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Hybrid regulatory landscapes: The human right to water, variegated neoliberal water governance, and policy transfer in Cape Town, South Africa, and Accra, Ghana

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ABSTRACT

Drawing on an analysis of water access and supply in Cape Town (South Africa) and Accra (Ghana), we illustrate that neoliberal and human right to water-oriented transformations co-constitute each other discursively, practically, and in policy implementation. Focusing on the transfer of policies and experiences (particularly conjoined demand management-free basic water programs and related social contestation), we provide examples of how neoliberal logics and human right to water principles intersect in evolving hybrid regulatory landscapes, which are characterized by contradiction. The human right to water makes a difference by influencing the drafting and implementation of water-related policies that affect to the lives of poor and vulnerable populations. Yet this process unfolds unevenly, as human right to water principles and practices are contextually applied, often alongside neoliberalizing policy instruments within evolving regulatory landscapes. Our analysis reveals the uneven effects of policy experimentation, transfer, and adaptation. The analysis shows that the principle of the human right to water affects the transformation of policy options circulating in the water sector, but it does so in relation to the institutional histories and policy options associated with uneven patterns of variegated neoliberalization in the water sector.

1. Introduction

South Africa is famed for its Constitutional recognition of the human right to water, yet critics have highlighted embedded inequalities and injustices, particularly as water continues to be governed as a commodity in many cities (e.g. Bond & Dugard, 2010; Dugard, 2015; Smith & Ruiters, 2006). In Ghana, there is a general public acceptance of a need to pay for water delivery services, public-private partnerships are advocated for resolving water supply issues, and – as we illustrate – service providers continue to push for higher water tariffs on a pay-before-consumption basis. In response, civil society organizations are increasingly making water-related claims via the discourse of a human right to water, despite no legal or constitutional recognition. In both sites, the human right to water is increasingly intersecting with the contextual outcomes of the neoliberalization of water governance – such as water commodification, payments for water, and demand management. We explore these intersections by focusing on the contradictions, limits, and constraints currently taking shape in Cape Town and Accra, where the human right to water and neoliberalization processes co-constitute evolving hybrid regulatory landscapes of water governance. In doing so, we draw connections across key literatures on the human right to water, variegated neoliberalization, and policy transfer.

The human right to water refers to "the idea that all people, regardless of citizenship, location, or ability to pay should be assured *access to water* needed for life, basic needs, and human dignity" (Mirosa & Harris, 2012, p. 945, emphasis added).[1] This definition builds on the 2010 United Nations General Assembly resolution, which highlighted the need for "a regular supply of safe, acceptable, accessible and affordable drinking water and sanitation services of good quality and sufficient quantity" (United Nations General Assembly, 2010, p. 3). This moved the concept beyond the 2003 General Comment 15, which framed the right in terms of the reliability of adequate water quantities (United Nations Economic and Social Council, 2003). Both statements point to the regularity, reliability,

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[1] To maintain the clarity of our central argument, we leave aside the notion of a right to sanitation.

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and affordability of supply – aspects that we illustrate to be central to unfolding tensions in Cape Town and Accra.

We develop our analysis by drawing on literature that focuses attention on the human right to water's discursive power in connection to contextual legislative and institutional change (Bond, 2012; Clark, 2017; Giupponi & Paz, 2015; van Rijswick & Keessen, 2012); its ties to Western liberal ideas and hegemonic frameworks that are state-centered and market-friendly (Angel & Loftus, 2017; Baer & Gerlak, 2015; Bakker, 2012); its connection to the social and informal aspects of accessing (basic) water (Hellberg, 2014, 2017; Rodina, 2016); and the links to citizen participation in water-related affairs and the water commons (Baer, 2015; Linton, 2012; Perera, 2015; Ravet & Braïlowsky, 2014). Across these discussions, a key concern focuses on the diverse pathways, politics, and contradictions of implementing the human right to water, and the forms of contestation that emerge in various contexts (see Sultana & Loftus, 2015). Adding new dimensions to these discussions, we provide a multi-sited analysis of human right to water and neoliberalizing trajectories unfolding together in two sites. We focus on how the resulting transformations take shape in diverse contexts, with distinct yet interconnected outcomes (Cf. Sultana & Loftus, 2012). Rather that provide a direct comparison, we offer a cross-contextual analysis that highlights key differences and linkages – the kind of approach increasingly being called for in analyses of the human right to water (Morinville & Rodina, 2013; Rodina et al., 2017; Sultana & Loftus, 2015).

We refer to the neoliberalization of water governance as the processes of advocating and implementing policies that emphasize economic markets and market-mechanisms (and related strategies such as privatization, commodification, commercialization, marketization, and the re-scaling of governance).[2] These approaches are often pursued under the assumption that they are the most effective and efficient mechanisms for *water provision*, which contrasts the human right to water's emphasis on *access*. To explore the effects that emerge at the intersection of these two orientations, we take our cue from previous discussions of the geographically differentiated yet inter-locally connected effects of neoliberalizing nature (see Bakker, 2009, 2010a; Castree, 2008a, 2008b, 2009; Furlong, 2010). However, we draw more explicitly from cognate theorizations of variegated neoliberalization (see Brenner, Peck, & Theodore, 2010a; Brenner, Peck, & Theodore, 2010b; Peck, 2013). This approach works "explicitly with and across difference, problematizing the (re)production of that difference" (Peck, 2013, p. 153) alongside emerging contradictions.[3] We link this process-oriented approach to scholarship on policy transfer, which is particularly useful for highlighting the fluidity, emergence, and complexity of evolving and often-contradictory regulatory landscapes (Mukhtarov, 2014; 2017).

This paper is one component of an ongoing research project exploring water access and governance in underserved communities in Cape Town, South Africa and Accra, Ghana. The analysis hinges on interviews with water sector experts, policy makers, and civil society representatives in the respective cities and communities.[4] The paper is also informed by the broader research undertaken, including a 487-household survey conducted in 2012 in Philippi and Khayelitsha in Cape Town (251 surveys in total), and in Ashaiman and Teshie in Greater Accra (236 surveys in total); multiple rounds of semi-structured interviews and focus groups beginning in 2012 and continuing through 2017; and, a participatory video project conducted from 2013 to 2015.

We begin by elaborating our analytical approach for understanding the human right to water in connection with variegated processes of neoliberalizing regulatory transformation. We then explore how the human right to water intersects with neoliberal demand management in Cape Town, before investigating how the human right to water has affected ongoing water governance struggles in Accra. We conclude with conceptual reflections and suggestions for refining analytical approaches, including implications for ongoing debates regarding the human right to water and its implementation.

2. The human right to water, variegated neoliberalization, and the co-constitution of regulatory change in the water sector

In this section, we bring together critical approaches to the human right to water with scholarship on processes of variegated neoliberalization and policy transfer. We focus our attention on the regulatory and geo-institutional differences that may be exploited, intensified, or reworked *through* the human right to water as a multi-scalar discourse, policy influence, and practice that connects with ongoing processes of variegated neoliberalization in the water sector.[5] Brenner et al. (2010b, p. 184) characterize neoliberalization as:

> a politically guided intensification of market rule and commodification... Neoliberalization processes have facilitated marketization and commodification while simultaneously intensifying the uneven development of regulatory forms across places, territories, and scales. Therefore, an emphasis on the variegated character of neoliberalization *processes* stands in sharp contrast to their prevalent equation with a worldwide homogenization or convergence of regulatory systems.

[2] "Neoliberalism" is now firmly entrenched in academic, policy, and public vernacular – even to the point that the IMF recently acknowledged its existence in practice and its utility as a concept (see Metcalf, 2017). Scholars exploring neoliberal water governance have often focused on strategies such as privatization, marketization, commercialization, and the devolution (re-scaling) of governance, which are often characterized as drivers of the further commodification of water and the financialization of the water sector (Bakker, 2007, 2010b; Bond, 2004; Bond & Dugard, 2010; Dugard, 2010; Furlong, 2010; Harris, 2013a, 2013b; Loftus & March 2015). Relatedly, the neoliberalization of water is characterized as an ongoing process of commodifying water and supporting market mechanisms to govern the distribution of water as a commodity. For discussions of the broader trend of conjoining neoliberalism with environmental governance, and of the need for careful delineation of the differences among approaches, see: Bakker (2010a); Castree (2008a, 2008b); Heynen et al. (2007); Mansfield (2008); and/or McCarthy & Prudham (2004). For a succinct explanation of trends in the neoliberalization of water and of the utility of neoliberalization as a concept in relation to water, see Furlong (2010). Building on these works, we find neoliberalization to be a useful concept for understanding market-oriented shifts in water governance. Yet we do not mean to imply that there exists a single, unified ideal-type of neoliberalism; rather we adopt a process-based approach to neoliberalization that stresses difference and contradiction (see Peck, 2013).

[3] A process-oriented approach helps us to avoid characterizing the human right to water as either complicit or counter to neoliberalization processes. We are nonetheless influenced by scholarship on counter-neoliberal trends in water governance (e.g. Bakker, 2013; de Freitas, Marston, & Bakker, 2015; Harris & Roa-García, 2013; Roa-García, Urteaga-Crovetto, & Bustamante-Zenteno, 2015).

[4] In South Africa, interviews were conducted with representatives from the City of Cape Town, two local NGOs (one of which is prominent in policy debates on demand management), and a specialist on the subject from the University of Western Cape. We also conducted a focus group with water activists and community members in Makhaza – an area of Khayelitsha. In Ghana, we conducted interviews with representatives from Ghana Water Company Ltd., Ledzokuku Krowor Municipal Assembly (LEKMA), an organizer from the network of civil society organizations known as ISODEC, and a specialist on the subject from the University of Ghana. We also conducted a focus group with representatives from local civil society organizations and another with non-governmental organizations. These interviews and focus groups add qualitative depth to the household surveys conducted in each city (which combined short form qualitative responses and quantitative methods). We have also analysed policies and other government documentation relevant to each case.

[5] While we are influenced by scholars of variegated neoliberalization, it is worth clarifying that we are not seeking to explain the endurance of neoliberalism as a political-economic-cultural phenomenon or as an explanatory concept (Cf. Peck, 2013). We hope not to reduce analysis to neoliberalism per se. but to contribute a cross-pollinating focus on the human right to water and neoliberalizing regulatory transformation in the water sector.

Neoliberalization is therefore an uneven process of supporting market dynamics as the key – yet socio-contextually variable – arbiter in distributing resources such as water. As such, there is no uniform template of neoliberal reform in the water sector, and neoliberalizing transformations are not simply imposed from elsewhere as fixed templates (Peck, 2013). The contextual unfolding of neoliberalization in specific sites contributes to a differentiated pattern of service provision and policy development in the water sector (Bakker, 2013). To explore the intersection of this process with the increasing influence of the human right to water, we focus on two related processes of regulatory experimentation and policy transfer. These two dimensions were identified by Brenner et al. (2010a, 2010b) as central to interconnected processes of variegated neoliberalization and counter-neoliberalization, and we find them useful for tracing the inter-local flows of discourse and policy in neoliberalized water governance.[6] These flows help to explain how the human right to water and neoliberalizing transformations travel and unfold together in tension, producing often-contradictory hybrid regulatory landscapes in particular places.

Regulatory experimentation refers to hybridized developments in public policy, which emerge from a process of developing and testing (combinations of) new policies, mechanisms, and regulatory institutions in specific locales (Brenner et al., 2010a, 2010b). Work focusing on regulatory experimentation in relation to the human right to water has revealed the difficulties faced by individual jurisdictions, which must forge new legal and regulatory terrain to establish the domestic and local grounds for realizing a human right to water in practice (within the context of a universal UN commitment). Despite isolated experiments – such as the legal protection of the right to water in the EU (van Rijswick & Keessen, 2012) or the constitutional recognition of the human right to water in South Africa – few analyses make connections across these cases. We are interested in making these connections by exploring how experiments are brought together to inform a contextually-applied transformative politics of the human right to water (see Angel & Loftus, 2017). To this end, we unpack how experiments grow into lessons for implementation that are transferred between places – that is, how experimentation with the human right to water in practice feeds into broader processes of policy transfer.

Brenner et al. (2010a, p. 355) define systems of inter-jurisdictional policy transfer as the "institutional mechanisms and networks of knowledge sharing through which policy prototypes are circulated across places, territories, and scales. . .for redeployment elsewhere". These systems produce policy templates that become readily available for addressing context-specific problems. Yet these templates are also qualitatively transformed as they flow through international networks, and as they are applied in local contexts under different institutional and regulatory conditions (Peck & Theodore, 2010a, 2010b, 2015; Shore & Wright, 2011). The policy transfer process must therefore be understood as "an institutionally produced and embedded phenomenon" (Peck, 2011, p. 793), meaning that travelling policies have unpredictable effects in-place and over time.

These processes have been explored to demonstrate the adaptation of neoliberalizing policy approaches, as they are applied in particular cases – such as the ways in which municipal experiences in health or social programs evolve unwittingly into circulating best practices to be applied in other cities and in addressing different, contextual problems (e.g. McCann, 2008; Peck & Theodore, 2015). In this paper, we explore the intersection of travelling policy options related to the human right to water (such as free basic water policies) as they unfold in relation to ongoing policies associated with the neoliberalization of water (particularly orientations such as full cost recovery, pricing, and demand management). We focus on how these options travel together and converge in processes of policy adaptation and transformation, thereby co-producing hybridized but continuously evolving and contested spaces of water supply and access.[7]

The significance of policy transfer has been illustrated in the water sector. Many commentators have focused on the effects of transnational policy repertoires associated with global organizations such as the World Bank, UNDP, and the United Nations Economic Commission for Europe (UNECE) (Amenga-Etego & Grusky, 2005; Goldman, 2007; Mukhtarov, 2013). Others have focused on intentional processes of "importing" water policy models at the national scale, in order to "shorten the policy innovation timeline" (de Loë, Murray, Michaels, & Plummer, 2016; Michaels & de Loë, 2010, p. 504). Similar framings have uncovered how water-related discourses inform policy innovations and the evolution of water management models, which then spread across places through less coordinated processes of knowledge transfer to populate the water sector in general (De Boer, Vinke-de Kruijf, Özerol, & Bressers, 2013; Molle, 2008; Vinke-de Kruijf et al. (2013)).

The human right to water is increasingly playing a role in this context of water-related policy transfer. As Sultana and Loftus (2012) point out, since the UN General Agreement the human right to water has been increasingly travelling as a policy ideal, with particular reference to the South African case. Verónica Perera (2012) encapsulated this process by using the term "travelling repertoires" to articulate how the statements, principles, ideals, and discourses underpinning the human right to water are able to *circulate across jurisdictions* and yet *materialize according to diverse contexts* in different policies and practices. More recently, she has illustrated how the universal principles of the human right to water always take shape in contexts of particularity, where political interventions are built upon historical-geographical specificities *and* extra-local contexts (Perera, 2015). Thus, the human right to water lends a "moral and political force" (Perera, 2015, p. 212) through its contextual application in connection to local and extra-local struggles – a process that produces a differentiated pattern of water governance transformations. While perhaps "deradicalized" as a universal principle, the human right to water can still gain radical possibilities when mobilized in contextual struggles alongside other discourses (Clark, 2017, p. 232). We add to this line of investigation by exploring how the travelling repertoires consist of both human right to water and neoliberalizing influences. The human right to water does not simply materialize in-place to transform existing policies, but rather circulates with other competing and complementary policies to co-constitute the regulatory landscape. Attention to this process is required to uncover any enduring efficacy of the human right to water.

Within this discussion, it is also important to understand contextual struggles over water-related policies and decision-making (Baer, 2015; Perera, 2015) – a compatibility that we explore in the Ghana case. Linton (2012) has gone as far to suggest that a right to participate in water-related decision-making should be

[6] Brenner et al. (2010a, 2010b) identify three dimensions of regulatory transformation: regulatory experimentation; inter-jurisdictional policy transfer; and the role of transnational rule regimes that shape the "rules of the game" (Brenner, et al., 2010a, p. 335). We have minimized the third dimension because our analysis – and the data upon which it rests – does not speak directly to the formation and maintenance of rule regimes, whether neoliberal, rights-based, or otherwise. We do, however, think it is worth developing research to explore how the human right to water might be wrapped up in a "polymorphous common project" (Collier, 2012, p. 194) of regulatory transformation in the water sector. Nonetheless, we do not attempt to characterize any one rule regime here.

[7] While notions such as policy transfer, mobility, transformation, adaptation, mutation, and translation have been in applied in various fields (see Mukhtarov et al., 2017; Shore, Wright, & Però, 2011), we focus on the policy transfer literature that overlaps with: a) work that explicitly builds our understanding of neoliberalization processes; b) work that addresses evolving policy reforms in the water sector.

considered a de facto component of the human right to water (also see Brooks, 2007). Focusing on these related aspects of decision-making can be a crucial way for the human right to water to become a *place-specific* "genuinely political activity" (Sultana & Loftus, 2015, p. 103). Radonic (2017) has shown this process at work, as indigenous communities in Mexico have reconfigured the human right to water as it overlaps with broader claims to sovereignty. Participation therefore grounds the mobile policies associated with both the human right to water and neoliberalizing trajectories.

Exploring these dynamics, we uncover the process that Mukhtarov (2013, 2014, 2017) calls "policy translation", and which scholars of neoliberalizing policy mobility refer to as adaptation or mutation (Peck & Theodore, 2010a, 2015). This approach pays attention to the role of contingency in shaping how policies move and unfold (Mukhtarov, 2017), and it helps to unpack the uneven spatial implications of cross-contextual flows of policy, influence, and discourse in the water sector (Narsiah, 2013). Doing so helps to explain the often-unintended and undertheorized ways in which the human right to water and neoliberal water policies travel together and converge to produce new and evolving "hybrid formations" (Peck, 2013, p. 153). We explore this process in Cape Town and Accra, drawing connections across the multi-sited analysis.

3. Experimentation and transfer of conjoined free basic water and demand management in Cape Town, South Africa

Within the context of a contradictory politics of water service provision in South Africa, we focus on a space of contested transformation where neoliberal logics and human right to water principles intersect.[8] We focus on one example in particular: a policy package that combines water demand management with a localized application of a national free basic water (FBW) policy of delivering 6,000 liters of water per household per month (cities apply the FBW policy as they see fit, with the only legal requirement being to guarantee FBW to indigent populations).[9] The recent abandonment of the original FBW formulation in the context of ongoing drought conditions in Cape Town – with residents now paying for the first 6 kiloliters unless formally registered as indigent – illustrates the unstable nature of policy experimentation in the City's water sector.[10]

The policy-making context of these experiments depends upon the City implementing policies that are in line with national imperatives and directives. With local authorities responsible for deciding how free basic water will be implemented, city-level policy-makers and bureaucrats (including sub-contracted technicians and engineers) have shaped Cape Town's approach, often with minimal reference to civic engagement (see City of Cape Town, 2013). They have done so by engaging with policy-makers in other municipalities across South Africa – principally, Johannesburg and Durban – in order to learn from prior implementation experiences (key informant interview, April 2015). A network of engaged local NGOs have worked to stress the uneven and often unfair consequences of the resulting policies – often pressing for policy reform, and at times citing legal challenges as the basis for their claims. Among such efforts, the South African Water Caucus and local NGOs have advocated for the broad implementation of a human right to water, directly challenging City policies that have backtracked on earlier commitments to a broadly applied FBW allowance. These tensions – between City officials, residents, and local and national civil society – have recently increased in the context of emergency drought conditions in Cape Town, which have prompted an even more prescriptive and top-down approach from the City. In what follows, we explore these tensions to unpack an evolving hybrid regulatory landscape that is characterized by contradictions, limits, and constraints.[11]

3.1. Context: FBW as a mobile concept

Despite the challenges of implementing a conjoined demand management-FBW program in both Durban (1998) and Johannesburg (2001), the City of Cape Town drew on these experiences to implement its ten-year water demand management strategy in 2007.[12] While water demand management had already been introduced as a guiding principle in 2003, the 2007 strategy created a dedicated water demand management section within the City's Water and Sanitation Department and established the terms for applying the national FBW policy.[13] The strategy was designed to address simultaneously: cost recovery in service provision by resolving rising consumer indebtedness due to accumulating water bills; shortages in water supply by reducing consumption in excess of the free basic water allowance of 6,000 liters per month; and, losses within public infrastructure by installing meters to monitor water leaks and losses and to enable more targeted and effective repairs (City of Cape Town, 2013).

Yet as Dugard explains, the FBW component was calculated according to specific experiences in Durban; when it "was translated from the Durban experience to national policy and then into municipal practice across the country, one of the biggest problems was how to allocate the free water" (Dugard, 2010, p. 184).[14] Officials in Durban even testified to the fact that contextual Durban experiences became the focus of national level policy-making (Dugard, 2010), which would ultimately shape the national imperatives according to which municipalities across South Africa would construct their own FBW policies (see Department of Water Affairs and Forestry, 2007).

[8] South Africa is considered exemplary for implementing a range of legal reforms and policies designed to uphold a human right to water, including the entrenchment of a human right to water in its 1996 Constitution, the implementation of a free basic water allowance in Durban, Johannesburg, and Cape Town, and a national Free Basic Water Implementation Strategy (Dugard, 2015; Republic of South Africa, 1997). Yet critics have argued that local-level service delivery remains characterized by widespread failures, aggressive decentralization, a lack of national regulation, and the aggressive pursuit of water commodification strategies such as cost-recovery policies, technical approaches to efficiency, water pricing, out-sourcing and sub-contracting, and debt-management through water cut-offs (Bond, 2004, 2008; Bond & Dugard, 2008; Dugard, 2010, 2015; Pauw, 2003; Smith, 2004; Smith & Hanson, 2003).

[9] For more details of how the FBW policy fits into the legal terrain of water governance in South Africa, see Dugard, Langford, and Anderson (2017).

[10] The research presented in this paper – and the majority of the analysis – was conducted prior to the increased severity of the drought in Cape Town, which has been subject to heightened media attention since September 2017. This paper does not include policy prescriptions for managing the drought, and the paper is not intended as a critique of the City's current policies during the drought. Nonetheless, our focus on the evolving policy landscape and our data collection through 2015 helps to shed light on conditions that have led up to – and potentially exacerbated – the current crisis.

[11] These three topics of focus were inspired by an interview with a key informant from a prominent NGO in Cape Town (interview, December 2014).

[12] Based on initial experimentation with free basic water in Durban in 1998, the City of Johannesburg implemented a conjoined demand management-FBW program in 2001, which ultimately led to the legal challenge of *Mazibuko and others vs. the City of Johannesburg*. The former argued that the installation of flow limiting devices, which automatically cut-off once the FBW allowance has been reached (unless prior payment has been made), ultimately undermined a human right to water and resulted in the death of two small children in a domestic fire (for details on the fire and the dispute, see Bond & Dugard, 2010; Dugard, 2010). While the case brought the human right to water into public debate, it was ultimately unsuccessful.

[13] In 2003, the City signed an agreement with the Department for Water Affairs (DWA) to implement water demand management in exchange for benefiting from the Berg River dam in the Western Cape Water Supply System, which opened in 2009 (City of Cape Town, 2013).

[14] In Durban, the 6,000-liter allowance was derived from the estimated quantity of water that each household could carry per day to the 200-liter drums that had been provided by the city in order to reduce provision costs (Dugard, 2010). It is therefore divorced from actual water needs per se, especially outside of Durban.

In Cape Town, the FBW allocation was subsumed within a demand management approach oriented around the deployment of technologies such as water management devices (WMDs).[15] The WMDs are designed to deliver an average of 350 liters (L) per day per household, up to a maximum of 10.5 kiloliters per month. Once the volume of 350 L is consumed, the WMD immediately cuts off the water supply until it is re-set at 4am for the next 24-hour period. While unused portions of the *daily* allocation of 350 L per day are carried over to the following day, any unused volume below the *monthly* allocation is not carried over. Once the maximum of 10.5 kiloliters is reached, the WMD prevents further water supply until the next month regardless of any previously available surplus in daily usage (City of Cape Town, 2016). This technology constrains diverse water needs, such as among large households (common in some areas of Cape Town) and unforeseen acute needs. The case of *Mazibuko and others vs. the City of Johannesburg* case illustrated this aspect graphically (see endnote 11), but the point also applies to more mundane aspects of everyday life, such as how a household might cope with illnesses, hold important community gatherings, or host social events such as weddings.[16]

3.2. Contradictions: The uneven socio-spatial implications of a conjoined demand management-FBW program

The City of Cape Town's approach to conjoined FBW and demand management has shifted over time. Initially, and partially in response to legal cases such as *Mazibuko and others vs. the City of Johannesburg*, Cape Town increased its FBW component from an initial 6,000 L to 10,500 L per household per month. However, conjoining the FBW component with demand management created numerous grey areas for implementation, particularly as the City continues to respond to the current drought and other ongoing pressures. For example, WMD installation was initially focused on high-consumption areas characterized by poorer households with higher than average numbers of occupants (Mahlanza, Ziervogel, & Scott, 2016). As a 2013 strategic review conducted by the City of Cape Town stated, WMDs would be implemented "on an ad-hoc basis for high-volume consumers in low cost areas" (City of Cape Town, 2013, p. 2.144). In the context of recent droughts, however, this approach has shifted significantly, with the City focusing on high-consumption households in general – including in wealthy neighborhoods. Of the approximately 240,000 WMDs installed across Cape Town over the past decade (City of Cape Town, 2018), the majority remain in poor neighborhoods. Yet the City's Mayor, Patricia de Lille, indicated that the current City policy is to target approximately 55,000 high-consumption households with the roll-out of 2,000 WMDs per week (35,000 were installed between October 2017 and February 2018 – see City of Cape Town, 2018). The spatial pattern of WMD installation and related City policy is therefore evolving rapidly.

These high-consumption households are targeted as what the City calls "profligate users". Until recently, profligate use had been defined as consumption above 20,000 L per household per month. Yet according to level 6B water restrictions in place due to ongoing drought conditions (at the time of writing), "profligate consumers" now includes *individuals* consuming greater than 50 L per day per person (reduced from 87 L per day prior to 1st of February 2018). The only recourse for a high-occupant household is to submit an affidavit, testifying to the number of occupants – a recourse usually out of reach for poor households.

In contrast, wealthy residents with good access to credit are generally not exposed to automatic cut-offs, as they are permitted to continue accessing water according to established billing procedures – a situation identified by both NGO and City interviewees. Under current drought conditions, these households are encouraged to reduce consumption and must pay for water on a stepped basis according to the high rates stipulated by level 6 restrictions. Yet according to current City policies (as of March 2018), they are not threatened with the installation of a WMD unless they consume in excess of 20,000 L per month. Even then, billing proceeds as usual, and there is no guarantee that the City will specifically target an individual household for WMD installation, meaning that wealthy households can continue to gamble with high water consumption.

Until recently, the monthly allowance delivered via the WMDs included the free allocation of 6 kiloliters per household per month, as stipulated in the 2007 strategy and the 2001 national policy. From July 2017, all water (including the first 6 kiloliters) is now chargeable on a stepped basis (City of Cape Town, 2017c). For *registered* indigent households (those earning less than R6,000 per month and on the City's database – a status that must be renewed every 12 months), the first 6 kiloliters remains free of charge but they are subject to the step 2 rate of R17.75 (US $1.3) per day for consumption between 6 and 10.5 kiloliters (City of Cape Town, 2017a, p. 43.41). This 6 kiloliter free allowance is mandated by the Municipal Indigent Policy, as implemented within the National Framework for Municipal Indigent Policies (Department of Provincial and Local Government, 2005). The National Framework does not identify specific measures for providing "sufficient water" to indigent households, meaning that municipalities are not mandated to provide sufficient water *free of charge* (Republic of South Africa, Undated). Until July 2017, the 6-kiloliter volume had been conceived as a public good (delivered free to all), while the additional 4,500-liter volume has been deemed a "mixed good". While charges should be levied for mixed goods, local governments should provide a "social package" to facilitate access to these goods among indigent households (Republic of South Africa, Undated). Hence, the City of Cape Town implemented a rebate policy for indigent households consuming between 6 and 10.5 kiloliters per month (City of Cape Town, 2017b).

Under current drought conditions, all water is considered a mixed good: to receive 6 kiloliters free of charge, a household must be registered indigent. This policy makes the free delivery of 6 kiloliters distinct from the FBW policy *per se*, as it is part of a socio-economic policy designed to provide a safety net for poor households to be able to access essential services. This shift in policy raises implications for households that have not formally registered (a household might not register due to a lack of awareness, inconvenience, socio-economic restrictions, fear, or political motivations for remaining off-list). It is likely that of the poor households in need of 10.5 kiloliters per month, only a small proportion are actually registered with the city as indigent (interview, NGO representative, 2017). Now that the first 6 kiloliters are also chargeable, many poor but unregistered households are left increasingly vulnerable to the targeting of indebted households for water demand management (as we discuss below).

In some areas, however, City policies are almost entirely waived. In places such as Khayelitsha (e.g. Site C), for example, WMDs have been installed but are not yet operational. For now,

[15] Having previously used the term "prepayment unit" (City of Cape Town, 2013, p. 37) and having experimented with the term "water conservation unit" (Basholo, 2016, p. 27), the City of Cape Town now refers to the flow-limiting technology as "water management devices", arguing in the process that they are distinguishable from "pre-paid" meters (City of Cape Town, 2016, p. 8). Activists opposed to the use of the technology often refer to them as "demand management units" or "demand management devices" (interviews with NGO representatives 2014, 2015).

[16] The status of water provision in Cape Town that we have presented here – and throughout the analysis – is correct as of March 2018, and is built on a combination of interviews with key informants and the analysis of City of Cape town policies and documentation (Basholo, 2016; City of Cape Town, 2013, 2016, 2017a, 2017c). However, the situation continues to evolve rapidly, meaning that misinformation exists on the government's own web pages, and leading to a general sense of confusion about water tariffs and any FBW allowance in the city.

Khayelitsha residents receive unrestricted quantities of free water – a situation that is likely to remain until the completion of a broader redevelopment program, which includes Reconstruction and Development Program (RDP) housing and the installation of in-home taps for every household. This scenario emerged because the initial implementation of demand management was contextualized by the Water and Sanitation Department's proviso that free basic water could only be provided for informal settlements and for indigent populations in formal housing. It therefore raises legal implications regarding the installation of technologies that would infringe upon access to FBW among those living in informal housing in such settlements (interviews with municipal representatives, April 2015; also see Department of Provincial and Local Government, 2005). City representatives have also recently assured that under the current crisis – and if Day Zero does arrive – water restrictions will not be forced upon informal settlements (where many residents already have to carry water from shared standpipes). Under current drought conditions, therefore, it is difficult to know where the City's priorities lie in the longer term: with concerted demand management across all populations, or with a socially informed policy oriented at regular and affordable access.

3.3. Limits: Unresolved debts as a socio-environmental injustice

A component of the City of Cape Town's demand management program has been addressing the issue of indebtedness – both at the household level due to water bills and the municipal level due to public expenditure on water services. The 2007 strategy clarified that cost-recovery mechanisms should be implemented to reduce the number of indebted households and to recover the costs of water provision. This emphasis on cost recovery was articulated recently by the City's Mayor – Patricia de Lille – as part of its emergency plan in response to ongoing droughts, which requires an additional R3.3 billion of investments to increase water supplies by 500 million liters per day (Philander, 2017).

The WMDs have become a central technological means for debt and cost recovery, as they prevent residents from consuming water they cannot afford. The City has also relied on offering debt relief in exchange for the installation of the units (interview, NGO representative, December 2014); indeed, debts will only be absolved if residents accept the installation of a WMD (City of Cape Town, 2017b). However, a key informant pointed out that each monthly statement arrives with two balances of water consumption: one showing total consumption, including the previous consumption that had incurred debt; and a second balance showing an adjusted consumption rate and newly calculated charges, taking into account the acceptance of WMD installation (interview, NGO representative, December 2014). City documents confirm that debts will only be absolved if *both* a water meter and a pre-payment electricity meter are installed, and only after a household has been using them for six months (City of Cape Town, 2017b). Debts are therefore filed away on record, rather than absolved. These debts are used as a demand-reduction incentive, as they are reduced when a household's consumption levels are within City-stipulated targets for an extended period (interview, NGO representative, December 2014). During this time the household must have maintained water consumption within the daily quota, paid for any extra usage, not been responsible for tampering within the WMD, and not failed to report or fix any leaks (City of Cape Town, 2016).

However, the units have been installed with locked lids, making it impossible for households to read their own meters, and preventing them from identifying any technical problems or leaks that might need attention (Wilson & Pereira, 2012). This is despite the fact that some residents have reported faulty WMDs, which do not provide the expected volumes of water. As a result, local residents have begun referring to the WMDs as *amafudo* (tortoises), as they are said to hide inside their shells (Lusithi & James, 2016). These aspects produce uncertainty and fear among many residents, as the WMDs detract from the socio-political factors that shape water provision arrangements (Cf. Hellberg, 2017). Simultaneously, the WMDs act as a form of "heavy-handed debt-recovery strategies in disguise" (Wilson & Pereira, 2012, p. 4). In this case, part of the disguise has been the principle of the human right to water and its policy incarnation as the FBW allowance, which opened the doors for the City to mobilize WMDs within the frame of the human right to water. For these reasons, civil society advocates have focused on the UN's emphasis on the right to reliable and continuous flows of safe water – a right constrained by the WMDs.

3.4. Constraints: The incommensurability of demand management and the human right to water in practice

Constraints on realizing the human right to water emerge in part from the technical issues associated with the WMDs and the limited political options for voicing concerns about their unjust effects. An interviewee from a local NGO explained:

> They [residents] were ill-informed of the water demand management device, and the way that it is introduced. . .they [contractors working for the City of Cape Town to install the devices] don't explain that this is a self-cutting device. . . They only come and manipulate the people to sign a particular form, which is a form that states that you agree that the water demand management device should be installed in your household, even if you don't know that this is what you are signing. . . the problem is that the city is not very good [at] engaging communities
>
> [interview, December 2014]

This approach obscures responsibility and shrouds the power relations behind their implementation. A water activist in the region elaborated:

> none of this is really being monitored, the only thing that's being monitored. . .is the number of meters installed. There's . . .no way in which the city is monitoring how the technology is being rolled out. And that's often where the conflict is: people don't understand the technology, they haven't asked for it, they're often kind of complicit in putting something into their home that is very problematic in the end, they haven't been told what issues they might expect, how to resolve problems. And a lot of the installation is out-sourced and so the responsibility is no longer sitting with the city but potentially with the company that's done it
>
> [interview, May 2015]

The reliance on technical contractors contributes to the narrowing of political avenues available to households for voicing their concerns. While officials and sub-contractors state that they are simply implementing City policy (Wilson & Pereira, 2012), residents are encouraged to take their concerns to local councilors, who "are the same councilors who have actually approved that the water demand management device should be installed" (interview, NGO representative, December 2014). Civil society organizations documented some of these pitfalls, having orchestrated an agreement for civil society and government to agree on a compromise for managing the debt scenario in the neighborhood of Makhaza. Despite this agreement, when civil society presented its three-pronged proposal, the City largely ignored the demands

and instead sent a new round of consultants and contractors to Makhaza in a new attempt to convince the local population to adopt the water management units (Wilson & Pereira, 2012).

A similar situation was found in Dunoon, where residents are unable to access government representatives, leading to cases of bypassing the WMD via the services of an independent plumber (which further places residents in positions of vulnerability, as these actions contravene the rules of the WMD installation) (Lusithi & James, 2016). Permanently leaving the WMDs behind, however, requires concerted civil society action beyond these subversive tactics and isolated protests (Galvin, 2016); questions remain whether the human right to water can offer a long-term focal point for such concerted action.

Despite the City's emphasis on "stakeholder buy-in" (City of Cape Town, 2013, p. 14), the above programmatic techno-politics of service delivery mirrors the kinds of processes that policy transfer scholars have emphasized (Collier, 2012; De Boer et al., 2013; Goldman, 2007; Peck & Theodore, 2015). In this case, we see that the conjoining of neoliberal and human right to water-based approaches is constrained within flows of expertise and the technocratic implementation of "best practices". The South African Constitutional commitment established a new set of norms or rules pertaining to water delivery and access at a broad political level. Yet there are recurrent challenges when attempting to design water policies and services that realize this commitment in practice, particularly *alongside* neoliberal policy prescriptions such as demand management and cost recovery, as well as their implementation via outsourced contractors and technocrats.[17] The challenges in Cape Town also indicate the continuous tensions between national frameworks and local implementation. As demand management has increasingly become the focus of water policies over the past decade, it has eroded the initial gains that were made in realizing targets towards FBW at the local level.

These challenges are increasingly acute in the context of the current severe drought conditions in Cape Town. While some of these demand management efforts appear sensible in such moments, there are also dangers in using the drought as a justification for the persistent application of water policies that disproportionately affect poorer neighborhoods (while emergency restrictions do not apply in informal settlements, the danger relates to the City's long-term policy approach). Indeed, the drought was predicted more than a decade ago, when demand management strategies were also shown to be ineffective on their own in mitigating the drought, and to disproportionately affect poor households. In 2006, for example, Jansen and Schulz (2006) simultaneously illustrated the heavily stressed nature of water supplies in Cape Town and the ineffectiveness of isolated demand management strategies in poorer neighborhoods. While high-income groups are relatively price-sensitive, low incomes groups do not adjust their consumption practices due to price shifts. Results showed that "price increases for the low-income groups will mainly work like a tax" (Jansen & Schulz, 2006, p. 607). So while the City's current policy during drought conditions is more equal in application (across socio-economic groups), it is not necessarily just, because "price is not a good management measure to restrict water consumption for this [low-income] group" (ibid.).

Similarly, in 2007 Cape Town's Department for Water Affairs identified 2015 as a likely crisis point of water availability and supply (which proved correct). Even if demand management strategies were to work as projected, the 2007 studies showed that additional water sources would still be required if severe shortages were to be avoided in the future (Muller, 2017). Recent City data suggests that demand management did decrease water consumption, particularly in recent years. For example, the number of non-indigent households consuming in excess of 20 kiloliters per month dropped from almost 120,000 in December 2016 to approximately 35,000 in October 2017 (when the drought crisis reached a critical point) (City of Cape Town, 2018). Yet, as Muller's data suggests, the City had previously illustrated that such decreases would be insufficient for avoiding drought.

These planning issues were compounded by overly optimistic scenarios of supply and demand, which emerged from the studies commissioned by the City (Muller, 2017). Recent consultancies mistakenly suggested that demand management policies were working so well that the development of new supply infrastructure could be postponed, thereby delaying projects to augment supply. The current crisis, therefore, is not just about hydrologic flows in recent years; it is partly a political product of inadequate planning over recent decades (Maxmen, 2018), and of a lack of national support for municipal attempts to uphold a human right to water (Dugard, Langford, & Anderson, 2017).

Over the past decade, demand management strategies have been as much about cost recovery as they have been about drought mitigation – until recently the City targeted indebted households, rather than high volume consumers in general. Indeed, the demand management program and the implementation of WMDs *began* with already underserved and vulnerable neighborhoods, only broadening in scope to wealthy neighborhoods once the drought crisis had enveloped the region. Demand management is now being applied across the municipal region, which means that the same policy is applied across all households and neighborhoods. Notwithstanding the indigent policy (noted above) and the current exemption for informal settlements regarding crisis policies, the City's approach still does not account fully for different levels of accessibility, such as household size. Thus, while under drought conditions policies may appear more *equally applied*, questions remain regarding long term *equitability*.

A more sustainable solution might focus on multi-stage management programs that combine demand management with water-sharing agreements and community engagement – as has been proven to work elsewhere (Aghakouchak et al., 2014). Such an approach might diversify Cape Town's regulatory environment away from over-dependency on market-oriented demand management, and towards community-sensitive policies that are built on diverse knowledge networks, social learning, community-engaged decision-making, and flexible policy implementation (see Rodina et al., 2017). While we refrain from prescribing specific policy solutions, if processes of policy transfer and adaptation are to work for Cape Town's benefit, then a diverse approach to reflexive policy learning would surely provide a more robust institutional basis than a one-sided demand management approach.

Paradoxically, despite ongoing social opposition to these processes and policies, the City's recent roll-back of the FBW policy illustrates the fragility of regulatory experiments in the water sector.[18] To illustrate this point further, we now turn to Ghana, where water policy reform *and* social responses have been shaped by the

[17] For an illustration of a similar argument based on research in Chile and Bolivia, see Baer (2017).

[18] Social contestation, mobilization, and activism in South Africa has focused on the lack of a deep participatory politics in water issues. The South African Civil Society Water Caucus, for example, has long complained of the lack of engagement in developing water policies and has been advocating for greater citizen control. This emphasis is also reflected at the local level, as interviews revealed an ongoing concern for a lack of substantive participation and engagement when it comes to devising and implementing water policies and technical aspects such as WMDs. While these are important aspects that require separate analysis in a dedicated paper, they are beyond the scope of this paper due to our analytical strategy, which is not intended to be a "like-for-like" comparative study. We look forward to seeing other publications that focus directly on an analysis of these dynamics.

transfer of both neoliberalizing and human right to water-related principles and practices.

4. Payments for water services and the right to water participation in Accra, Ghana

Water provision in Accra is marked by a general acceptance of payments for water, informal water markets, and policy attempts to introduce water management devices – all without a formal or constitutional recognition of the human right to water.[19] In this context, we focus on growing calls for participation over water-related decision-making. We build on the arguments made by Linton (2012), Clark (2012, 2017), Baer (2015, 2017), Baer and Gerlak (2015) and Perera (2015) that participation in decision-making and the embedding of the human right to water in a local participatory politics of water is central to realizing the right in the long term. We explore this issue as it relates to the discursive transfer and deployment of a human right to water as a way of articulating civil society opposition to water commodification processes.

This articulation exists within a policy-making context oriented around the role of the state-owned enterprise Ghana Water Company Limited. GWCL regained control over water supply in 2011, when the decision was made not to extend the contract of the private supplier Aqua Vitens Rand Limited (AVRL) – a joint venture between the Dutch company Vitens and the South African water utility Rand Water. The GWCL is currently meeting somewhere between 46.5% and 70.6% per cent of urban water demand in the city (Dapaah, 2014; Ministry of Water Resources, Works, and Housing, 2014; Oteng-Ababio, Smout, & Yankson, 2017).[20] Much of the remainder is provided by a network of informal private water suppliers/vendors, who sell sachets or deliver tankers of water (Morinville, 2017; Stoler, 2017; Stoler, Tutu, & Winslow, 2015).[21] These vendors have come to dominate supply since 2005, contributing their own forms of informal governance in the water sector (Oteng-Ababio et al., 2017). The GWCL also intersects with local governance in the form of District Assemblies, which face considerable governance constraints, including being considered largely ineffective by some residents (key informant interviews, April 2015; household surveys).

GWCL is governed by the Ministry of Water Resources Works and Housing and its Water Sector Strategic Development Plan (2012–2025).[22] The Plan frames its goal of universal coverage in terms of private financing and full cost recovery, rather than in line with any language of rights (Ministry of Water Resources, 2014, pp. 16–17). While privatization was rejected at the national and institutional level with the cancelation of the Aqua Vitens Rand contract, rights to water in Ghana continue to be framed according to an ability to pay. A representative from GWCL encapsulated this framing:

> With the human rights aspects, they are entitled to water, but it's a fact that water can't be free, [so] we would expect that you pay a little for what you consume... otherwise it would affect the country's economy. So yes [there is a human right to water in principle], but let's all understand the way the world economies work and how things are now. (interview, GWCL representative, April 2015).[23]

Meanwhile, the National Drinking Water Quality Management Framework for Ghana addresses the prominence of private water vendors only in terms of raising questions about the safety and efficiency of various delivery means; the Framework does not question the role or position of informal and private vendors (Ministry of Water Resources, Works, and Housing, 2015). In Accra, this overall approach is contextualized by the Integrated Urban Water Management Project, which involves a goal of providing, by 2030, access to *affordable* water within a reasonable proximity to each household (Oteng-Ababio et al., 2017). As we illustrate, the question of affordability is emerging as central to ongoing contestations around water supply.

Within this broad policy context, GWCL develops its own implementation strategies, which must be approved by the Ministry. As we explain, however, GWCL looks to models of water provision in other countries, and the policy context is affected by external and global institutions (e.g. the AVRL privatization occurred as part of a loan conditionality from international financial institutions, and we illustrate that these influences can still be felt). The main debates among policy-makers in GWCL and advocates from civil society focus on how to guarantee a reliable and safe supply of water to underserved areas. GWCL is concerned with overcoming previous financial and water provision deficits, moving away from a rationing schedule, and recovering the costs of expanded provision. Public-private partnerships are currently seen as the predominant mechanism to develop new infrastructure, as occurred with the recently completed desalinization facility in Teshie (which was out of operation at the time of writing, due to negotiations over the terms of contract with the private operators). Civil society organizations argue that GWCL is simply following previously established policy templates and ignoring demands for ensuring public interests in water policies (such as ensuring affordable tariffs, rather than sinking costs into large-scale operations such as the desalination plant, for example).

Disputes over water services are arbitrated by the Public Utilities Regulatory Commission, which also oversees quality of services, and establishes tariff levels and any increases. PURC's mandate is to ensure a fair *market* for water provision, meaning that it defends consumer interests but does not undermine the economic base of providers such as GWCL. In our case, we explore how civil society has mobilized the human right to water to put pressure on GWCL and its attempt to implement demand manage-

[19] The acceptance of payments for water was illustrated by our household surveys. Forty-nine per cent of the 236 respondents in our survey in Accra stated that they "strongly agree" or "agree" that private companies should be involved in water provision, and 75% strongly agreed (57%) or agreed (18%) with the statement that "everyone should pay for the water they use. Significantly, 57% of respondents disagreed or strongly disagreed that water should be free for everyone. These results contrast markedly with those derived from the survey in Cape Town, which revealed strong opposition to payments for water services. See: Harris, Rodina, Luker, Darkwah, and Goldin (2016).

[20] Interviews revealed that initial indications suggest that the new desalination plant, located in Teshie, has been helping to close this gap between water demand and water supply. However, questions remain regarding the long-term contribution and sustainability of the plant, particularly a given recent shut-down (initiated by GWCL) due to stalling contract negotiations and frequent complaints about water quality and the reliability of provision.

[21] The role of these vendors, who sit outside of established regulatory practices, begs a different set of questions about the role of informal water supply networks in realizing a human right to water, which we do not address here (see Wutich, Beresford, & Carvajal, 2016).

[22] The Plan is governed by the Ministry of Water Resources, Works and Housing (MWRWH), in collaboration with other relevant government institutions, including the Community Water and Sanitation Agency (CWSA) and the Water Resources Commission (WRC) (Ministry of Water Resources, 2014). For a full list of water-related actors in Ghana, see Fuest et al. (2005).

[23] This acceptance of water as an economic good reflects broader debates on payments for water (on whether the right should be "free"), as well as those on the international transfer of human right to water principles and policies. The Dublin Principles reflect the broad articulation of water as an economic good. Yet debate continues as to whether the human right to water should equate to a "free right to water", as opposed to one that could be based on payment. The United Kingdom, for example, recognizes the human right to water as a component of a broader right to an adequate standard of living, and yet payments for water are structurally embedded. The United States, in contrast, has not recognized the human right to water as it opposes the implication that such a recognition may open the doors to individuals claiming free access.

ment. Both sides of the debate have been influenced the South African experience.

4.1. Water as an economic good and the right to substantive participation

In this case, we demonstrate a kind of "double transfer": as GWCL experimented with transferring demand management policies based on the South African experience, civil society simultaneously drew upon human right to water-based opposition to these regulatory shifts in South Africa.[24] At the center of the "double transfer" process is a concern over participation in water-related affairs – an aspect that Baer has argued moves the human right to water beyond a narrow focus on access and price. As a representative of the Ghanaian Integrated Social Development Centre (ISODEC) explained, nominally there are structures in place to support participatory processes in the Ghanaian water sector, but in reality, these channels do not exist for the average citizen. "The net effect", he explained, "is that the kind of engagement between communities, citizens, and duty bearers in the water sector is limited", with District Assemblies often bearing the brunt of complaints (interview, April 2015). Concerns around such aspects of participation have been mobilized along with the human right to water to challenge water commodification and governance processes. A representative from a key organization involved in the Water Citizens Network explained that Ghanaian water-related rights are tied to an ability to voice concerns over issues such as private sector involvement in water provision:

> civil society organizations... are trying to claim the space that rightly belongs to civil society, to have an input in the processes of decision-making around water supply and assess in the sector. But then it has not been easy, because these days you rarely get support for the work we are engaging in if your programs or projects do not have an element that supports public-private sector partnerships, and we are opposed to that concept within the water sector
>
> [interview, April 2015]

The Water Citizens Network has mobilized "in response to the whole question about the independence of society within the water sector", and in order "to represent the views of citizens with regards to the right of every citizen to water" (interview, April 2015). This conceives the right as much in terms of decision-making *processes* as it does in terms of physical water supply and access as an outcome.

This approach – which is beginning to have a direct effect on water policies and regulations – has been inspired by experiences elsewhere. Representatives from GWCL and ISODEC both referenced experiences in South Africa as a model *both* for water policy development and its contestation in Ghana, having travelled to South Africa and elsewhere through engagement with the Municipal Services Project – a multi-sectoral research, engagement, and policy-learning project, which is funded largely by the International Development Research Council of Canada (see: http://www.municipalservicesproject.org/).

In 2014, GWCL initiated plans to implement a program of installing pre-payment meters so as to "inject efficiency into its revenue maximization" by ensuring "that those who use it pay for it" (Anson-Lawson, 2014, paragraphs 1 and 4). This approach had been introduced by Aqua Vitens Rand, but the program was abandoned when civil society pressures prompted the non-renewal of the contract in 2011. Building on this history, GWCL's proposed approach sat alongside its request to PURC to increase water rates by 400%. The Commission rejected such an increase, but approved a one-off average rate hike of 67% (across tariff tiers), while also reiterating that the government should support infrastructure developments as part of its public service provision obligations (Public Utilities Regulatory Commission, 2015). Despite being ordered by a Parliamentary Select Committee on Water Resources, Works and Housing to review its plans, in 2015 GWCL publically announced that, from August of that year, water access would be conditioned on a "pay *and* consume" basis (i.e. payment *before* consumption).

While the majority of residents already access water on these terms (by purchasing water from vendors), civil society groups made the point that public provision should be both affordable and reliable, and not locked into flow-limiting technologies such as pre-payment meters. Such devices contradict a broad understanding of the human right to water in line with UN statements. With civil society otherwise was provided with few options to participate in these decision-making processes, the Water Citizens Network voiced its opposition to GWCL's plans via a press release:

> We are alarmed by the weight and consequence of the statement which completely ignores the human rights context of water provision and the core responsibility of the state to use tax contributions of citizens to support the provision of basic essential services including water. We call on civil society organizations committed to the principle of the human right to life and the inviolability of the human life to condemn the statement of the Managing Director [of GWCL] and to join the call for a rescission of the "pay before drinking" prepaid water policy... we register our resolve and commitment to stand resolutely for the human right to water and against prepaid water meters.
>
> We continue to hold dear the principle of public control of water production and delivery, based on the conviction that water is a unique commodity, necessary to the sustenance of life and therefore its access should not be constrained by cost or other barriers... The meters are targeted at the poor to deprive them of their human right to water...
>
> Prepaid metering should not be countenanced because it is a cruel means of managing demand where those who are unable to afford [water] are simply cut off to increase access to those with the economic means (Water Citizens Network, 2015, pp. 1-2).

The Water Citizens' Network argued that GWCL had been irresponsible in its billing procedures by neglecting poorly calibrated meters and inaccurately billing consumers. This approach centered their argument on the aspect of affordability – one of the key components of the human right to water identified in UN definitions. The Network further called on GWCL to respond to the issues identified in the 2010 national technical audit of water service provision, rather than to implement a new, profit-oriented policy that fails to address existing technical and social barriers to effective water management. The press release explicitly referenced experiences in South Africa and Uganda, which GWCL representatives acknowledged had informed the service provider's decision (interviews, April 2015). The press release argued that "the experiences of other countries show that prepaid metering deepens inequalities as poor areas and not wealthy areas are mostly targeted for cost recovery" (Water Citizens Network, 2015, p. 2).

Instead of pre-payment meters, the Network argued, the Ghanaian state should invest more heavily in GWCL, and the GWCL should improve access to payment points by exploring internet and phone based payment systems (Water Citizens Network,

[24] There are, of course, parallels between this double transfer and Polanyi's (2001) notion of "double movement", as the double transfer entails both advances of market rule and a push back from society to regain control. However, expanding on this conceptual point is not our aim here.

2015). In June 2016, GWCL began piloting a new billing system, which combines water scratch cards with an instant billing system based on the geographical positioning systems (GPS) of smartphones. This approach helps to remove the errors associated with human meter reading and enables billing disagreements to be settled without bureaucratic delays.

At the time of writing, therefore, it appears that the Water Citizens Network has successfully kept at bay the plans of the GWCL to implement the kind of demand management policies that have been legally challenged, albeit *unsuccessfully*, in South Africa under the Constitutional right to water.[25] While GWCL's new smartphone technology raises a new set of concerns (around consumer privacy and governmental control, for example), the discourse of the human right to water appears to have been an effective tool for limiting the further commodification of water – at least for now. According to a key player in the national Network (interview, April 2015), the next step is to engage in a political drive that will pursue the human right to water and deeper water sovereignty at two different scales: a constitutional recognition of the human right to water and related policy reform (for which members of the Network have been participating in a Constitutional review process); and, tackling the uneven politics to governing water at the local scale.

It will be worth paying attention to how these issues unfold. Indeed, PURC is due to announce the results of its 2018 Major Tariff Review (having recently published results for the electricity sector). Should PURC support the view of civil society that GWCL must be more accountable to citizen demands for equitable and affordable access, then this would provide evidence that the official regulatory climate will have been shaped further by human right to water principles for the coming years. Nonetheless, at this point, it is of analytical interest that the transfer of human right to water principles *and* prior experiences has been used to counter the transfer of neoliberal policies such as the use of pre-payment meters within demand management programs. Moreover, this process is occurring with explicit reference to the South Africa context: GWCL policy-makers have cited South African models of demand management as best practice, while ISODEC respondents have articulated their opposition to water commodification by explicitly drawing on and referencing legal challenges in South Africa. Thus, the conduits of transfer are similar: neoliberalizing and human right to water-influenced approaches are travelling together as best-practice models and as popularized examples of social control over water. In the process they also inform and shape each other. Systematic analyses of these processes are required to understand their continuing effects.

Yet the limits and constraints that emerge in Accra are distinct, based in part on geo-institutional histories (e.g. heavy reliance on informal and private supply) and on forms of articulation among local networks. The result is a contextual, patterned, and evolving hybrid landscape of regulatory transformation in the water sector, within which the variable coming together of the human right to water and market-based policies is just one component (for a discussion of other factors influencing the application of a human right to water in neoliberal contexts, see Baer, 2017).

Interestingly, the current landscape in Ghana does not fully align with the country's official policy framework of pursuing integrated water resource management (IWRM). Focusing on technological solutions such as desalination and a related policy approach of attempted cost recovery – through high and largely unaffordable tariffs – does not align with IWRM. This is especially the case given that the network of informal private providers remains largely ignored in policy approaches. As with the Cape Town case, a more concerted approach to IWRM might entail a multi-sectoral assessment of water availability, provision, demand, and access that engages civil society in meaningful dialogue. Indeed, the Water Citizens Network has been pushing for this very aspect, arguing that a human right to water also entails a right to participate. If regulators such as PURC take seriously the demands of the Network, then the Ghana case may reveal the potential – pointed to by Sultana and Loftus (2015, p. 99) – for the human right to water to create opportunities "for marginalized communities and peoples to enter into (often elitist) decision-making processes of water policies, management systems, and institutions". To understand this potential, we argue that it is necessary to unpack the kinds of evolving and hybridized regulatory landscapes that we have discussed here.

5. Conclusion

Our analysis has focused on the co-constitutive relation between the human right to water and ongoing neoliberalization in two distinct (yet linked) sites. In the South Africa case, we focused on how continued neoliberalization through the deepening of demand management programs limits and constrains the realization of the human right to water. The findings are useful for further building our understanding of the spaces that the neoliberalization of water services in South Africa has created (see Narsiah, 2013). In the Ghanaian case, we explored how neoliberal and human right to water-influenced approaches and discourses travel together but take shape according to local articulations and demands for substantive participation. Neoliberalizing and human right to water-influenced ideas and experiences are therefore being re-shaped together *in-place*.

In both cases, the contradictions, limits, and constraints we explored have led to a distancing of water-related policies from the progressive transformations in provision and access that civil society advocates have demanded. In Cape Town, severe drought conditions have prompted a recalibration of demand management, leading to new patterns in the roll out of WMDs. These interventions will likely prove unsustainable – and rather moot – if supplies are not augmented and other governance aspects not reconsidered *in toto* (Muller, 2017). Demand management efforts have also come at the expense of previous commitments to FBW, as the indigent policy is the bare minimum required by national policy frameworks. These aspects highlight the contradictions that emerge at the intersection of the human right to water, neoliberalization, and changing hydrologic conditions.

In Accra, while GWCL pursues cost recovery mechanisms and increases to water tariffs, civil society is advocating for the constitutional recognition of a human right to water. Yet everyday water access remains contextualized by a general acceptance of payments for water, and the national approach places emphasis on technological solutions (such as desalination), despite a commitment to integrated water resource management. Affordability, engagement, and quality remain key challenges.

Our argument is not, therefore, that the human right to water unequivocally or uniformly producers water policies that are more fair or sustainable.[26] While the human right to water has affected policy developments in both Cape Town and Accra (including to

[25] We do not mean to suggest that there has somehow been more success in realizing the human right to water in Ghana than South Africa. To date, there have no legal challenges in Ghana since there is no Constitutional recognition of the human right to water. Moreover, given their specific circumstances the two contexts should not be measured alongside each other on some unified scale. We discuss the contrasting experiences simply to highlight that the human right to water intersects with water policy transformations in contextual and sometimes unexpected ways.

[26] This conclusion positions our argument alongside other recent analyses, which have shown that the human right to water can be used by states to counter the radical demands of marginalized groups, or to shroud policy-making as usual (Radonic, 2017; Schiff, 2016).

defend access by poor and vulnerable populations successfully at various times), it remains just one component within a broader, variegated process of transformation in the water sector. This means that the pursuit of a human right to water in principle will not transfer into a uniform pattern of universal access in practice. Instead we observe an uneven pattern of patchy successes and failures in transforming the human right to water into policy practice.

Our analysis shows that policy principles such as FBW and prescriptive demand management policy options exist and circulate together as mobile but *embedded* policy paradigms. This process produces evolving hybrid regulatory landscapes that affect both water provision and access.[27] While demand management through water pricing and consumption caps is now entrenched in Cape Town (partly at the expense of FBW), Accra continues along its own path of private provision and techno-solutions (e.g. PPPs and desalination), despite opposition from social movements. The outcomes in both places will likely be shaped by the degree to which civil society aligns with or resists policy changes, meaning that these outcomes will not fit a linear model of progress in water policy.

These findings show that the human right to water and variegated neoliberalization co-constitute evolving regulatory landscapes in practice, particularly at the municipal scale. We must not, therefore, confine our analyses of the power and potential of the human right to water just to the legal or institutional realm (at the national scale). The findings also raise questions about the degree to which the human right to water has begun to influence the policy prescriptions associated with global organizations such as the World Bank, transnational water companies, and international NGOs. Addressing such issues will shed new light on the kinds of policy mobilities highlighted by the likes of Goldman (2007) and Mukhtarov (2013, 2014), and will help to uncover the potential emergence of new – but contested – rule regimes or hegemonic practices in water governance.

There is a need for more research of this kind, we argue, in order to build an understanding of patterned regulatory change in the water sector today. There is also a need for historically-informed analyses of both neoliberalizing and other kinds of regulatory restructuring (Cf. Peck, 2013). Such historical approaches might further the kinds of cross-contextual analysis we have presented here by uncovering how the discursive, legislative, and practical potential of various principles underpinning expectations in water provision and access are institutionalized over time as coherent but geographically differentiated approaches. These approaches and practices will continue to exhibit various contradictions, limits, and constraints – key elements which deserve analytical attention across sites and scales to better understand shifting hybrid landscapes of water governance. Such historical and cross-contextual analysis will be required, we argue, if we are to understand any enduring significance of the human right to water.

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Declarations of interest

None.

[27] See Jamie Peck (2011) for an explanation of the paradoxical concept of simultaneous mobility and embeddedness.

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