption of norm diffusion from the international to the domestic level presented by the norm life cycle model.

The graph below (figure 3.3) shows the total number of countries that had a law with an element of the HRtW each year. We see countries with HRtW laws as early as 1942, with a slight uptick in the 1970s, and then a major increase in the 1990s continuing forward.

Figure 3.3

![Total Number of Countries with a HRtW Law by Year](image)

Again, this image supports the basic concept of Finnemore and Sikkink’s norm life cycle: the norm emerges, then hits a tipping point and begins to cascade, becoming more and more common until it becomes internalized. However, the tipping point for the state cascade in enacting HRtW laws is about a decade earlier than the legal definition and implementation emerge at the international level.

This difference in the timelines is in line with the overall idea of the norm life cycle, but departs from that story in key ways: significant work at the norm creation and emergence stage
was happening on human right to water at the *domestic level* and then moved up to the international level. So, instead of emerging conceptually at the international level and then being disseminated to the national level, the right to water emerges from the bottom up.

I am not the first scholar to suggest that domestic-level politics can affect the norm life cycle. Sandholtz (2008, 103) argues “that norm change is frequently the product not of abstract arguments but of practical disputes arising out of specific actions; and […] occurs in cycles that are linked, forward and backward, in a longer historical dynamic.” He tests his theory with two case studies, showing evidence that the norms have indeed changed over time, and specifying the phases of the norm change cycle: “rule structures, actions, disputes, arguments, and norm change” (Sandholtz 2008, 110). Ingerbritsen (2002) suggests that states rather than individuals can play the role of norm entrepreneur, which certainly could be part of what we see with the development of the HRtW.

Krook and True (2012, 108) similarly identify the trend in the literature on norms that assumes “a one-way process in which norms emerge and are then communicated and internalized.” They challenge that linear narrative and instead “propose a discursive understanding of norms as processes” (Krook and True 2012, 106). They suggest that norms may vary as to their level of dynamism in their contents and meanings, especially with regard to localized interpretations (Krook and True 2012, 123). Their theory of a dynamic process of norm formation better fits my data on the HRtW than the earlier linear model.

The broad large-n data I have gathered do not allow me to identify the cause of specific instances of norm reversals and changes (such as whether a specific state policy is the result of epistemic communities of knowledge, or effective domestic social movement pressure, or from a successful transnational advocacy campaign), but I can identify trends that suggest that there is a
dynamic process going on, or as I refer to it, a mutually constitutive process. Although the original versions of water laws appeared before the 2002 General Comment that marked the international tipping point for the norm, many of those laws were revised or further elaborated after the 2002 General Comment, which suggests an ongoing conceptualization process.

In the following example, I demonstrate a content analysis of the language of water laws in Nicaragua, specifically with regard to recognition of a right to water. This is meant to be an example of the wider process by which I developed my argument about a mutually constitutive norm formation process.

Change Over Time: Nicaragua

Rather than amending previous laws, Nicaragua has passed additional water laws, which have remained (at least partly) in effect, and therefore were included in my coding population. Looking at the text of Nicaragua’s water laws and how they have changed over time provides an example of the non-linear norm conceptualizing process for the HRtW.

Nicaragua’s 1996 “General Law on the Environment and Natural Resources” states in article 76: “Everyone has the right to utilise water for the satisfaction of their basic needs, always in a way that does not cause damage for third parties” (Trans. WASH United et al. 2012, 167).

Nicaragua’s 2003 “Law Governing the Suspension of Concessions of the Use of Water” recognizes a right to access water in article one: “Access to water constitutes a citizen’s right and a human right, inviolable and inalienable” (Trans. WASH 2012 United et al., 167). Finally, Nicaragua’s 2007 “General Law on National Water Resources” in article 13 states: “Water is a vital, limited, vulnerable and finite resource whose preservation and sustainability is an essential and unavoidable task of the State and society combined. Having access to it is an inalienable right of every human being” (Trans. WASH 2012, 167).
Although Nicaragua recognizes a legal right to access water starting in 1996 (before the 2002 General Comment), the 1996 law emphasizes basic needs and prohibits harm to third parties. The 2003 law recognizes access to water as a citizen’s right and a human right as it attempts to regulate water concessions. The 2007 law drops the distinction between citizen rights and human rights, merely saying it is an inalienable right of every human being, emphasizing its universality. Additionally, the 2007 law notes the duty of the State in preserving and sustaining water as a limited resource. The Nicaraguan laws do not show broad changes, which suggests that Nicaragua may have been a norm entrepreneur for the HRtW (supported by Nicaragua’s sponsorship of the 2010 UNGA resolution on the human right to water and sanitation). However there are still language and focus changes that reflect the internationalization of the HRtW over time. These changes in the legal language of Nicaragua’s water laws support the idea that the concept of the HRtW has changed and evolved since its introduction. Nicaragua’s water laws recognized a human right to water before it was widely accepted at the international level, but has also evolved since then, to reflect changes as the right has been consolidated internationally. Taken in conjunction with my larger data set, which that shows different norm cascade timelines for domestic laws, international legal interpretations, and amended domestic laws recognizing the HRtW, I argue that the HRtW cannot be described by a linear top-down norm diffusion process, but instead must be understood as a mutually constitutive norm formation and diffusion process between the domestic and international levels.
Chapter 4: Operationalizing the Human Right to Water

My data set was constructed using laws located in the WASH Human Right to Water Sourcebook\textsuperscript{21}, through the World Law Guide and the US Law Library of Congress. Ultimately it contained laws from 113 states (included in the appendix), reflecting the water laws in place in 2010. My data is currently biased toward countries \textit{with} laws that contain an element of the human right to water because the bulk of the laws were located in the WASH sourcebook; but my sample includes a broad section of those laws both at the statutory and constitutional level\textsuperscript{22}. At this stage in my research, I cannot make definitive claims about the differences between countries that have HRtW laws as a group and those that do not, but this data does allow me to discuss commonalities and patterns among the laws themselves and among the countries that have HRtW laws. In Chapter 7 I discuss my future plans for this ongoing research project, including how to expand the dataset to test the effects of having HRtW laws on the actual enjoyment of the right.

Coding Specifics

To code the rest of legal provisions I read the text of the law (either provided in the WASH sourcebook or located through the World Law Guide or the Law Library of Congress) to perform a content analysis of the laws. Rather than performing a search for specific words, once I located the parts of the law that referenced water, I read the entire section of the law to ascertain whether any of the following elements of the HRtW were present. All of my coding of legal provisions was dichotomous: either the country has a law that is meant to fulfill the specific

\textsuperscript{21} Although the WASH sourcebook is my primary source, I had to verify or eliminate draft laws that were included, as well as laws at the subnational level.

\textsuperscript{22} Although the WASH sourcebook does include some subnational laws, the subnational laws were not even an attempt at a complete collection of laws, so I excluded them from my dataset. Consequently, there are a few countries that are included in the WASH sourcebook but are not in my dataset, because they only had subnational laws (or laws that were in a draft stage and were never implemented)
criteria for which I was coding, or it does not. My coding scheme was not aimed at capturing the quality of these different laws, merely whether the law attempts to address each particular element of the human right to water. All my measures were thus dichotomous, not ordinal in nature. Additionally, I coded with the most generous interpretation of the law in mind. Although when evaluating the gap between rights guarantees and fulfillment a stricter interpretation of the law may be used, I believe that a broader interpretation facilitate my task of understanding the content of HRtW laws at the domestic level and the potential legal protections.

As I previously explained in chapter 2, my conceptualization of the HRtW began with the basic definition provided by the 2002 General Comment by the Committee on Economic, Social and Cultural Rights (CESCR): “The human right to water entitles everyone to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic uses” (CESCR 2002, para. 2). I ended up expanding the definition to include the five essential criteria identified by the special rapporteur: Availability, Quality, Acceptability, Accessibility, and Affordability (De Albuquerque and Winkler 2012, 172). Additionally, I identified what I consider to be critical elements of a human right in general, such as using rights language and universality.

**Primary Criteria of the HRtW**

The human right to water is currently assessed internationally on five primary criteria: Availability, Quality, Acceptability, Accessibility, and Affordability (De Albuquerque and Winkler 2010, 172). Availability means that there must be sufficient amounts of water available for the personal and domestic uses for each person. Quality means that the water has to be safe for consumption and other domestic uses and cannot endanger human health, either through pollution or pathogens. Acceptability means that the water should have an acceptable taste and color and be provided in a culturally acceptable way. Accessibility means that water sources
must be regularly and safely available to everyone within a reasonable distance to their household. Affordability does not require that water services be provided free of charge, but it means that no one should be denied access to water for an inability to pay and that the costs not impinge on the fulfillment of other rights, such as the rights to housing or food. I coded for each one of these criteria, either as a single provision, or a combination of legal provisions, as described below.

**Availability**

I operationalized availability, by coding two different legal provisions: whether the law guaranteed a minimum amount of water for household use, as well as whether drinking water had priority usage in the case of shortages. These provisions reflect the emphasis in human rights law on a minimum floor of provisions of economic rights (Chapman 2007). Originally I had planned only to code for whether a minimum amount of water was guaranteed, but in my original sample many states had laws that prioritized water for domestic uses, which ultimately is another way that states seek to assure availability. Water shortages are certainly a concern, but because domestic water use constitutes such a small percentage of overall water use (especially compared to agriculture), if domestic use is prioritized over other uses, there should always be enough water available for domestic use (Gleick 2000). If the country had one of these two provisions, I coded it as having an *Availability* law.

The minimum amount of water did not have to specified at a certain amount, instead the law simply had to guarantee a minimum quantity of water. For example, article 18 of the 1994 (amended 2002) “Law of Ukraine on ensuring the sanitary and epidemic safety of the population” says “Bodies of executive power, bodies of local self-governments shall ensure that inhabitants of cities and other populated localities are provided with drinking water of quality and in
quantities complying with the requirements of sanitary regulations and state standards” (WASH United et al. 2012, 253). Similarly, South Africa’s 1997 (amended 2004) “Water Services Act” defines “basic water supply” as the “prescribed minimum standard of water supply services necessary for the reliable supply of a sufficient quantity and quality of water to households, including informal households, to support life and personal hygiene” (WASH United et al. 2012, 134).

Laws prioritizing drinking water over other water uses was not specified as a necessary provision internationally, initially, but it was a provision that appeared in the water laws for many countries. I decided that that this prioritization could be used to operationalize water availability and went back to recode countries to include this variable. For example, Costa Rica’s “General Health Law” originally passed in 1973 and amended in 1996, states in article 264: “Water constitutes a good of common public interest and its utilisation for human uses shall enjoy priority over any other use” (Trans. WASH United et al. 2012, 206). Lesotho’s 2008 “Water Act” specifically refers to “the case of conflicting water use” in Article 5, and says that “if water is insufficient to cater for other uses, domestic use shall prevail and be given first preference over other uses” (WASH United et al. 2012, 149).

The minimum amount provision was not as common as the prioritization of domestic water use. Only 32 countries out of 106 referenced a minimum amount of water required in their water laws. However, 63 countries out of 98 had a provision that prioritized domestic water use. Although it looks as if the prioritization of domestic water use is doing most of the work for this variable, there is substantial overlap between the two provisions (see figure 4.1 below). When the two provisions were combined into the Availability variable, 70 (71.43%) out of 98 countries were coded as having the Availability element and 28 (28.57%) were coded as zeros.
Figure 4.1: Cross-Tabulation of Minimum Amount and Prioritize Drinking Water Provisions

<table>
<thead>
<tr>
<th>Minimum Amount</th>
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</tr>
</thead>
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<td>0</td>
<td>28</td>
</tr>
<tr>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>35</td>
</tr>
</tbody>
</table>

Quality

For quality, I coded two different variables, one based on protection from pollution and one on protection from pathogens, specifically. When discussed as a human right, the right water is often either grouped within a health framework (CESCR 2002) or an environmental framework (Collins-Chobanian 2000, Hiskes 2009). If the right to health is the primary justification for the right to water, the focus is on keeping water free from diseases and parasite. If environmental rights are the primary justification, the focus is on keeping water free of pollution. Both pathogens and pollutants can make water unsafe to drink but they require different treatment methods. Laws regulating water safety from pathogens can be distinct from laws regulating water safety from pollutants. For example, the 1998 Water Code for Côte d’Ivoire has several articles that refer to water quality. Article 48 refers to environmental pollution: “Spills, waste dumps of any kind, or of radioactive waste, causing or increasing pollution of water resources is prohibited.” Article 80 refers to water quality for hygiene and human health, usually a reference to pathogens in the water: “The use of water for the preparation and consumption of any food and goods intended for human or animal consumption must meet the standards of hygiene and public health.” Article 78 refers to water quality standards set by the government, which would count for both: “Water for human consumption must comply with drinking water standards established by joint order of the Authority for Water and the Minister of Health.” (WASH 2012, 152).
human health, usually a reference to pathogens in the water: “The use of water for the preparation and consumption of any food and goods intended for human or animal consumption must meet the standards of hygiene and public health.” Article 78 refers to water quality standards set by the government, which would count for both: “Water for human consumption must comply with drinking water standards established by joint order of the Authority for Water and the Minister of Health.” (WASH United et al. 2012, 152).

Additionally, the 1996 constitution of the Gambia (amended in 2001) includes a health-based water quality provision in article 216: “The State shall endeavour to facilitate equal access to clean and safe water, adequate health and medical services, habitable shelter, sufficient food and security to all persons” (WASH United et al. 2012, 120). Whereas article 31 of the constitution 1993 constitution of Andorra references water under an environmental frame: “The State has the task of ensuring the rational use of the land and of all natural resources, so as to guarantee a fitting quality of life for all and, for the sake of future generations, to restore and maintain a reasonable ecological balance in the atmosphere, water and land, as well as to protect the autochthonous flora and fauna.”

If a statute referred only to protecting water quality, or providing water of acceptable quality, or potable water, I coded it as having protection in both categories. For example, Senegal’s 1981 “Water Code” states in article 51: “Drinking water must satisfy the applicable norms for water to be potable, specifically concerning its physical, chemical, biological and bacteriological characteristics.” Although this suggests a health frame, the specification of “physical, chemical, biological and bacteriological characteristics” appears to reference both pollutants and pathogens. Ultimately I ended up combining the pathogen and pollutant categories into a single variable operationalizing Quality to avoid any double-coding issues.
For this project, if a country had a law protecting against pollution or pathogens I counted it as having a Quality provision. Out of 103 countries, 73 had a Quality law (71.81%) while 30 did not (29.13%).

Acceptability

Although Acceptability is an important part of the conceptualization of the human right to water, the ability to create laws that protect the acceptability of water is slightly more difficult. I operationalized this element of the HRtW using three provisions (i.e., protection of existing access; protections of traditional societies’ use of water; and participation in water policymaking and implementation) as a holistic way of looking at acceptability. Protecting existing access to water is integral to accessibility, but when it was actually found in the laws, these largely seemed aimed at protecting different cultural uses of water. Similarly, several states had laws that specifically protected the traditional uses of water by indigenous peoples. The other way the law can attempt to provide acceptability is through allowing and facilitating participation in decision-making around water service provision. Because what is acceptable can and will vary significantly from culture to culture, participation in the definition and/or design of mechanisms for implementation of water policy increases the likelihood that laws and policy are determined in keeping with culturally appropriate understandings of acceptability for differing groups of water users.

The 2009 “New Constitution of Bolivia” in article 374 specifically states: “The State shall recognize, respect and protect the customs of communities, local authorities and peasant indigenous organizations on their rights, on the management and sustainable water management.” This specific recognition in Bolivia is likely due to the water privatization crises and protests (Baer 2015, 354).
The 1994 Colombian “Law 142 establishing the regime for public household services” provides a detailed framework for civil participation with regard to public services including water.

Article 65: The authorities and the participation of users

For the adequate implementation of civic participation the following is incumbent upon the authorities:

65.1 - The municipal authorities should carry out a broad and continuous consultation with the community to implement the basic functional elements of the committees as well as to prepare and advise them permanently in their operation.

65.2 - The departments will be responsible for promoting and coordinating the system of participation, by means of action applicable throughout all of their territory. In coordination with the municipalities and the Superintendence, they shall ensure the training of the members, providing them with the basic tools that permit them to better organize their work and to rely on the information necessary to represent the committees.

65.3 - The Superintendent’s Office will have at its charge the design and implementation of a system of oversight and control that will enable it to aid in the tasks of the committees on development and social control of public utilities.

Article 80: Functions concerning the participation of users

The Office of the Superintendent shall have [...] the following functions to support the participation of users:

80.1- To design and implement a system of monitoring and control that allows it to support the tasks of the committees regarding development and social control of public utilities.
80.2 - To ensure the training of members, providing them with the basic instruments which will allow them to better organise their financing work and to rely on the necessary information to represent their committees. 80.3 - To provide the necessary technical support for the promotion of the participation of the community in tasks related to surveillance. (Trans. WASH United et al. 2012, 187).

Laws that protect existing access arrangements or traditional uses of water are less common than other provisions (See figure 4.2 below). Out of 106 countries 13 (12.26%) had existing access protections, and 14 (13.21%) had protections for water use by traditional and indigenous societies. Only four countries overlapped and had both. Participation guarantees were slightly more common, with 40 out of 106 countries having that provision (37.74%) There was some overlap between the different policies, but 55 out of 106 countries (51.89%) had no type of Acceptability law.

Figure 4.2 Cross-Tabulation of Existing Access and Traditional Society Protections

<table>
<thead>
<tr>
<th>Existing Access</th>
<th>Traditional Society Protections</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>83</td>
</tr>
<tr>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>92</td>
</tr>
</tbody>
</table>

Accessibility

I coded two different water provisions to operationalize accessibility. First I coded whether the country had a law that guaranteed access to drinking water. For example, Guinea’s 1994 “Water Code” in article 6 has an access guarantee: “every person has an inalienable right to access water resources and use them for domestic purposes” (Trans. WASH United et al. 2012, 123). Access provisions were relatively straightforward to code, as well as being very common, with 72 countries out of 106 (67.92%) having an access law. I also coded whether the law specifically
protected against disconnection from water service. Disconnection provisions were fairly uncommon, with only 11 countries out of 106 (10.38%) having such a law. The United Kingdom’s 1991 “Water Industry Act” (amended 1999) specifies in section 61 when water services can be disconnected for non-payment or any other reason, and there are numerous premises that cannot be disconnected for non-payment, including “Any dwelling which is occupied by a person as his only or principal home.” And “Any house in multiple occupation which does not constitute a dwelling within the meaning of paragraph 1 above and in which any person has his only or principal home” (WASH United et al. 2012, 267-8) Essentially, water cannot be disconnected from where people live.

Although the human right to water is largely considered a positive right that must be provided by the state, it still has a negative aspect, specifically with regard to disconnection. If the state disconnects households from water service, it is failing to respect the human right to water, which in turn clearly violates the accessibility requirement. This negative aspect of the right is not well-represented within water laws, but is clearly part of the wider discussion of a HRtW, especially given the disconnections in Detroit, MI, as I will explain further in chapter 6.

Ultimately I decided not to combine these two provisions into one variable. Theoretically, although I believe they both fit under the accessibility criterion, they are distinct as a negative dimension of the right (i.e., protection from shutoffs) and a positive dimension of the right (i.e., entitlement to water access). Empirically, there was substantial overlap between countries that protected against disconnection and countries with access guarantees (see figure 4.3). Because of the empirical overlap and the theoretical difference, I decided not to combine the provisions into one variable and instead used the access guarantee alone for the Accessibility element.
I include the information on disconnection coding because I believe it is a theoretically important protection for the HRtW. The earlier debates within human rights between civil/political rights and economic/social rights often hinged on the supposition that negative rights were “easier” or at least more likely to be protected than positive rights. Although it is largely accepted that all human rights have both negative and positive dimensions, we see in this case that the negative dimension is actually less likely to be legally enshrined than the positive dimension.

**Affordability**

Affordability is a critical but somewhat complicated aspect of the human right to water. In most political systems, water provision is not free because it costs governments money to clean and supply water to users. There are a variety of acceptable ways to pay for and provide clean drinking water, but in order to fulfill the human right to water, access to water must be affordable. When coding for this provision, I coded for whether there was language in the law aimed at guaranteeing affordability, not whether the law is empirically adequate in each case to provide affordable water.

Ireland’s 1997 “Local Government (Financial Provisions) Act” section 12 removes a charge for domestic water uses. “Removal of power of local authorities to make charges for supply of water for domestic purposes, etc. (2) Section 65A of the 1878 Act is hereby amended by - (a) the substitution of the following subsections for subsections (1), (1A) and (1B): (1) A
sanitary authority may make charges for water supplied, whether within or outside their functional area, by them, but after the 31st day of December, 1996, a sanitary authority may not make a charge for a supply by them of water for domestic purposes.” If domestic water is not subject to a charge, it should be, by definition, affordable for everyone. However, there are costs to water provision, and not all countries have the ability to simply provide even a small measure of drinking water free of cost.

Bangladesh’s 1999 “National Water Policy” provides another model of affordability with a tiered pricing structure: “4.14: Economic and Financial Management d: The pricing structure will match the goals and needs of the water provider and the population served. Water rates will be lower for basic consumption, increasing with commercial and industrial use. The rates for surface and groundwater will reflect, to the extent possible, their actual cost of delivery.” This tiered pricing structure is a way to make water for domestic uses available at a low cost, while still allowing for cost recovery.

Finally, Colombia’s 1991 Constitution (amended in 2005) in article 368 provides for governmental subsidies to help make public services available and affordable for people at all income levels: “The Nation, the departments, the districts, the municipalities and the decentralised entities shall grant subsidies in their respective budgets, so that persons with low income may afford to pay the tariffs for the public household services covering their basic needs” (Trans, WASH United et al. 2012, 163).

Although affordability is an important element of the HRtW, it was also one of the more difficult elements to locate, in part because affordability for public service provisions were not always located specifically with water laws. It may also be possible that affordability provisions are located in tax codes as well. Ultimately I only had 93 countries included in this particular
variable, which are from the WASH sourcebook because of uncertainty over the location of affordability provisions. Out of those 93 countries, 43 (46.24) had an affordability provision. I am confident about the ones for this particular variable, but I am least confident with the zeros for this variable, because the absence of an affordability provision within water-specific laws does not necessarily mean it is entirely absent from the law.

**Rights Language**

The first provision of the HRtW I coded for whether the policy employed rights language or not (i.e., a dichotomous variable) but I did not restrict my selection to only those laws in which the words “human right” were overtly stated. In the context of water policy, a right often refers to ownership or usage rights rather than a human right.24 Because of this alternative meaning of a right with respect to water, when I coded for rights language, I was looking not only for the specific word “right” but also to make sure that it was a rights guarantee rather than an ownership right.

For example, article 127 of the “General Law on the Environment and Natural Resources” in the Dominican Republic (2000) states:

> Everyone has the right to use water in order to satisfy their vital human needs of nutrition and hygiene, the needs of their family and their animals, always in such a way that their use does not cause prejudice to other users and does not imply diversions or containment, nor the use of machines or the realisation of activities that in any way deteriorate or damage the watercourse and its margins, that alter it, pollute it or make impossible its use by third persons. (Trans. WASH United et al. 2012, 195)

24 I define a human right “A claim by someone, on someone, for something necessary for human dignity” based on Gewirth 1996.
Occasionally the rights-language was used in conjunction with a specific aspect of water policy, such as article 117 of Croatia’s 1995 “Water Management Act”: “Water-related documents are kept and used in accordance with the publicity principle. Any person has the right to require and obtain any data from water-related documents upon payment of a corresponding compensation for the costs of the data transcripts” (Trans. WASH 2012 United et al., 257-6). In this case, the right is to obtain data from water-related documents, rather than accessing water itself. For the purposes of this coding, any part of the water policy that contained a rights provision that fit into the human rights frame (rather than property rights) was coded as having rights language.

Article 31 of the Constitution of Andorra is an example of a water law that does not use rights language. “The State has the task of ensuring the rational use of the land and of all natural resources, so as to guarantee a fitting quality of life for all and, for the sake of future generations, to restore and maintain a reasonable ecological balance in the atmosphere, water and land, as well as to protect the autochthonous flora and fauna.” Although this article is within Title II: Rights and Freedoms, Chapter V: Rights, and economic, social and cultural principles, it is not using rights language with regard to water resources.

Another example of language that was coded as a zero for the rights language variable is Uganda’s 1995 “The Water Statute” which uses the phrase “right to water” but within a water-as-property frame, rather than a human rights frame.

**General rights to use water** 7.1.: Subject to Section 8 a person may – (a) while temporarily at any place; or (b) being the occupier of or a resident on any land, where there is a natural source of water, use that water for domestic use, fighting fire or irrigating a subsistence garden. 2. In addition to the right to water under subsection (1) the occupier of land or resident on land may, with the approval of the authority...
responsible for the area, use any water under the land occupied by him or is resident on or any land adjacent to that land. 3. The rights under subsections (1) and (2) do not per se authorise a person to construct any works.

The language within this statute is discussing under which circumstances a person is allowed to access water resources that are available. The statute therefore requires that there are circumstances under which individuals are not allowed to access available water resources, even for domestic uses.

In my data for the Rights Language variable, I have 106 countries that were coded. Slightly over half, or 59 countries (55.66%) were coded as having rights language in their water laws that were in effect in 2010. Forty-seven (44.34%) were coded as zeros, not having rights language.

**Direct Reference**

Next I coded for whether the policy made a direct reference to water, as opposed to a broader category such as public services or an adequate standard of living. The norm life cycle described by Finnemore and Sikkink (1998, 900) would suggest that we would see more direct references to water after the United Nations Committee on Economic & Social Rights issued its 2002 General Comment on Water (CESCR 2002). The more involved the state is with internationalized human rights norm development and emergence processes, the more we should see policies that directly reference water before we saw the norm gain traction on the international level following the issuance of the related General Comment.

Article 33 of Indonesia’s Constitution, written in 1945 and amended in 2002, provides a direct reference to water (although without rights language). “3. Land and water, and the natural resources found therein, shall be controlled by the state and shall be exploited for the maximum
benefit of the people” (WASH United et al. 2012, 214). The constitutional provision directly refers to water resources, but as within state control, not as an accessible right. Additionally, Indonesia has statutory law that both makes a direct reference to water as well as uses rights language. Article 5 of the 2004 “Law no. 7/2004 on Water Resources” says: “The state guarantees the right of every person in obtaining water for minimum rudimentary daily use to fulfill a healthy, clean and productive life” (WASH United et al. 2012, 239). Both of these examples would result in Indonesia being coded as having a direct reference to water.

An example of an indirect reference is Article 21 from the 1990 Constitution of the Republic of Benin: “1. The people enjoy free ownership of their wealth and natural resources. This right is to be exercised exclusively in the interest of populations. Under no circumstances shall people be deprived thereof” (Trans. WASH United et al. 2012, 118-9). Natural resources can easily be interpreted to include water resources, but it is not directly stated that water is included, which means that it is coded as a zero for the direct reference category.

Nearly all of the cases within my dataset contained a direct reference to water, only nine cases out of 106 countries (8.49%) had solely an indirect reference to water. Some states had multiple laws, such as in the case of Indonesia, where one law contained an indirect reference while another law contained a direct reference. Because I consolidated all of the current laws into a single observation for each country, states with multiple laws would be coded as having a direct reference if at least one of their laws contained a direct reference to water.

**Universality and Non-Discrimination**

Two major concepts within human rights are that rights must be universal and must be provided without discrimination\(^\text{25}\). These concepts are closely linked, theoretically, and I

\(^\text{25}\) Non-discrimination is a core obligation for all human rights treaties (Chapman 2007, 152). Universality is one of the unique characteristics of human rights vis-à-vis citizen rights, and is discussed in depth by Donnelly (2007).
operationalized them as a single variable within my data set. Usually laws are assumed to be universal (or universal to everyone within the jurisdiction of the state) unless they state otherwise. If any of the HRtW provisions had exceptions or exclusions, this variable was coded as a 0. Generally the laws had guarantees against non-discrimination. If such a guarantee was present, this variable was coded as a 1. If there was no specific non-discrimination provision, and there were no specific exclusions to general guarantees (such as for access or quality), then I coded the law as a one. Additionally, I coded for laws protecting access for prisoners and vulnerable populations. Although this level of specificity is not necessarily a required part of the HRtW, such groups are commonly denied access to water and often need special protection. These specific protections were relatively rare overall and tended to overlap with non-discrimination provisions, so they did not end up as part of my final analysis.  

Again, my coding did not depend on necessarily finding certain keywords, but rather an close reading of the selected laws. Sometimes the terms non-discrimination or universal are used, but they do not have to be. The 2009 “Drinking Water Law” from the Netherlands requires in Article 8.3 that “The owner of a waterworks company uses tariffs and conditions that are reasonable, transparent and non discriminatory” (Trans. WASH United et al. 2012, 253). Similarly, the 2008 Constitution of Ecuador, in article 314, names universality as a principle for state provision of public services:

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26 There were three countries that had protections for vulnerable populations without having a non-discrimination provision: Morocco, Mozambique, and Rwanda. After a close reading analysis of those specific laws, I determined that they still did not qualify for the universality/non-discrimination provision. Protections for specific vulnerable groups is often rooted in the existence of historical and institutional discrimination against those groups, and therefore is an attempt to correct for the existing level of discrimination, and make laws more universal. However, these three countries did not have general water laws that contained an element of the HRtW that were made universal by these specific non-discrimination provisions. Instead, it is likely that access to water was not legally protected in general, but was a specific concern for certain groups (Much like water was explicitly included in CEDAW and the CRC before being recognized as implicitly in the ICESCR).
The State shall be responsible for the provision of the public services of drinking and irrigation water, sanitation, [...]. The State shall ensure that public services and the provision thereof observe the principles of obligation, generality, uniformity, efficiency, responsibility, universality, accessibility, regularity, continuity and quality. The State shall take steps to ensure that the prices and fees of public services are equitable, and shall establish the monitoring and regulation thereof. (WASH United et al. 2012, 159)

Cameroon’s 1998 “Water Code” article 2 states: “Water is part of the common heritage of the nation; the State provides its protection and management and must facilitate access to water for everyone” (Trans. WASH United et al. 2012, 124). Although the law does not use the word non-discrimination or universal, it does include access to water for everyone, which is a clear statement of universality.

Using the language of universality is not a feature of only post-2002 laws, however. Madagascar’s 1999 “Water Code” defines “public water and collective sanitation service,” as “a service of drinking water supply and collective sanitation of domestic wastewaters provided to the public, that is for every physical or legal person under public or private law” and goes on to state: “The public service is responsible for the universal provision of drinking water, which is based on the obligation to supply all users with a minimum amount and a minimum service of drinking water.” (Trans. WASH United et al. 2012, 124-5).

Not all water laws could be assumed to be universal, however. For example, in the Kyrgyz Republic the 2005 “Water Code of the Kyrgyz Republic” refers to the rights of “water users” which does not seem to be a universally inclusive group, and the 1999 “Law on Drinking Water” (amended in 2009) appears to apply only to “Consumers of drinking water supplied by the systems for household drinking water” (WASH United et al. 2012, 256). So there are rights
held by anyone being supplied drinking water by the state, but not everyone is guaranteed that provision, so the law is not universal.

My observations were almost evenly split between being coded as universal or not. Fifty-five countries (51.89%) contained universality or non-discrimination provisions, or the laws were otherwise written in such a way to suggest universal application. Fifty-one countries (48.11%) had laws that were either explicitly non-universal, or were written in such a way that universality could not be assumed.
Chapter 5: Analyzing the Human Right to Water

Prior to my dissertation, the extant coding of HRtW laws, primarily at the constitutional level, has treated every law with an element of the human right to water as equal. However, the human right to water is a complicated right with multiple elements (as I argued in justifying my coding scheme above). So, the next step in understanding the constitution of the norm of the human right to water is to look at which elements of the right are more common and the timelines of their inclusion. This dissertation takes that task on centrally. The bar graph below (figure 5.1) shows how many countries enacted laws with each of the five primary elements of the HRtW in each year. There is not a clear pattern, other than a clear increase in all five provisions over time from 1990 to 2010. Accessibility and Quality tend to be the most common elements to be enacted.

Figure 5.1

Comparison of Different HRtW Law Elements Enacted by Year
Although I group the laws that I coded into these five elements, it is worth noting that the five elements of Availability, Quality, Acceptability, Accessibility, and Affordability were not the original framing for these laws. These constituent elements of the right to water only emerged as part of the evaluation of the human right to water in the mid-2000s by the Independent Expert on the Human Right to Water and Sanitation. States were passing water laws that contained these elements far earlier than the laws themselves were described internationally. Indeed, states were passing related laws using slightly different framing in many cases, specifically with regard to Availability and Acceptability. My coding and analysis of resulting patterns offers one of the strongest examples of how this particular human rights norm has been developed both at the domestic legal level and the international level as I explained in chapter 3.

The right to water follows a more complex course, often beginning from the bottom up. Having analyzed the relationship between domestic and international elements of the human right to water (HRtW) and how they emerged over time in chapter 3, and gone into detail as to the coding for each element of the HRtW in chapter 4, this chapter explores patterns between the elements of the HRtW at the national level. The primary goal is to identify whether or not there are strong associations between any of the elements of the HRtW. The secondary goal is to highlight common characteristics for states that have laws with the elements of the HRtW, either individually or collectively.

My analysis centers on the data I coded for domestic water laws described in the last chapter and recapped below (see figure 5.2).
Figure 5.2: Elements of the HRtW in Domestic Water Law

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constitution</td>
<td>Dichotomous variable if the HRtW law is found in the constitution</td>
</tr>
<tr>
<td>Statutory</td>
<td>Dichotomous variable if the HRtW law is found in statutory law</td>
</tr>
<tr>
<td>Rights Language</td>
<td>Dichotomous variable if the HRtW law uses rights language</td>
</tr>
<tr>
<td>Direct Reference</td>
<td>Dichotomous variable if there is a direct reference to water</td>
</tr>
<tr>
<td>Universality</td>
<td>Dichotomous variable if there is a non-discrimination provision and no exceptions in the law</td>
</tr>
<tr>
<td>Availability</td>
<td>Dichotomous variable if HRtW law contained a minimum amount OR prioritized domestic water use over other uses</td>
</tr>
<tr>
<td>Quality</td>
<td>Dichotomous variable if HRtW law contained protections against pollution or pathogens</td>
</tr>
<tr>
<td>Acceptability</td>
<td>Dichotomous variable if HRtW law contained a provision protecting existing or traditional uses or water OR a participation guarantee.</td>
</tr>
<tr>
<td>Accessibility</td>
<td>Dichotomous variable if HRtW law contained access guarantee</td>
</tr>
<tr>
<td>Disconnection</td>
<td>Dichotomous variable if HRtW law contained protection from disconnection</td>
</tr>
<tr>
<td>Affordability</td>
<td>Dichotomous variable if HRtW contained affordability provisions</td>
</tr>
</tbody>
</table>

Source: Author’s original dataset, legal instruments obtained from WASH sourcebook (2012), World Law Guide, and Law Library of Congress.

**Associations Between Elements of the HRtW**

I identified eight variables that I consider to be essential elements of the HRtW. First, the five normative dimensions of the HRtW within international law (Winkler and De Albuquerque 201): Availability, Quality, Acceptability, Accessibility, and Affordability. To those I added the use of Rights Language, a Direct Reference to water, and Universality. To test the association between these eight variables, I performed a polychoric correlation matrix\(^{27}\) (See figure 5.3 below).

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\(^{27}\) Because all of my HRtW element variables are dichotomous, I had to use the polychoric matrix rather than a standard correlation matrix. A Pearson’s R correlation matrix is only appropriate when the variables are continuous.
We can see from the correlation matrix, that there are numerous positive associations at a statistically significant level between core components of the HRtW. Because these elements are all part of the definition of a single human right, I expected to see some level of association between different elements.

Countries that had laws that used Rights Language in reference to the provisions coded from their national laws tended to also be countries with Universality, Quality, Acceptability and Accessibility provisions. It makes theoretical sense for the use of rights language to be positively associated with universality or non-discrimination guarantees, since universality is one of the core concepts of human rights (Donnelly 2007). The acceptability element of the HRtW also makes theoretical sense to be positively associated with rights language because it is highly linked to the concept of human rights.

Acceptability is perhaps the least intuitive of the five dimensions of the HRtW, but it is an essential part of what makes a human right to water different from a material condition being

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* p<.05 **p<.01 ***p<.001
X: Unable to calculate due to missing values
Acceptability requires that the material condition be provided in a way that is acceptable to the rights-bearers. In a very literal sense, acceptability can refer to the physical characteristics of water, such as the color, taste, or smell. Even if water is chemically and biologically safe to drink, it may be unacceptable to the rights-bearer, which means that their HRtW would not be fulfilled. Requiring people to drinking water that may be technically safe but that they find highly unpleasant is not respectful of human dignity, which is the ultimate basis for human rights.

Additionally, the acceptability dimension requires that the material condition be provided in a way that is culturally acceptable. An analogous example would be with the right to food: if beef were provided to a Hindu community to fulfill the right to food, even if it were nutritious and safe to eat, it would violate the acceptability requirement and the right would not be fulfilled. Similarly, different cultures, especially indigenous peoples, may have requirements for water sources they can or cannot use because the water source has ceremonial or spiritual value, or the ways in which those water sources can be used do not extend to consumption.

“Acceptability” is not the language used in most domestic water laws, but many domestic water laws have protections for traditional or indigenous uses of water, which would work towards protecting acceptability. Additionally, many domestic water laws have a participation guarantee. Because acceptability can have the most variance from culture to culture, or even

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28 The CESCR General Comment 15 (2003, para 2, para 12(b), para 12(c)(i), para 24) uses the phrase “sufficient, safe, and acceptable water” several times to describe what is contained in the right to water. In the 2003 definition, the primary characteristics were Availability, Quality, and Accessibility (para 12). Acceptability is not clearly defined, although the Comment states: “Furthermore, water should be of an acceptable colour, odour and taste for each personal or domestic use” (CESCR 2003, para 12(b)). The acceptability criteria is part of other human rights as well, but is often not well defined or measured. Foreman and MacNaughton (2016, 57, 63) include the requirement “to provide accessible, available, acceptable, quality essential medicines ” as a core duty in the human right to health, but they focus on the accessibility and availability criteria, rather than acceptability. Acceptability is, in my view, an essential part of human rights, but it does not seem to be well-theorized in the literature.
person to person, participation is likely the best way to make sure that the water being provided is acceptable to the rights-bearers.

The Quality and Accessibility provisions were both very common throughout domestic water law, and therefore were positively correlated with many of the other elements. Quality and Accessibility both fit into a development frame, as well as being essential elements of the HRtW, so theoretically, I would expect for them to be the most common provisions because of the overlap. The fact that Quality and Accessibility were both positively associated with the use of rights language does mean that these elements are not the exclusive provenance of development-focused laws.

The requirement of a Direct Reference to water was positively correlated with only Quality provisions. Again, this makes a certain amount of theoretical sense, because water quality provisions are more common in relation to water than they are in relation to the substance of other rights to public services provided by the government. This also supports the idea that although elements of the HRtW are present in domestic water law, they may not have originally been intended for water (or solely water), or that they were introduced under an alternative but potentially compatible frame, such as development or environmental policy.

Universality was positively correlated with Quality, Acceptability, and Accessibility. Accessibility and Quality, again being the most common provisions, correlated with most of the other elements. Theoretically, I would expect to see Universality and Acceptability correlated because they are both essential components of the human rights frame. Universality and non-discrimination means that no one can be excluded from the right, and acceptability means that the needs of individual water users and cultural groups are respected. Both provisions enforce the founding assumption of human rights: that all human beings have dignity and therefore have
rights. Being a person with dignity and rights means being respected and seen as part of the
rights-fulfillment process, rather than a passive recipient of governmental or charitable
generosity.

Availability was positively correlated with both Quality and Affordability. Availability
was also a fairly common element, showing up in about 70% of countries in my dataset, with
Quality provisions being present in 73% of countries. It is interesting that Availability was not
correlated with Accessibility, which was present in 67% of countries. Because Availability was
created using a combination of two provisions from coding (a minimum amount guarantee or
prioritizing drinking water over other uses), it may reflect that these provisions individually
correlate in different ways with other provisions. When the individual provisions that make up
Availability are cross-tabulated with Accessibility, a few possibilities emerge (see figures 5.4
and 5.5).

Figure 5.4: Cross-tabulation of Accessibility provision with a minimum amount of water
requirement

<table>
<thead>
<tr>
<th>Access Guarantee</th>
<th>Minimum Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>32</td>
</tr>
<tr>
<td>1</td>
<td>42</td>
</tr>
<tr>
<td>Total</td>
<td>74</td>
</tr>
</tbody>
</table>

Figure 5.5: Cross-tabulation of Accessibility provision with Prioritizing Drinking Water

<table>
<thead>
<tr>
<th>Access Guarantee</th>
<th>Prioritize Drinking Water</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>14</td>
</tr>
<tr>
<td>1</td>
<td>21</td>
</tr>
<tr>
<td>Total</td>
<td>35</td>
</tr>
</tbody>
</table>
A minimum amount of water requirement appears almost entirely along with an access guarantee, which makes sense looking at the language of both of those elements as described in chapter 4. An access guarantee can be strengthened with a minimum amount requirement. There seems to be less of a clear pattern between a law to give priority use to drinking water and a law guaranteeing access.

Quality was positively correlated with Rights Language, Direct Reference, Universality, Acceptability, Availability, and Accessibility – everything except Affordability, which makes sense for the most common provision. Similarly, Accessibility was positively correlated with Rights Language, Universality, Quality, and Acceptability. These elements were the most common within my dataset.

Acceptability was positively correlated with Rights Language, Universality, Quality, and Accessibility. Because Acceptability is the element most directly linked to the human rights frame, it is theoretically consistent that it correlates with Rights Language and Universality. The fact that it was positively correlated with Quality and Accessibility, which fit into frames beyond just human rights, suggests that not all of the countries with Quality and Accessibility provisions are using development or non-rights frames.

Affordability was the least common provision of the eight elements, present in only 43% of countries in my dataset, and was only correlated with Availability. Part of this may be a result of the higher level of uncertainty over coded zeros for this variable, because affordability provisions for public services have numerous potential locations within statutory law and may not always be located with water laws. Affordability also had a higher number of missing cases, in part due to this uncertainty. If this lack of a relationship persists through further and more detailed coding, it should be investigated in further research.
Patterns and Associations among States and the HRtW

I created a basic additive variable that is the total elements of the HRtW. This variable adds the dichotomous variables of Rights Language, Direct Reference, Universality, Availability, Quality, Acceptability, Accessibility, and Affordability. A “complete” HRtW law would therefore have a score of 8. This is a very simplistic variable and treats each element as equally weighted, but it is useful for the purposes of trying to find patterns between states that have more or fewer elements of the HRtW. (See figure 5.6)

Figure 5.6 Frequency Chart for the Complete HRtW Additive Variable

<table>
<thead>
<tr>
<th>Complete HRtW</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>9</td>
<td>7.96</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>1.77</td>
</tr>
<tr>
<td>2</td>
<td>9</td>
<td>7.96</td>
</tr>
<tr>
<td>3</td>
<td>21</td>
<td>18.58</td>
</tr>
<tr>
<td>4</td>
<td>10</td>
<td>8.85</td>
</tr>
<tr>
<td>5</td>
<td>20</td>
<td>17.70</td>
</tr>
<tr>
<td>6</td>
<td>11</td>
<td>9.73</td>
</tr>
<tr>
<td>7</td>
<td>17</td>
<td>15.04</td>
</tr>
<tr>
<td>8</td>
<td>14</td>
<td>12.39</td>
</tr>
<tr>
<td>Total</td>
<td>113</td>
<td>100</td>
</tr>
</tbody>
</table>

Considering the high degree of correlation between several of the different elements of water and the limited number of cases an ordinal logit model does not always converge (and those that do have very low degrees of freedom). Based on the high levels of correlation, I collapse my scale of nine into a scale of four\(^{29}\). My first category is 0, which corresponds to having none of the elements of the HRtW. Within my limited data set, this is only nine countries.

\(^{29}\) The Kuder-Richardson Indicator for my dataset is .6943. Due to concerns over not loading onto a single factor, I also ran the KR20 test dropping Affordability because that seemed the most likely to be a different dimension, and the result was .6958. Adding missing countries and treating them as zeros results in a KR20 of .9089 with the zeros as an anchor. Based on these results, I proceed using my collapse complete HRtW scale as the dependent variable for my ordered logit models.
My second category is 1, which encompasses having 1, 2, or 3 elements of the HRtW, which I call “Few”. My third category is 2, which encompasses having 4, 6, or 6 elements of the HRtW, which I call “Some”. And finally my fourth category is 3, which encompasses having 7 or 8 of the elements of the HRtW, which I call “Most”. (See Figure 5.7). The collapsed version of the complete HRtW additive variable is what I will use for my dependent variable in most of the following analyses.

To analyze this data, I am introducing control variables and I am treating all other countries as if they do not have HRtW laws\(^\text{30}\). Although I have not examined every country’s laws, based on the sample of countries whose names begin with letters A, B, and C, nearly all of the countries that had HRtW laws were identified in the WASH 2012 Sourcebook. Although I found a few countries that had HRtW laws that were not included in the WASH 2012 Sourcebook, I am confident that the level of error involved in this assumption is acceptable for the purposes of identifying possible avenues for future research (although not for hypothesis testing). But because my dataset is biased toward countries that have a HRtW law (because I used the WASH sourcebook as my primary source), without this assumption we cannot compare countries that do not have these HRtW provisions because we do not know if they lack any HRtW laws, or if they were simply missed in the dataset creation.

Figure 5.7: Frequency Chart for the Collapsed Complete HRtW Additive Variable

<table>
<thead>
<tr>
<th>Complete HRtW Collapsed Scale</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 (None)</td>
<td>95</td>
<td>47.74</td>
</tr>
<tr>
<td>1 (Few)</td>
<td>32</td>
<td>16.08</td>
</tr>
<tr>
<td>2 (Some)</td>
<td>41</td>
<td>20.6</td>
</tr>
<tr>
<td>3 (Most)</td>
<td>31</td>
<td>15.58</td>
</tr>
<tr>
<td>Total</td>
<td>199</td>
<td>100</td>
</tr>
</tbody>
</table>

\(^{30}\) This suggestion was made by Jenifer Whitten-Woodring after presenting an earlier version of this research at the annual meeting of the 2018 International Studies Association.
Based on the collapsed HRtW scale I created, along with recoding any missing values as zeros, about half of the world’s countries have no elements of the HRtW. Eleven percent are part of group 1, 18 percent are part of group 2, and 14.5 percent are part of group 3, the top group.\textsuperscript{31}

\textit{Control variables}\textsuperscript{32}:

\textbf{Available Water Resources}

This variable is proxied by a measure from AquaStat\textsuperscript{33}: Total renewable water resources per capita (m\textsuperscript{3}/inhab/year). I suspect that states with greater available water resources per capita may not be as likely to have an accessibility guarantee because they may not face as great a challenge in providing sufficient water to their population and therefore there may not be the need to specify protections for accessibility de jure – in contrast to states with scarcer water resources. This variable is logged to reduce error for large values.

\textbf{Other Water Uses}

This variable is proxied by measures of the percentage of water resources used by industry and agriculture, also from AquaStat. My intuition is that states with a higher demand on their water resources be may be more likely to have a provision that gives domestic use priority, but we may see the opposite if the high demand from agriculture and industry means that those stakeholders hold greater political and economic influence.

\textbf{Democracy}

\textsuperscript{31} Once these missing countries are added to my dataset, I suspect the first category will be the most populous, based on the Direct Reference to water element. Many states have water laws that directly reference water, but lack any of the substantive elements of the HRtW. Completing my dataset will include a variable for this case.

\textsuperscript{32} Normally when trying to predict the institutionalization of a human right, I would include an international right recognition variable, because if the country were a party to the relevant human rights treaty, I would expect it to be more likely that they would have the right domestically institutionalized. However, because of the theoretical claim that I’m making, that many of these states began institutionalizing elements of the HRtW before it was internationally recognized, there is not a good variable for this. The UN General Assembly declaration from 2010 might serve, but it seems possible that the level of domestic elements of the HRtW a country could be used to predict the likelihood of joining the declaration, but not the other way around.

This variable is proxied by the Polity IV\textsuperscript{34} democracy score. “The Democracy indicator is an additive eleven-point scale (0-10). The operational indicator of democracy is derived from codings of the competitiveness of political participation (variable 2.6), the openness and competitiveness of executive recruitment (variables 2.3 and 2.2), and constraints on the chief executive (variable 2.4)” (Marshall, Gurr, and Jaggers 2016, 14). In general, democracies are more likely to support a variety of rights, therefore my expectation is that more democratic countries will be more likely to have more elements of the HRtW in their policies (Poe and Camp 1994; Richards et al. 2001; Sen 2004). Sen (2004) emphasizes that democratic countries have to be more responsible to their citizens and are more likely to take their basic rights seriously. Additionally, I suspect that more democratic countries will be more likely to have the acceptability element specified directly. If different elements of the HRtW are being institutionalized because of local demand, we might expect those aspects to be more strongly associated with democracy.

**Constitutional Age**

This variable will be the age of the constitution in effect in 2010. I created this variable using the date of the current constitution went into effect from the publicly available Comparative Constitutions Project (“Constitute”)\textsuperscript{35} and subtracted from the year 2010, the year of my dataset. Countries with constitutions written after the UDHR tend to include a wider variety of rights than earlier constitutions. My expectation is that countries with newer constitutions are more likely to have more elements of the HRtW.

\textsuperscript{34} The Polity IV Project by Marshall and Jaggers codes regime type for all states from 1800-2011 and is one of the standard datasets used when coding for regime type.

Region
I have included variables for the region that each country is in from UNStats\(^{36} \). I do not necessarily anticipate a specific region to be more likely to have more elements of the HRtW, when I control for the age of the constitution and level of development, but the neighborhood effect has been noted in other human rights studies and is theoretically consistent with the emergence and spread of norms (Kaletski et al. 2016, 446)

Development
I proxy the level of development using logged GDP per capita (which is also data from AquaStat). Frequently, countries with higher levels of development tend to have more recognized rights, so if there is any relationship, I suspect that more developed countries will have more elements of the HRtW.

Population
I include the population as a control variable (also data from Aquastat). I log the variable to avoid large errors at large values. Although larger populations, especially with a higher rural population are often associated with worse outcomes for actual access to an improve water source, I do not anticipate population necessarily having a specific influence on the number of elements of the HRtW policies.

Models
I use an ordered logit model because I created my dependent variable using ordinal categories. Using the full model with all of my independent variables had ended up with a very small number of observations due to missing data. The table is included as figure 5.8 below. The only significant variable in that model was population, which has a positive coefficient (and an odds ratio above 1). This means that for a one unit increase in the logged population, holding the

\(^{36}\) [https://unstats.un.org/unsd/methodology/m49/overview/](https://unstats.un.org/unsd/methodology/m49/overview/) (downloaded July 9, 2018)
other variables constant, there is a 1.55 percent proportional odds of being in a higher category. However, the low number of observations means that most of the available data is actually not included in this model.

Figure 5.8: Ordered Logistic Regression for the Collapsed HRtW Additive Variable, version 1

<table>
<thead>
<tr>
<th>Variables</th>
<th>Odds Ratio</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Available Water Resources</td>
<td>0.854503</td>
<td>0.254541</td>
</tr>
<tr>
<td>Percent use by Agriculture</td>
<td>1.032454</td>
<td>0.02858</td>
</tr>
<tr>
<td>Percent use by Industry</td>
<td>0.9972776</td>
<td>0.020149</td>
</tr>
<tr>
<td>Democracy</td>
<td>1.118459</td>
<td>0.108798</td>
</tr>
<tr>
<td>Constitutional Age</td>
<td>0.9945671</td>
<td>0.007649</td>
</tr>
<tr>
<td>Development</td>
<td>0.5680037</td>
<td>0.246376</td>
</tr>
<tr>
<td>Population</td>
<td>1.546412*</td>
<td>0.29278</td>
</tr>
<tr>
<td>Region: Africa</td>
<td>0.1520627</td>
<td>0.375579</td>
</tr>
<tr>
<td>Region: Americas</td>
<td>3.584594</td>
<td>5.672933</td>
</tr>
<tr>
<td>Region: Asia</td>
<td>0.2110452</td>
<td>0.387459</td>
</tr>
<tr>
<td>Region: Europe</td>
<td>7.358464</td>
<td>15.49475</td>
</tr>
</tbody>
</table>

N=46
* p<.05 **p<.01 ***p<.001

The variables that were responsible for most of the missing data were the percent of water use by agriculture and the percent of water use by industry, which were meant to proxy having other demands on water resources beyond domestic use. I removed these two variables from my ordered logit model to try to include more of my observations in the model and get a better picture of how the other demographic variables were associated with the level of completeness for the HRtW. The odds ratios results are included in figure 5.9 below.

In this model, with 134 observations included, several of the control variables appear to be significant. A one unit increase in the logged available water resources per capita has a 1.33 odds of being in a higher HRtW category, holding the other variables constant. Population still has a positive, significant effect, with a 1.50 odds of being in a higher HRtW category with each one unit increase in the logged population. A one unit decrease in the logged GDP per capita,
which is my development proxy, has .62 odds of being in a higher HRtW category. Finally, we see a potential neighborhood effect in this model, with countries in the Americas having a 10.25 greater odds of being in a higher HRtW category, holding all other variables constant. This neighborhood effect may be due to the greater emphasis placed on the HRtW after the privatization fights in Bolivia, as Baer (2015) suggests.

Figure 5.9: Ordered Logistic Regression for the Collapsed HRtW Additive Variable, version 2

<table>
<thead>
<tr>
<th>Variables</th>
<th>Odds Ratio</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Available Water Resources</td>
<td>1.326403*</td>
<td>0.175256</td>
</tr>
<tr>
<td>Democracy</td>
<td>1.072254</td>
<td>0.056356</td>
</tr>
<tr>
<td>Constitutional Age</td>
<td>1.000674</td>
<td>0.002004</td>
</tr>
<tr>
<td>Development</td>
<td>0.6165283**</td>
<td>0.105167</td>
</tr>
<tr>
<td>Population</td>
<td>1.497703***</td>
<td>0.171869</td>
</tr>
<tr>
<td>Region: Africa</td>
<td>3.058151</td>
<td>3.426844</td>
</tr>
<tr>
<td>Region: Americas</td>
<td>10.2477*</td>
<td>10.68674</td>
</tr>
<tr>
<td>Region: Asia</td>
<td>1.545354</td>
<td>1.681956</td>
</tr>
<tr>
<td>Region: Europe</td>
<td>3.185345</td>
<td>3.252128</td>
</tr>
<tr>
<td>Cut 1</td>
<td>2.976978</td>
<td>2.551039</td>
</tr>
<tr>
<td>Cut 2</td>
<td>3.896602</td>
<td>2.555009</td>
</tr>
<tr>
<td>Cut 3</td>
<td>5.425085</td>
<td>2.574331</td>
</tr>
</tbody>
</table>

N=134
LR chi2(9) = 49.12
Prob > chi2 = 0.0000
* p<.05 **p<.01 ***p<.001

I also ran logit models for each of the individual elements of the HRtW with the control variables. Figure 5.10 shows the odds ratio results of those logit models. Available water resources were positively associated with a direct reference to water and to protection from disconnection. Population was positively associated with all the elements of the HRtW except Quality, Disconnection, and Affordability. The Affordability and Quality models actually did not have any significant variables. Level of development was negatively associated with about half of the elements of the HRtW: Rights Language, Direct Reference, Universality, Availability, and
Accessibility. One of the most interesting results from the individual logit models is that the acceptability model shows a positive association with level of democracy. For each one unit increase in level of democracy, there is a 1.17 odds increase that the country will have the Availability HRtW element. This supports my expectation about the effect of democracy on the elements of the HRtW.

Although my coding data are still limited at this point in time, what I have coded shows some interesting patterns and associations. There are multiple strong associations between the elements of the HRtW. Additionally, when the individual elements of the HRtW are combined into an additive variable and condensed, the available water resources, level of development, and population show potential effects on the level of completeness of the HRtW institutionalization. Additionally, there is a potential neighborhood effect for countries in the Americas, possibly based on past struggles for the HRtW in the region. Looking at the elements of the HRtW individually suggests a relationship between democracy and acceptability that merits further investigation.
Figure 5.10: Individual Logit Models for Elements of HRtW

<table>
<thead>
<tr>
<th>Variables</th>
<th>Rights Language</th>
<th>Direct Reference</th>
<th>Universality</th>
<th>Availability</th>
<th>Quality</th>
<th>Acceptability</th>
<th>Accessibility</th>
<th>Disconnection</th>
<th>Affordability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Available Water Resources</td>
<td>1.334392</td>
<td>1.452169*</td>
<td>1.092987</td>
<td>1.077706</td>
<td>1.107136</td>
<td>1.334032</td>
<td>1.162138</td>
<td>1.910614*</td>
<td>1.199806</td>
</tr>
<tr>
<td>Democracy</td>
<td>1.087491</td>
<td>1.058916</td>
<td>0.9830254</td>
<td>1.020146</td>
<td>1.02833</td>
<td>1.172703*</td>
<td>1.052595</td>
<td>1.06111</td>
<td>1.038863</td>
</tr>
<tr>
<td>Constitutional Age</td>
<td>0.999456</td>
<td>1.00137</td>
<td>1.005519</td>
<td>0.9942918</td>
<td>0.996618</td>
<td>0.9851626</td>
<td>0.9995239</td>
<td>1.008139</td>
<td>1.003446</td>
</tr>
<tr>
<td>Development</td>
<td>0.547723*</td>
<td>0.6082045*</td>
<td>0.5790069*</td>
<td>0.5930243*</td>
<td>0.689378</td>
<td>0.9688777</td>
<td>0.4872449***</td>
<td>0.9212062</td>
<td>0.687231</td>
</tr>
<tr>
<td>Population</td>
<td>1.463738**</td>
<td>1.514227**</td>
<td>1.384222*</td>
<td>1.478135**</td>
<td>1.237093</td>
<td>1.650259**</td>
<td>1.469188**</td>
<td>1.513384</td>
<td>1.273014</td>
</tr>
<tr>
<td>Region: Africa</td>
<td>1.68999</td>
<td>3.335108</td>
<td>1.28178</td>
<td>0.5903166</td>
<td>0.49692</td>
<td>0.4195776</td>
<td>2.676135</td>
<td>1.649461</td>
<td></td>
</tr>
<tr>
<td>Region: Americas</td>
<td>7.313732</td>
<td>2.942772</td>
<td>5.741963</td>
<td>3.147044</td>
<td>2.117404</td>
<td>1.81158</td>
<td>6.295795</td>
<td>2.884732</td>
<td></td>
</tr>
<tr>
<td>Region: Asia</td>
<td>1.071728</td>
<td>1.855973</td>
<td>0.3995511</td>
<td>0.466961</td>
<td>0.411167</td>
<td>0.2814981</td>
<td>0.7377775</td>
<td>0.6221196</td>
<td></td>
</tr>
<tr>
<td>Region: Europe</td>
<td>2.876843</td>
<td>3.494969</td>
<td>1.373286</td>
<td>Dropped</td>
<td>Dropped</td>
<td>0.1210748</td>
<td>3.830155</td>
<td>Dropped</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>134</td>
<td>134</td>
<td>134</td>
<td>129</td>
<td>129</td>
<td>134</td>
<td>134</td>
<td>135</td>
<td>129</td>
</tr>
<tr>
<td>LR chi2</td>
<td>34.03</td>
<td>31.25</td>
<td>34.58</td>
<td>32.06</td>
<td>18.6</td>
<td>38.55</td>
<td>42.1</td>
<td>15.49</td>
<td>20.54</td>
</tr>
<tr>
<td>Prob &gt; chi2</td>
<td>0.0001</td>
<td>0.0003</td>
<td>0.0001</td>
<td>0.0001</td>
<td>0.0172</td>
<td>0</td>
<td>0</td>
<td>0.0085</td>
<td>0.0085</td>
</tr>
<tr>
<td>Log likelihood</td>
<td>-69.170902</td>
<td>-75.76001</td>
<td>-68.234434</td>
<td>-72.728273</td>
<td>-79.4615</td>
<td>-60.628105</td>
<td>-70.874334</td>
<td>-27.904028</td>
<td>-67.92938</td>
</tr>
</tbody>
</table>

*p<.05 **p<.01 ***p<.001
Chapter 6: Complicating the Human Right to Water: Examples from the United States and India

The human right to water (HRtW) is an international norm that has developed steadily in modern law since the 1970s. However, much of that development has taken place at the state level, specifically within state water policy, before it emerged as an international norm. As I demonstrated in chapter 3, elements of the human right to water can be found in contemporary constitutional and statutory domestic law about a decade before it gains international mention (i.e., cascading in the 1990s prior to recognition in broader human rights law in the early 2000s). Moreover, the HRtW was slow to be fully defined and elaborated internationally. Much of the early international attention was recognizing the existence of “a human right to water” or “a human right to water and sanitation.” Not until the 2002 Committee on Economic, Social and Cultural Rights (CESCR)’s General Comment 15 did the international community begin to identify a firm legal foundation and definition of the human right to water. Work to elaborate how to fulfill or realize the right began after the General Comment.

The HRtW norm is not a simple or standard case of top-down norm dissemination into state policy. I have shown that the norm has been mutually constituted between the state and international levels. However, even when state law has been involved in the creation of the HRtW norm, and has many of the elements of the HRtW, that does not mean that it fully reflects the norm as it exists today. Specifically, because many state-level water laws existed before the norm was fully elaborated, states could not completely institutionalize the norm.

37 Of course laws regulating and governing water use have existed far longer than that, but we see laws that include specific elements of the human right to water in the 1970s and cascading in the 1990s.
38 Baer (2015, 355), in her study of Bolivia’s institutionalization of the HRtW highlights the fact that “South Africa and Uruguay enshrined the HRtW in their constitutions in 1996 and 2004, respectively, but there were essentially no global guidelines for national governments on how to implement the HRtW.”
Although state policies will need to be further amended to fully institutionalize the HRtW, that does not mean they will be identical across state jurisdiction, sub-state units, or issue areas in relation to water. New policies cannot just be adopted wholesale and put into place with a turnkey approach. Water policy is always going to be context-specific in relation to each state, in part because water is a deeply local and geographically bound resource. Moreover, states already have water policies, whether those policies contain elements of the HRtW or not. So, any future changes to water policy made to align it with human rights principles will be informed by existing institutional frameworks of that particular state. Even when states do entirely replace their water policy framework, such as Bolivia did in 2009 (Baer 2015, 354), their policy decisions will be influenced by their previous experiences with water policy.

Regardless of the driving motivation behind the creation of state-level water institutions, some version of a state-level water institution existed in most if not all states before the HRtW norm emerged. Comparative politics and international relations scholars diverge on how strongly they believe state institutions can be influenced or driven by international norms, with classic IR scholars such as Krasner (1982), Ruggie (1982), and Keohane and Martin (1995) seeing a much larger role for international norms than classic comparative scholars such as Knight (1992) and North (1990). Along with many human rights scholars, my research reveals that human rights norms can influence state-level institutions in tangible ways. But the specific way in which international-based norms contribute to the domestic institutionalization of elements of the HRtW is not straightforward. With regard to water institutions, specifically, any international influence will have to be integrated into the existing institutional framework, which will likely mean modifying and adapting those institutions rather than replacing them wholesale.
Ultimately, all water politics are, in part, local. The international and national levels can provide consistency and leverage for local campaigns. Socialization and desire for conformity can drive states to adhere to norms. It can also be useful to study water policies at international and national levels. Using large-n data can help us understand patterns that occur across water policies worldwide and can also help scholars and policymakers identify sites for more in-depth study. My data from the previous three chapters allowed me to identify a discrepancy in the expected norm formation and institutionalization timeline dominant in constructivist international relations scholarship on human rights norms. However, in the end, states have a number of different influences on their water policy, their own history and their own political pressures. Finding patterns and trying to understand water policy on a global level will not lead to a universal or fully generalizable explanation for water policies around the world.

To fully understand water policy for each state would require a case study of each state. Case-by-case analysis can reveal factors that influence why and how states shape water policy, including individual institutional legacies (which in turn affect how water has been regulated, distributed and framed over time) and previous obstacles that the state has had to address in relation to water provisioning, etc. For many states, water policy has been primarily framed as an economic issue, a development issue, or more recently, as an environmental issue. However, as I demonstrated in chapter 3, the human rights frame has gained significant levels of support since the 1990s. The HRtW is a politically salient issue because an internationally-defined HRtW goes beyond the existing de jure or de facto rights recognition of most states. As my work reveals, there are definite patterns in how state water policy has influenced the HRtW norm, as well as how well state laws match up with the existing definition of the norm; this mutual constitution is underplayed in most contemporary scholarship on the right to water.
In this chapter, I will use two state examples to further elaborate the individual complexity of the interaction between state water policy and the (now) international HRtW norm. These are illustrative (rather than exhaustive) comparative case studies developed to highlight patterns of variation in the nature and implementation of water policy across states. Using the United States of America and India. I will describe the water institutions of each state and demonstrate how these institutional frameworks reflect the patterns central to my HRtW law coding (i.e., the patterns central to Chapters 3 and 5).

I use the cases, in turn, as a plausibility probe to reinforce my broader theoretical contribution – namely, the adapted norm life cycle. I analyze specific incidents within each state that reveal how the existing water institutions are either still incomplete or insufficiently comprehensive in providing universal access to clean water, or realization of the human right to water. I then argue that aligning national institutions with an internationally accepted HRtW norm would increase the likelihood that both the USA and India could more comprehensively and effectively implement the right to water.

**The Evolution of Water Policy, Examples from the US and India**

Both the United States and India demonstrate complexity and variation in water policies and institutions at the national and sub-national levels; my comparative analysis reveals the ways in which the HRtW has been recognized and institutionalized more generally. The US and India are both large, highly-populated, democratic, federal states. English Common Law shaped the evolution of both legal systems, and a Supreme Courts interprets the constitution and creates new law in each state. Since the last decade of the 20\textsuperscript{th} century, both have seen their left-moderate parties/alliances become more sympathetic to neoliberal market reforms and their right-wing parties/alliances become increasingly socially conservative, although India has a
leftist/communist set of political parties that is not matched in the US. During the Cold War, India allied with the Soviet Union rather than the US and therefore has a longer history of recognizing economic and social rights than the US does. India is also considered a developing country and has a much lower GDP per capita than the United States. Their similar frameworks allow the differences in their water policies to stand out.

The following case study vignettes will not focus on all possible sources of variation between US and Indian water policy and institutions, but rather seeks to demonstrate that even with many similar legal and political institutions, states such as these two still have highly individualized experiences and manifest the norm life cycle in different ways.

**The United States of America**

The United States has used two major legal frames with regard to water, historically. The first is the riparian right framework, in which anyone with land touching a body of water has the right to use that water, but not to the detriment to those downstream. The riparian rights frame came initially from English common law and is also common throughout Europe (Scott and Coustalin 1995, 825). The other frame, which took root in the water-scarce Western states within the USA, is the appropriative rights framework, also sometimes called use-based rights (Scott and Coustalin 1995, 825). Under this legal framework, the water belongs to those who claim it and use it. The order in which water rights were claimed was the order in which users had priority over the water, regardless of riparian order. Water rights had to be used in order to keep them. Both of these frameworks emphasized who had the right to use water sources, rather than providing universal access to water to everyone and essentially treated water as a property right (Scott and Coustalin 1995, 822). However, the appropriative rights framework is considerably
more restrictive, because water users with earlier claims can essentially deny water (either through volume or quality) to later claimants, especially if there is a shortage.

Historically, groundwater use was based on land ownership. Those owning land had unlimited right to pump water from beneath their land, which was known as “The English Rule.” Few, if any states in the US still employ this rule because groundwater does not actually follow land ownership boundaries; rather, it is linked to aquifers that extend broadly underground across multiple ownership sites and regulatory jurisdictions. Most states use the “American Doctrine” which specifies “reasonable use.” Groundwater is typically regulated by state and local laws; it largely does not fall within federal jurisdiction except in relation to pollution control (Scott and Coustalin 1995, 945).

The federal status of the United States is critical to understanding water laws because most water laws are left to state jurisdiction. Provision of water supply is frequently devolved by the states to local and municipal governments. Federal laws can govern surface waters usually only if they are considered navigable between states. The primary federal law regarding water pollution is the Federal Water Pollution Control Act of 1948, which formalized government obligations for the control of water pollution and allowed the federal government to provide support for state regulations. This was amended in 1965 with the Water Quality Act, which created the Federal Water Pollution Control Administration and allowed the federal government to set water quality standards if states refused to set their own. In 1972, the Federal Water Pollution Control Act was further amended by the Clean Water Act, which set the basic structure for regulating and permitting pollutants and discharges into US waters that we still use today. These amendments also provided the Environmental Protection Agency regulatory authority over water quality and pollution control programs.
The other major federal law governing water quality is the Safe Drinking Water Act (SDWA) of 1974. This law was designed to regulate the nation’s drinking water supply in order to protect public health. It both protects drinking water sources such as rivers, lakes, reservoirs, springs, and ground water wells, as well as allowing the EPA to set water quality regulations for water suppliers.

The United States is not included in my data set of countries with a HRtW law, because there are no federal laws that protect any of the elements of the HRtW. The closest would be the SDWA but even the SDWA has significant restrictions and exceptions to its protections, such as not including private wells that serve fewer than 25 people. So, although the US has national water quality laws, they are not universal. In fact, the US (as of July 2018) explicitly does not recognize a human or constitutional right to water.\(^{39}\)

Even though the US is not an example of the HRtW being developed prior to the norm being defined and disseminated from the international level, it is not completely without a rights frame in relation to water. Nationally, there is not recognition or institutionalization of the HRtW. However, individual states, such as Hawaii and Massachusetts, have recognized a right to water within their state constitutions, or have laws protecting affordable access to drinking water, such as California (WASH United et al. 2012, 164, 169, 171, 203). It is common in the US for rights to develop at the state level for decades before they become nationally recognized, often referred to as “laboratories of democracy” (New State Ice Co. v. Liebmann 1932).\(^{40}\)


\(^{40}\) The legal recognition of same-sex marriage is a recent example of individual states developing the right, starting with Massachusetts in issuing same-sex marriage licenses in 2004, before being recognized nationally a decade later by the Supreme Court in *Obergefell v. Hodges* 2015.
The US does seem to be a good example of the more traditional norm life cycle as described by Finnemore and Sikkink (1998). The norm has largely developed elsewhere, although there is some support within pockets in the US, and it has begun to cascade internationally. In 2010, the US did not sign on to the United Nations General Assembly Declaration on the Human Right to Water and Sanitation. In 2018, however, an EPA advisory committee recommended taking a human rights approach to water in a draft report on environmental justice, using the 2003 General Comment 15 as part of its reasoning (NEJAC 2018).

A common critique of the HRtW in developed countries, such as the US, where piped and treated water has been fairly standard for decades, is that a right is not needed, because the majority of the population has access to clean water. But rights are not important just when they are widely violated. Rights are possibly most important when it is easy for people to engage in utilitarian thinking to allow the violation of the rights of a few to be ignored as long as most people are doing well enough. A human right to water means that everyone should have access to adequate amounts of clean water for domestic uses. It also means that having piped water is not enough, especially if that water is not actually of sufficient quality to drink. Just as a series of high-profile incidents in the 1960s and 1970s demonstrated the necessity for federal water pollution legislation, a series of incidents in the 2000s and 2010s in the United States have highlighted the need for the HRtW.

**Detroit, Michigan**

After years of a shrinking population and corresponding decline in its tax base, Detroit filed for bankruptcy in July 2013 to maintain the 139 square mile city that once held 1.8 million people (Davey and Walsh 2013). A significant amount of the city’s debt was held by the Detroit
Water and Sanitation Department (DWSD). In 2014, The DWSD began shutting off the water of people who owed more than $150 to the Department, or were more than two months behind on their water bills (Hackman 2014). At the beginning of the shutoffs, at least 40% of all Detroit water customers were behind on their water bills, a ratio nearly identical to the 38% of the city’s residents who lived below the poverty line; 23% of the population was unemployed (Hackman 2014).

As the shut offs progressed, Detroit faced criticism for irregularities in notifying customers of impending loss of service, as well as delays in reconnecting water service once bills were paid. Critics also pointed out that shutoffs focused on individual households that were overdue on water bills rather than on corporate customers that were also overdue (Hackman 2014, Graham 2014). A group of residents challenged the shut-offs in a class action suit supported by organizations including the Michigan Welfare Rights Network, People’s Water Board, Moratorium Now!, and the National Action Network (Michigan Chapter). Among other claims, the plaintiffs argued that the water shut-offs were a violation of substantive due process and equal protection because there is a fundamental human right to affordable drinking water. The bankruptcy judge denied their plea for an injunction on the shut-offs, restoration of service, and the implementation of a water affordability plan with income-based payments (Maurikia Lyda et alia v. City of Detroit 2016, 688). The bankruptcy court concluded, "that there is no constitutional or fundamental right either to affordable water service or to an affordable payment plan for account arrearages” and the US 6th Circuit Court of appeals upheld that ruling (Maurikia Lyda et alia v. City of Detroit 2016, 699).

In October 2014, the UN Special Rapporteur on the human right to safe drinking water and sanitation visited Detroit (along with the UN Special Rapporteur on Adequate Housing as a

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41 In Maurikia Lyda et alia v. City of Detroit, Mich., 841 F. 3d 684 - Court of Appeals, 6th Circuit 2016, 689.
component of the right to an adequate standard of living and to right to non-discrimination in this context) at the invitation of several civil society groups concerned about the water shut offs (Office of the High Commissioner for Human Rights [OHCHR] 2014). The Special Rapporteurs made a joint statement that disconnecting water access to households which are unable to pay their water bills constitutes a human rights violation (OHCHR 214). Although the state of Michigan and the United States have not acknowledged or accepted that disconnection for those unable to pay is a human rights violation, Detroit has begun implementing affordability schemes, more regularized notice of impending disconnection, and halting disconnections during the winter months (Graham 2014). Even if legally the US does not recognize a human right to water, it seems that the rights frame can be used to put pressure on the government to change its behavior, which is how Finnemore and Sikkink’s (1998) norm cascade functions to increase the uptake of a norm by state actors and other power-holders within society.

**Flint, Michigan**

Flint Michigan faced similar financial difficulties to Detroit, and in 2011 Flint declared a financial state of emergency, which allowed the State of Michigan to take over the city’s budget and appoint an emergency manager (Flint Financial Review Team 2011; Davis 2016). A planned pipeline from Lake Huron to Flint would reduce costs by removing Flint as a customer of the Detroit Water and Sewerage Department. While the pipeline was under construction, Flint would switch to sourcing water from the Flint River to lower costs immediately. The switch to the Flint River happened in April 2014 (Adams 2015).

After a series of boil water advisories and subsequent increases in chlorination after the presence of total coliform bacteria was detected, the Michigan Department of Environmental Quality (MDEQ) issued a Governor’s briefing paper in October 2014, identifying possible
causes for the water contamination, and recommending further chlorination and flushing (MDEQ 2014). In January 2015, residents began reporting concerns over the tap water color and smell and mysterious rashes and illnesses suffered by their children (Erb 2015). On February 26, 2015, the Michael Glasgow reported lead levels of 104 ppb in resident Lee-Anne Walters’ home, above the EPA limit of 15 ppb, to the MDEQ (CNN Library 2018; Glasgow 2014). Walters had contacted the EPA over concern about dark sediment in her water that was making her children sick. Further tests showed lead levels of 397 ppb in Waters’ water.

On March 23, 2015, the Flint City Council voted to reconnect their water system to DWSD and stop sourcing water from the Flint River (Fonger 2015a). The emergency manager overruled the council’s decision, citing the potential high costs, and claiming that Detroit’s water was no safer than Flint’s (Fonger 2015b). In June, activists and clergy members filed a lawsuit against the city, charging that the river water was a health risk, but the suit was dismissed.

June 24, 2015, the EPA issued a memo about the high lead levels in Flint, warning that the city was not properly controlling for corrosion, which was resulting in toxic-waste high levels of lead in household water (Del Toral 2015). The memo was leaked and released by the ACLU, but residents’ concerns were dismissed by politicians and public officials from the MDEQ (Smith 2015). A Virginia Tech study suggested that 40% of homes in Flint might be experiencing elevated lead levels (Roy 2015). The evidence of lead contaminated water began increasing and becoming more public, including reports from elevated lead levels in children, from pediatricians, but the state continued to denounce the findings publicly. By October 2015, the evidence became overwhelming: the water from the Flint River was corroding the lead pipes and resulting in dangerously high lead levels throughout the city. The city reconnected with Detroit for their water, but the corrosive waters had permanently damaged the pipes, which
would need to be entirely replaced. In November 2015, a class action lawsuit was filed against state officials for knowingly exposing Flint residents to toxic water\textsuperscript{42}.

Once the city and state acknowledged the issue with Flint’s water, government officials began working to address the issue, declaring a state of emergency, seeking federal funds to replace the damaged pipes, passing out bottled water and providing filters to residents. A federal investigation began and has so far resulted in multiple criminal indictments under the Safe Drinking Water Act. Multiple lawsuits have been filed in attempt for residents to seek redress for their continued exposure to toxic levels of lead (IN RE FLINT WATER CASES 2018). It appears that the laws about water quality in the US are working as expected, and working fairly quickly with regard to the Flint case. However, this case highlights just how much is lacking in the existing legal institutions around water.

If the US recognized a human right to water, an unelected emergency manager would not have been permitted to overrule the Flint City Council decision to switch their water back to Detroit, because participation from water users in decisionmaking is required.\textsuperscript{43} Residents’ concerns over the color and smell and taste of their water should have been acknowledged under the Acceptability requirement\textsuperscript{44}. Prioritizing the supply of safe drinking water over potential monetary savings should have resulted in better testing and research before changing water sources. People are mobilizing around the legal protections for safe drinking water that do exist in the US in an attempt to fix the problem of elevated lead levels in Flint’s water and to provide

\textsuperscript{42} The lawsuits are still continuing to work through the legal system and have been consolidated as IN RE FLINT WATER CASES, Dist. Court, ED Michigan 2018.

\textsuperscript{43} There are numerous concerns based on the over-riding of democratic decisionmaking by state-imposed managers in cities in receivership, beyond HRtW issues, especially highlighted by Fasenfest (2017).

\textsuperscript{44} Acceptability requires that the material condition be provided in a way that is acceptable to the rights-bearers. In a very literal sense, acceptability can refer to the physical characteristics of water, such as the color, taste, or smell. Even if water is chemically and biologically safe to drink, it may be unacceptable to the rights-bearer, which means that their HRtW would not be fulfilled. Additionally, the acceptability dimension requires that the material condition be provided in a way that is culturally acceptable. Requiring people to drinking water that may be technically safe but that they find highly unpleasant is not respectful of human dignity, which is the ultimate basis for human rights.
residents redress, which suggests that a legal right to safe drinking water would be similarly mobilizing.

Moreover, even though pipes are being replaced and filters have been distributed and tested and it seems that most residents have access to safe drinking water, their trust in government testing and reporting has been permanently damaged. Worse, the effects of lead poisoning are permanent and can have profound consequences on children who are exposed to even low levels of lead. A human rights approach would require the state to take these permanent damages into account when providing redress. Currently, the most likely way that these issues will be redressed is through monetary payments for successful class action lawsuits.

The examples of Detroit and Flint, Michigan demonstrate several ways in which the current water laws in the US are insufficient to protect human rights, and the specific ways that a human rights frame could benefit individuals. Detroit’s issues could largely be addressed by recognizing a right to access and affordable water. Flint’s issues could largely be addressed by emphasizing the right to participation and access to information, as well as prioritizing the delivery of safe and acceptable drinking water over other governmental concerns. Both cases show major violations of the core principles of universality and non-discrimination.

India

India’s post-colonial constitution integrated economic and social rights centrally, unlike the United States’ constitution (Gauri and Brinks 2008). However, many of these rights were listed Part IV, the Directive Principles, which are non-justiciable according to Article 37 of India’s Constitution. The right to water was not explicitly mentioned in the constitution, but the Supreme Court of India has repeatedly found a constitutionally guaranteed and justiciable right to water under right to life in Article 21 of the Indian Constitution. India’s creation and
interpretation of the right to water was developed prior to the international emergence of the HRtW norm and does not map completely onto the CESCR’s 2003 definition (Cullet 2013).

India uses a mix of the rights framework and the development framework in how it addresses water. Indian case law firmly supports a right to water, both in terms of protection from pollutants, as well as in relation to the state duty to provide clean water. However, the national government has not enacted any legislation recognizing and enforcing a right to water. Instead, the National Water Policy (2002) uses a development framework. The policy refers to water as “a prime natural resource, a basic human need and a precious national asset” as well as “one of the most crucial elements in developmental planning” (Ministry of Water Resources 2002, 1). The document goes on to describe the guidelines and best practices for development of water resources, including primary consideration for drinking water. However, the document lacks any language of rights, and instead is couched in more flexible terms such as “should.” The policy includes a desire for universal access to safe drinking water but does not make that desire a requirement. “Adequate safe drinking water facilities should be provided to the entire population both in urban and in rural areas” (Ministry of Water Resources 2002, 4).

Similar to the US, India is also a federal system that allows the individual states to set their own water policies, much of which is given over to local control. Although some states, such as Uttar Pradesh, Madhya Pradesh, Karnataka, and Maharashtra, have created more detailed water regulations and institutions, Cullet (2013, 62-63) found that there is no dedicated comprehensive drinking water legislation in any of the Indian states. The Indian experience with the right to water thus far seems to be a mixed experience, with the courts routinely supporting the right, while other political and governmental actors are less reliable.

Plachimada, Kerala

45 A.P. Pollution Control Board II v Prof. M.V. Naidu and Others (Civil Appeal Nos. 368-373 of 1999)
The Coca-Cola Company (or its subsidiaries) operates several plants in India, which use water as the primary ingredient for their products. In early 2000, Coca-Cola was granted a license by the government of Plachimada, Kerala to open a plant there; the government’s aim was to help promote economic development of the region. Later that year, the plant began operations, taking approximately 510,000 liters of water each day, and releasing large quantities of wastewater (Hills and Welford 2005, 171). Within six months residents began noticing a change in their water quality, in hardness and taste, as well as illnesses after using it (Koonan 2007, 2). After a year of production, local residents began protesting the use of water by Coca-Cola, asserting that their rights had been violated. The primary complaints were that wells had dried up which forced them to use outside sources of water; consequently, they were unable to grow rice and coconuts at previous levels, and that the water remaining was polluted beyond safe use (Koonan 2007, 2).

As a result of the complaints from residents, in 2003, the local panchayat chose not to renew Coca-Cola’s license with the justification of public interest (Drew 2008, 38). The case was taken to the Kerala High Court (Goshray 2007). The court found that groundwater is a public resource and cannot be converted to private use. Additionally, the court found that the state had a duty to “protect against excessive groundwater exploitation and the inaction of the State in this regard was tantamount to infringement of the right to life of the people guaranteed under Article 21 of the Constitution of India”46. The court ruled that Coca-Cola had to stop taking groundwater in excess of a “reasonable amount”, but that the panchayat could not cancel the license or interfere with the plant as long as the plant did not extract prohibited groundwater.

Coca-Cola appealed the ruling, asserting that its groundwater use was not responsible for lower levels of groundwater, rather a severe drought was responsible for the water shortage, and

46 Perumatty Grama Panchayat vs State Of Kerala on 16 December, 2003 2004 (1) KLT 731
that other water-heavy industries in the region were still permitted to extract groundwater (Hills and Welford 2005, 173; 175). Despite the ruling, the panchayat continued to refuse to renew Coca-Cola’s license. The panchayat had set three conditions for allowing Coca-Cola to resume operations: that the plant not extract groundwater from the region, that the company ensure that the plant discharge did not contain toxic substances, and that the company ensure that its products did not contain toxic elements (in response to a parliamentary committee which found high pesticide levels in Coca-Cola products earlier in the year) (Hills and Welford 2005, 172). A study requested by the Kerala High Court found that the drought was the primary cause of water shortage in the region, but that the extraction of groundwater by Coca-Cola had “aggravated the water scarcity situation” (Hills and Welford 2005, 176).

Coca-Cola continued to assert that it was in compliance with all state and federal laws regarding the use of groundwater, the contents of its waste products (heavy metals were below allowed levels, for example), and the safety of its beverages (Hills ad Welford 2005, 173). These claims received some support from various state agencies across the years of the controversy (Hills and Welford 2005, 173). As the case progressed, inadequate waste product procedures were revealed (Burnett and Welford 2007, 299). However, being in compliance with the laws does not prevent a rights violation, rather it highlights the inadequacy of the existing regulatory regime and its incompatibility with human rights. This contradiction helps to explain how the Kerala High Court could both assert a public right to groundwater and order Coca-Cola to stop extracting groundwater, as well as finding that the panchayat unlawfully revoked the plant’s license. Koonan (2007, 3-4) argues that the existing water pollution laws in India could have been sufficient to prevent the environmental degradation, but that the Pollution Control Board acted irresponsibly in this case.
In April 2005, the Kerala High Court ruled that Coca-Cola could extract up to 500,000 liters of groundwater per day and that the panchayat should renew the license (Hills and Welford 2005, 176). In June 2005 the panchayat issued Coca-Cola a three-month license with 13 conditions (Hills and Welford 2005, 176). Coca-Cola appealed to the High Court again, saying that the short-term conditional license was a violation of the court order. Protests continued, both to prevent Coca-Cola from re-opening the plant, as well as demanding reparations for the environmental damage. In 2006 the Kerala state government banned the production and sale of Coca-Cola, which the company appealed and had overturned by the Kerala High Court (Burnett and Welford 2007, 302).

The legal struggle between Coca-Cola and the panchayet has continued, although the Coca-Cola plant has not resumed production at the plant. In 2009, the Kerala state government created a High Power Committee (HPC) to assess the damages at Plachimada. The committee found that Coca-Cola had been responsible for Rs. 216.26 crore worth of damages (approximately $40 million with current exchange rates) (Mathew 2010). In 2011, the Kerala state government passed a law to allow people to seek compensation from Coca-Cola (Singh 2011).

In this case, the villagers use a rights framework to protest the interference with their drinking water. This rights framework is affirmed by the Kerala high court, but the legal result has been mixed with some actors supporting an inviolable right to clean drinking water, and other actors weighing the importance of economic development. This case shows multiple elements of the HRtW in action, such as the requirements for participation, and the availability of water as well as the quality of water both being key components. Although state agencies have been mixed, the state political actors have acted in support of the right to water, which has kept
the plant closed and implemented a policy for compensation for the victims, providing redress for the rights violations.

**Gujarat: Sardar Sarovar Dam**

However, even having a constitutional right is not always the same as having a recognized human right. One of the important things about human rights is that they are interconnected, interrelated and indivisible from one another. So, while constitutional rights might be balanced and trumped by other rights or needs by the state, human rights cannot. Even though India recognizes and has already institutionalized many aspects of the human right to water, it can still benefit from further looking at the developing human rights frame at the international level. One striking example of this would be the Sardar Sarovar Dam project (Cullet 2013, 62).

The Sardar Sarovar Dam is the terminal dam of a much larger dam development project on the Narmada River running through Gujarat, Maharashtra, and Madhya Pradesh (BBC 2000). The dam project was the idea of Jawaharlal Nehru, but was not started until 1979 and has faced extensive controversy, particularly over the displacement of tribal people (BBC 2000). The larger dam project has multiple goals: diverting and storing water for irrigation and drinking water, placing limits on the amounts of water that can be withdrawn, and hydroelectric power. However, the various states involved have different interests. Gujarat wanted a higher dam to provide more water to its citizens, whereas Maharashtra and Madhya Pradesh wanted a shorter dam to reduce the displacement of their citizens (Peterson 2010).

In order to begin building the dam, Gujarat and Madhya Pradesh were required to prepare replacement forest sites for those that would be submerged, improve their resettlement offer for the citizens who would lose their homes, create wildlife sanctuaries, and prepare the catchment
and command areas for the dam (Peterson 2010, 8). Although neither state met these requirements, in 1987, after several years of severe drought, Gujarat was allowed to begin construction on the Sardar Sarovar Dam (Peterson 2010, 8).

The Sardar Sarovar Dam immediately faced extensive protests over the resettlement of the largely adivasi population (Scheduled Tribes living in traditional ways) that lived in the area to be flooded (Peterson 2010, 9). Gujarat, because of its intense need for the water from the dam project, was more willing to work with NGOs to provide acceptable resettlement arrangements than Madhya Pradesh and Maharashtra (Peterson 2010, 11). Gujarat also had far fewer villages to resettle than the other two states (Peterson 2010, 11). As a result, protests increased, led by the Narmada Bachao Andolan (NBA – Save the Narmada Movement), which was formed in 1989 (Peterson 2010, 12).

The Sardar Sarover Dam project was initially funded by the World Bank, but the bank withdrew its support in the wake of extensive protests (BBC 2000). The Indian government continued to fund the project and construction continued, despite several court challenges. A Supreme Court decisions in 1999 allowed construction to continue, but only to 85 meters, with later approval for 90 meters a possibility (Peterson 2010, 18). Further heights required Relief and Rehabilitation and Environmental clearances from the Narmada Control Authority (Peterson 2010, 19). By 2003, the Sardar Sarovar Dam had reached 100 meters, which was high enough to fill the canal to send water to Gujarat. The dam has continued to be raised, with several Supreme Court decisions allowing construction to continue. A 2006 decisions to allow the dam to be raised to 121 meters was particularly controversial because the construction was outpacing rehabilitation (The Economic Times 2006). The central government recently halted construction on the dam, however (The Economic Times 2011).
The Sardar Sarovar Dam has always been a development project with the goal of better using and managing scarce water resources. However, in 2000 the Supreme Court justified allowing continued construction on the dam on the basis of the right to water, saying “Water is the basic need for the survival of human beings and is part of the right to life and human right as enshrined in Article 21 of the Constitution of India and can be served only by providing source of water where there is none.”\textsuperscript{47} The dam has been successful in providing drinking water to areas of Gujarat with water scarcity, which seems like a success for the right to water. However, using a human rights framework requires recognition of the interdependence and indivisibility of all rights, including the rights of the displaced adivasi. In a country with limited but concentrated water resources, large infrastructure projects like dams are going to be an important component of fulfilling the right to water. However, respecting other human rights, especially those of the people who will be displaced by the dam, is equally as important as the water that dam will provide.

India’s recognition of the right to water precedes the international norm of the HRtW, and its experiences highlight the ways in which India’s recognition and definition of the right overlap or not with the international norm. Because India already recognizes the right, creating legislation to further elaborate on the right, and to universalize standards across India is the next ideal step. Even if India attempts to bring its water policy into greater alignment with the international HRtW, it will still need to be based on the existing institutional framework.

These cases also demonstrate the limits of a primarily or solely legal solution. In India, the Coca-Cola subsidiary was found to not be in violation of the law, even though there was a harmful effect on access to clean water. The existence of safe drinking water laws in the US did not protect the residents of Flint from drinking contaminated water, and denying people access to

\textsuperscript{47} Narmada Bachao Andolan v. Union of India, A.I.R. 2000 S.C. 375, ¶ 274
water based on their ability to pay was found to be entirely legal in Detroit. Additionally, because these laws exist within an already extant institutional structure, they have to grapple with the biases and discrimination built into this system. This applies to all laws and rights, but it is especially highlighted in the case of water, because water provision has a significant infrastructural aspect. If the pipes to provide the water have been laid in such a way to exclude marginalized communities, the quality of the water provided does not really matter to that community, they are not getting access to water anyway. Additionally, decisions about where to source water, how to recover costs, and when to upgrade infrastructure can have an invisible built-in exclusionary component. The universality requirement can help to address this, if only by providing previously excluded people the legal foundation to make a rights claim against the government (Epp).

The two examples from both US and India demonstrate that even states with many similar legal and political institutions, have highly individualized experiences and manifest the norm life cycle in different ways. Specifically, these case vignettes demonstrate the variability of water laws depending on the framing of those laws. Additionally, they provide insight into the way that actual laws that contain elements of the HRtW influence governmental and judicial decisions. Finally, these cases illustrate the ways in which a human rights frame could be potentially beneficial to the residents of these countries, as well as how much work can still be done towards legally institutionalizing a human right to water.
Chapter 7: Conclusions and Next Steps

The human right to water has assumed central normative and political significance since the 1990s. Following the UN General Assembly’s resolution recognizing the Human Right to Water and Sanitation in 2010, the volume of scholarship and policy action on the topic of the right to water has increased significantly. Additionally, increasing access to an improved water source became a central priority within the framework of the Millennium Development Goals, even though the MDGs used development frame rather than a human rights frame.

Despite the real improvements that have taken place since the 1990s in access to an improved water source, the greater focus on the human right to water highlights how much room there is for improvement. In order to fulfill progressively higher levels of access, availability, affordability, and greater degrees of acceptability, it is critical to understand how this right has emerged, what it contains, and how it is legally institutionalized. This dissertation contributes centrally to linking theoretical debates on the right to water to broader debates on human rights norms evolution, legal internalization, and domestic policy implementation (Finnemore and Sikkink 1998; Clark 2017; Sanholtz 2012; Hillebrecht 2014). It offers a framework for establishing the legal lay of the land with respect to water so that we can in turn evaluate states’ respective levels of adherence to their own current laws covering the right to water, and test the effectiveness of policy provisions necessary to fulfill the HRtW.

I began this dissertation project with the intent of creating a dataset of national statutory and constitutional laws coded in order to determine their content and how well they institutionalized the international HRtW. Over the course of my research, it became clear that the HRtW was still in the process of being fully institutionalized and solidified at the international level. Nonetheless, many states still had constitutional and statutory recognition of a right to
water, and laws that protected different elements of the HRtW. Instead of trying to explain why states institutionalized this particular international norm, this dissertation now breaks new ground in explaining why the standard path of norms institutionalization was reversed.

This project contributes several important insights to our understanding of human rights, norms, and specifically the human right to water. I demonstrated that recognition of rights can be found not just in constitutional law, but in statutory law as well, which significantly widens the scope of potential future research. Constitutional provisions are important, but they are frequently broad and vague. Specificity comes within statutory and even regulatory law. Studying laws at the national, and ultimately subnational level is requires significant effort (both empirical and theoretical). But working across levels of analysis is order to understand the co-constituted nature of human rights law safeguarding the right to water each level.

My work complicates Finnemore and Sikkink’s norm life cycle model, by demonstrating that the human right to water had institutionalized and reached the cascade phase at the domestic level about a decade before becoming internationally institutionalized, counter to the general expectation. I made this discovery by analyzing legal instruments at the domestic level against broader normative trends at the international level. At first glance, my work appeared to validate the standard pattern of the normative life cycle laid out by Finnemore and Sikkink (i.e. emergence, cascade and internalization).

But my work pushed beyond the standard explanation as I began to uncover the ways in which the existing development framework surrounding water provision has contributed to the institutionalization of domestic water law. My research joins the work of previous scholars in challenging a static conceptualization of norms and instead envisioning an ongoing conceptualization process (Sandholtz 2008, Krook and True 2012).
Additionally, my project addresses the variety of existing frames surrounding water governance and demonstrates that other frames lacks certain benefits that a human rights frame offers to claimants of the resource. These benefits include lasting guarantees to access and quality, the ability to seek redress if the right is violated, procedural guarantees such as the right to participation, and the necessity of considering the effects on other rights. However, other frameworks are not opposed to the human right to water, and indeed can support policy elements in common with the HRtW framework.

My original coding of over 100 water laws (the central empirical contribution of the dissertation) demonstrates the ways in which different elements of the human right to water correlate with each other -- specifically in terms of the pervasiveness of legal requirements covering quality and accessibility; the clustering of the more rights-central provisions; and the relative scarcity and isolation of the affordability provision in relation to other legal guarantees. This project has enabled me to create a platform for future research that would center on developing a measure of a “complete” human right to water, which would be a major contribution to the human rights field, in particular.

The results of my quantitative analysis identified several theoretically interesting associations. The Quality and Accessibility provisions were both very common throughout domestic water law, positively correlated with many of the other elements, and both Accessibility and Quality fit into other frameworks, such as a development frame or an environmental frame. However, the fact that Quality and Accessibility were both positively associated with the use of rights language demonstrates that the human rights framework has not been pushed only at the international level, but through domestic level policy as well.

Affordability’s relative isolation, reliably associated only with Availability, offers a
compelling puzzle. Part of this may be a result of the higher level of uncertainty over coded zeros for this variable, because affordability provisions for public services have numerous potential locations within statutory law and may not always be located with water laws. Affordability also had a higher number of missing cases, in part due to this uncertainty. However, this tentative finding provides a testable empirical question for future research and a theoretical question to understand why affordability is less connected with other aspects of the HRTW.

In the multivariate ordered logit model, several of the control variables appeared to be significant. Having greater available water resources per capita was associated with greater legal recognition of the HRTW. Having a larger population showed a similar slightly larger effect. However, a higher GDP per capita was associated with less legal recognition of the HRTW. Finally, there is a potential neighborhood effect with countries in the Americas having much greater odds of being in a higher HRTW category. This neighborhood effect may reflect the success of anti-privatization transnational advocacy campaigns (Baer 2015) or policy diffusion across epistemic communities (Haas 1992).

The individual logistic models for the elements of the HRTW showed no significant associations between the control variables and the Affordability and Quality provisions, which supports the idea that those provisions could have been put into law within numerous frameworks. One of the most interesting results from the individual logit models was the positive association between level of democracy and the Acceptability provision. This association supports the idea of acceptability being a critical component of the human right to water, which is not captured by any other frameworks. One direction for future research would be to explore the relative strength of geographic clustering (i.e., neighborhood effects) to attempt to determine the source of policy commonalities.
This research project is far larger than a single dissertation, and there are several next immediate steps, as well as longer term goals I have for my research on the right to water. The next step is to solidify my coding scheme based on the prevailing current understanding of the HRtW, which has become more standardized internationally since the early-2010s, when I began my research. Now that we have international institutionalization of the norm, I expect that we will begin to see policy changes domestically following the standard (i.e., Finnemore and Sikkink) norm life cycle, with the international norm diffusing down to the domestic level.

Once the coding scheme is solidified, the next step is to extend the geographical reach of my dataset, as well as extending it temporally. To track how policy shifts in response to international norm pressures, it will also be necessary to track policy changes over time. In addition, I will need to expand my coding at the subnational policy level, especially given how devolved water policy is.

Ultimately, the goal of this extensive policy coding project would be to evaluate the gap between the legal guarantees of the HRtW and the actual enjoyment of that right in the model of Law and Versteeg (2010) who explore rights gaps between de jure protections and de facto enjoyment of economic rights. Additionally, this research will allow us to answer the question that Nandita Singh (2016) asks about whether legal implementation is the only or primary factor necessary to fulfill the HRtW, or whether other factors are equally relevant causally.

Human rights scholars often focus on laws, but we need to interrogate why we think that laws matter, and the effects they have in practice. Finally, my goal is being able to evaluate the actual efficacy of specific provisions of the HRtW, similar to the constitutional provision study by Kaletski et alia (2016) on implementation of economic rights more generally. In order to perform these studies, we need a better measure of enjoyment of the right to water than the
current indicator, which solely covers “access to an improved water source” (De Albuquerque and Winkler 2010, 167). However, significant research is currently underway to create better indicators, including the research being carried out by Meier et alia (2014; 2017).

My findings have significant implications for both research and policy. First, the provision of acceptability (which is integral to multiple rights, not just the right to water) is highly under theorized and under explored. My findings on the salience of provisions covering acceptability within water law across countries is a key empirical finding the opens the way for this type of further theorizing. Indeed, acceptability is one of the key contributions of a human rights frame – so it should be better specified and measured. The acceptability provision in law covering the right to water reinforces the inherent dignity of all humans as rights-bearers, and the protection for their participation in determining the framework governing the right to water; it ensure that water users, too, get a voice in determining if and how their rights are being fulfilled.

Additionally, it is reasonable to expect that many rights, not just the human right to water, may be found (at least in part) in statutory law and not just in constitutional law. Indeed, even when there are constitutional protections, frequently those protections must be further elaborated through statutory law. Richards and Haglund (2015) carried out an extraordinary study of legal protections on violence against women, exploring statutory law at the national level. They found several important effects, including that greater economic empowerment for women results in higher levels of enforcement of laws protecting women against. Additionally, they found that despite variation in enforcement, laws matter at both the international and national level. Countries with stronger laws had less violence against women. Ultimately, my work can advance an equally in-depth analysis of the elements necessary to protect the HRtW de jure and de facto and a model that could be extended to analysis of other rights.
My work also has implications for future research into the norm life cycle, because I parse the process of norm emergence, diffusion, and internalization in new ways. Even when a norm appears to be following the expected life cycle, if factors at the domestic level are under-specified, we cannot understand the domestic internalization of norms that Finnemore and Sikkink (1998) anticipate. My research suggests that the interactions between the domestic level and international level can be far more complex than a simple top-down diffusion story would anticipate.

My research also has the potential to add to water resource management research and policy implementation. Currently, complex interdisciplinary systems modeling is a key tool that decision makers employ to guide their choices about water resources (i.e. those surveyed in Brown et al. 2015). These models are adaptive and pay attention to how decision maker preferences can change with more information. When concern about stakeholder participation emerged, researchers developed collaborative modeling methods to take stakeholder preferences into account (Brown et al. 2015, 6115). My research could contribute to efforts at integrating a human rights approach into systems modeling, a rich vein for potential collaboration between social scientists, engineers and other professionals involved in water resource research and policy implementation with significant scholarly and practical implications.

Finally, this and future research has the potential to make a major impact on how governments regulate water, not only in terms of framing their goals but also in terms of evaluating the effectiveness of policy implementation. While human rights are interdependent in theory, cases like India’s Sardar Sarovar Dam reveal the complex challenges involved in putting that philosophy into practice. Policies that respect rights should also lead to better enjoyment of the material condition part of the right, but as Herrera (2017) demonstrates, aspects of the HRtW,
(such as participation guarantees) can actually lead to worse outcomes in the material provision of clean drinking water. These complications do not mean that we should give up on human rights, but rather that we need to be very cognizant of the conflicts and trade-offs. Understanding the effectiveness of specific policies, and determining the conditions under which they are most effective, can contribute to improving the content and targeting of policy. Many researchers, policy makers and development experts are working very hard to make sure that every person has access to an adequate amount of safe and acceptable drinking water. In this dissertation, I have attempted to add to that work, both through my theoretical and empirical contributions.
Appendix

Figure A.1: Total HRtW Score for Each Country in Dataset

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Figure A.2: HRtW Coding Results for 15 Country Sample

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