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(Re)theorizing the Politics of Bottled Water: Water Insecurity in the Context of Weak Regulatory Regimes

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Abstract: Water insecurity in developing country contexts has frequently led individuals and entire communities to shift their consumptive patterns towards bottled water. Bottled water is sometimes touted as a mechanism to enact the human right to water through distribution across drought-stricken or infrastructure-compromised communities. However, the global bottled water industry is a multi-billion dollar major business. How did we reach a point where the commodification of a human right became not only commonly accepted but even promoted? In this paper, I argue that a discussion of the politics of bottled water necessitates a re-theorization of what constitutes "the political" and how politics affects policy decisions regarding the governance of bottled water. In this article I examine bottled water as a political phenomenon that occurs not in a vacuum but in a poorly regulated context. I explore the role of weakened regulatory regimes and regulatory capture in the emergence, consolidation and, ultimately, supremacy of bottled water over network-distributed, delivered-by-a-public utility tap water. My argument uses a combined framework that interweaves notions of "the political", ideas on regulatory capture, the concept of "the public", branding, and regulation theory to retheorize how we conceptualize the politics of bottled water.

Keywords: water politics; bottled water; water governance; urban water; re-theorizing

1. Introduction

Water insecurity in developing country contexts has frequently led individuals and entire communities to shift their consumptive patterns towards bottled water. Bottled water has gained popularity as a mechanism to enact the human right to water through massive distribution of containers across drought-stricken or infrastructure-compromised communities. Water insecurity is particularly acute in cities as infrastructures are substantially sensitive to exogenous shocks, including extreme climatic events, accelerating urbanization and explosive population growth. When water utility infrastructure is compromised because of a disaster or lack of maintenance, or a combination of other different factors, government officials have tended to leave it to consumers to solve their problems of water insecurity. These individuals seek to protect themselves from potentially harmful waterborne pathogens that could be ingested from dubious quality tap water sources through an "inverted quarantine" [1], whereby people protect themselves through the products they consume.

Water insecurity in cities is most frequently associated with two main factors: the inability of local governments to enable and sustain sufficiently, securely, and accessibly a steady water supply in contexts of increasing scarcity and extensive urbanization, as well as the lack of mechanisms, infrastructure, and strategies to increase access for those who remain water insecure [2]. Water insecurity can cause emotional distress [3] as well as physical affectations with extremely negative impacts, particularly in contexts of high vulnerability to disasters, such as earthquakes and flooding [4]. These negative impacts can have particularly compounding and multiplicative effects [3]. Water insecurity in cities remains a pervasive global problem. These problems are not confined to cities in

the developing world. Episodes of drinking water supply contamination in the US leading to deaths have received major global media attention and heightened concerns about the state of American urban water delivery infrastructure [5,6]. Fragility of water supply systems is compounded by a lack of transparency on the part of public officials, leading to distrust on the ability of local governments to provide safe drinking water for all [7], as required by the United Nations human right to water directive [8].

Bottled water consumption is globally on the rise. The global bottled water industry is a major business with revenues in the range of $215–$260 billion US dollars (https://globenewswire.com/news-release/2018/04/18/1480659/0/en/Global-Bottled-Water-Market-to-Breach-US-300-Billion-Worth-by-2024-Leaders-of-Global-Bottled-Water-Market-Facing-Stiff-Competition-from-Local-Vendors-notes-TMR.html), currently (2018) around $215 billion US dollars (https://www.marketwatch.com/press-release/the-global-bottled-water-market-size-is-expected-to-reach-usd-21512-billion-by-2025-2018-08-27). How is an industry that makes money from packaging a scarce resource compatible with our intentions to create the conditions for a global norm of the human right to water, when scarcity is one of the key dimensions of water insecurity? Different authors have posited a broad range of explanations about how bottled waters have come to, in the words of Hawkins, Potter, and Race, "insinuate themselves into our lives" [9]. Governmental failures to provide safe drinking water through local water utilities [10], poor networked infrastructure for water delivery throughout urban centers, rural and peri-urban areas [11], powerful marketing campaigns [12,13], regulatory failures and capture of local governments on the part of multinational corporations [14], a taste for healthy hydration through highly portable liquids [15,16], and a shift in norms where consuming bottled water has become somewhat of a cultural norm despite its negative environmental effects [17] are all factors that have contributed to the emergence and sustained growth of the global bottled water industries.

I re-theorize the politics of bottled water by engaging with the literature on branding theories as well as regulation theory to show how strategic branding choices make use of weak regulatory regimes to create new markets and/or strengthen leadership position on current ones. An examination of the interplay of these factors, therefore, offers a novel reading of the politics of bottled water beyond what has already been written elsewhere. I center my analysis on urban water as it is where the major locus of decision making exists, even if federal and state-level authorities also wield enormous power to make decisions on how water should be allocated, and on the production of containerized liquids of various types, including beer, soft drinks, and bottled water. These government actors also carry responsibilities regarding the governance of bottled water. Decisions at the federal level can have an impact on how much water is extracted and by whom. Policy choices with local impacts and implications are also frequently drawn up at the federal level.

While I follow Schmitt's work on "the political", and Winner's examination of whether artifacts have politics, my argument goes beyond by building an interdisciplinary framework that uses regulatory capture, the concept of "the public" as taken from a publicness theory lens and regulation theory to retheorize how we conceptualize the politics of bottled water governance. In this article, I answer two interrelated but under-theorized questions:

(1)　how is bottled water political, and which factors make containerized liquids the locus of political analysis?
(2)　how do different regulatory contexts transform the ways in which bottled water is governed?

In this article, I demonstrate that behind the incredibly rapid growth in bottled water consumption across the world, we can find a complex web of political forces that facilitate regulatory capture of government actors by industries. I show how, more than the development of a taste for the commodity itself, the exponential growth that the global bottled water market has experienced has been primarily the result of political negotiations and the politicization of public water utility infrastructure. Through a series of vignettes of different cases of growth in bottled water consumption, I explain how regulators

in different countries and cities have failed to create the right conditions for universal water access in urban and peri-urban contexts. I indicate how the confluence of weak regulatory frameworks, lax enforcement, and poor infrastructure have contributed to consolidating the current dominance of bottled water as a mechanism for drinking water provision. I do so by explaining the underlying politics of governing the vital liquid in packaged format. I draw from empirical research I have undertaken in Mexican cities, though I also refer throughout the text to several international case studies where the political dynamics might be similar.

This article is organized as follows: in the second section after this introduction, I examine how bottled water is political and which factors make water politics the focus of political analysis. In the third section, I examine the interplay between weak regulatory regimes, branding, poorly-maintained infrastructure, and strong branding and marketing campaigns. In the fourth section, I synthesize works on urban water politics by highlighting the importance of retheorizing the politics of bottled water through the inclusion of regulatory regimes in water policy discussions. I also discuss the role of cities in providing safe drinking water. Finally, in the conclusion I explain how a re-examination of the "what is politics" question and an inquiry on to the various concepts of "the political" helps us re-theorize the politics of bottled water in a novel way.

2. How is Bottled Water Political?

One of the key questions in political science (and social science in general) is: what constitutes "the political"? What is politics? What is political? What are the characteristics that make an event or a phenomenon, "political"? Even more importantly, when are objects (whether we believe they are imbued with non-human agency or not) "political"? These are all important questions to ask, even more so when we are re-theorizing politics, as we do in this special issue. My goal with this discussion is to engage with the literature on "the political" and the broader meaning of politics, from the discipline where I identify with the most (political science), but also engaging other disciplinary approaches to understanding politics. This is not a "political science summary of the literature", but I use this discipline as a springboard as it is the one with which I identify the most and am most familiar with. I will also engage works published by human geographers, another discipline with which I identify. In reviewing this literature, I will engage the four main elements I consider to be part of any analytical framework that involves human geography: space, place, location, and scale.

Canadian political theorist Mark Warren's definition of what is political is analytically powerful as it combines two main elements used in the study of water governance, power and conflict. Therefore, I use it here as a starting point for my discussion. According to Warren, we can define politics as

"the subset of social relations characterized by conflict over goods in the face of pressure to associate for collective action, where at least one party to the conflict seeks collectively binding decisions and seeks to sanction decisions by means of power". ([18], p. 218)

Warren's excellent definition of what politics entails directly relates to the very starting point of why water as a subject matter is political. As Sultana indicates, "water is essentially about power—the power to decide, control, allocate, manage—thereby affecting people's lives" ([19], p. 485). Water is also about conflict, in the same vein that Warren is discussing it. Conflict about who gets to consume water, who gets to extract it and commodify it, and who is excluded from its consumption and, thus, denied their human right to water, therefore, facing water insecurity [19,20]. Governing water is, hence, about harnessing power and dealing with conflict in a way that ensures that there is equitable distribution and allocation.

Water governance is political and politicized. While there is a broad range of definitions I will confess my own positionality by indicating that I am writing primarily from a political science perspective. I view water governance as a model of resource management where we can find multiple nodes holding power within a network and coordinating for optimal usage and replenishment. I harness Rhodes' view of governance [21–23] and, thus, I define water governance as a set of

institutional arrangements requiring power-sharing within a networked structure of interactions between resource appropriators and other political agents. My definition of water governance implicitly highlights three elements: power-sharing, networked-structures, and multiple actors/agents. Yet I have found political science and policy science perspectives often fail to highlight the political components of water governance. Who gets to participate in the governing of this vital liquid? Who is denied access to resources? Who holds power and control over distribution within urban infrastructures? What rules and norms govern water access, use and reuse, and how are these established, enforced, and sanctioned?

Containerizing this vital and necessary liquid for sale and profit when many communities worldwide lack access to enough water for their personal use acutely highlights the importance of rethinking and re-theorizing the politics of governing bottled water. Theories of the politics of bottled water have a broad range of ontologies and epistemological approaches. While material culture scholars like Gay Hawkins have examined the different components of a bottle of water, as it pertains to actor-network theory and scholarly approaches that provide this commodity with non-human agency, my approach is completely different and, therefore, I do not follow the conceptual model of ontological interference as described by Hawkins [24–26]. I do, however, draw heavily from insights Hawkins has offered on how the mere existence of polyethylene has enabled the creation of markets for containerized liquids. More specifically, Hawkins has highlighted how having access to an easy-to-hold-and-carry plastic bottle has facilitated access to this commodity.

My argument in this paper touches upon Gay Hawkins' thoughts about how brand, oil and water assemble into becoming bottled water [27,28], and Langdon Winner's assertion that artifacts are political [29], but with a twist. I do not ascribe to actor-network theory, nor do I endow plastic and H_2O with non-human agency characteristics. I do, however, strongly follow Winner's argument that there is value in understanding how certain technologies embody specific forms of power and authority. Specifically, I argue that branding itself is a political act, and that encasing water inside a plastic bottle follows a certain kind of politics: a simultaneous politics of fear and protection, whereby consuming bottled water is an act of self-preservation (or inverse quarantine, a la Szasz) in response to fear of waterborne diseases.

According to Winner, there are two main ways in which artifacts can have politics, both of which have a key impact on how we politicize bottled water. The first one, where the device or system "becomes a way of settling an issue in a particular community" ([29], p. 123), makes the artifact inherently political. Through Winner's lens, we would argue that bottled water is inherently political because its usage can facilitate or preclude individuals or entire groups from enjoying their human right to safe drinking water. As the case of sachet water shows, there are communities where access to this type of packaged liquid is necessary [30–33] and, often times, the only way in which marginalized populations are able to enjoy their human right to water. The second lens that Winner uses is the case of inherently political technologies, "man-made systems that appear to require, or to be strongly compatible with, particular kinds of political relationships" ([29], p. 123). We could also argue that bottled water can be political because it is compatible with specific kinds of political relationships. For example, for Winner, the atom bomb is a clearly and inherently political artifact. So are transportation systems. Bottled water can be inherently political because in its creation and manufacturing process, political relationships are built between regulators and bottling companies. Government actors act as regulators of how much water is extracted, and which types of plastic can be used to package the vital liquid. These relationships can also become vitiated, as I argue later in this article, and be the source of mechanisms of regulatory capture.

Re-theorizing the politics of water necessarily means tracing back the developmental trajectories of our thinking about water, about politics and the inherent meshing of the two. Here is where I follow Winner as I look to water and the technologies through which it is delivered from aquifer or lake to consumers' hands. While not following exactly the idea of endowing water with non-human agency, I do consider, as Acevedo Guerrero asks, how "as infrastructure extracts, contains, channels, processes,

leaks or distributes waters it produces new kinds of spaces and reproduces inequalities or differences between them" ([34], p.1). Choices about infrastructure are also inherently political.

In an exercise of re-theorization of the politics of bottled water, it is fundamental that we rethink how we define and describe the politics of water governance, as it is through these governing processes that new forms of water use, appropriation, and distribution emerge. Defining and understanding the politics of water governance has become an important area of research in and of itself, and plenty of worthy contributions are available for the reader's perusal. In discussing how this term is defined, I align closely with the multidisciplinary and interdisciplinary work of Margreet Zwarteveen and the Water Governance group at the IHE-Delft Institute for Water Education, as it represents a cross-disciplinary, integrative approach to discussing politics and the governance of the vital liquid. In their recent commentary, Zwarteveen and collaborators produced an analytical examination of the politics of water governance that summarized what water governance is, at the core, and the different ways in which it intersects with politics and the political. As Zwarteveen et al. indicate:

> "water governance at heart is about political choices as to where water should flow, about the norms, rules and laws on which such choices should be based, about who is best able or qualified to decide about this, ad about the kind of societal future such choices support." ([35], p. 1)

My analysis is consistent, therefore, with Zwarteveen and collaborators' definition of what is at the core of governing water: distributions. Who gets specific flow quotas and by whom is water distributed, who gets more benefits and who loses in the distribution and allocation of authority? Whose expertise do we believe and whose voices are silenced or not considered and why? Distribution of water, voice and authority, and expertise is a useful analytical heuristic that Zwarteveen and collaborators master that can also be applied to how we govern bottled water. Which aquifers and freshwater bodies are targeted by whom and to what extent can the water that is extracted from these be transformed into a tradable commodity? Whose voices are silenced, and which livelihoods are affected through the systematic misallocation of water extractive rights and why do bottling companies still fail to pay a fair amount for the water they extract? Engaging these questions allows us to critically examine how bottled water is governed, and by whom, as well as who gets excluded from these governing processes. These are questions that, in many ways, the vast literature on political ecology has engaged upon, even if not directly centering on the politics of bottled water. However, I do not take a political ecology approach in this paper, as I believe it would be a disservice to scholars in this area to attempt to survey the literature within the constraints of this article. I do want to acknowledge the contributions of authors in this field and thank an anonymous reviewer for pointing this out to me.

3. Examining the Combined Politics of Branding, Regulation, and Infrastructure

From a political economy viewpoint, bottled water is a commodity because it is the result of economic agents who have used resources (however scarce) to manufacture a product that can be sold in markets. This commodity has been crafted to provide healthy hydration [15] through pure drinking water [17,36,37]. Given these branded properties of bottled water, finding a broad range of types of packaged beverages and highly functioning markets for each one of these types is hardly a surprise, despite the ethical implications of containerizing a vital resource [38] which should, theoretically, be treated as a common pool resource [39,40].

An overlooked mechanism that can be used to create markets for bottled water is through specialized branding and implementation of clever and powerful marketing strategies within weak regulatory regimes. While Wilk and others have emphasized the role of marketing and branding, how these interact with regulation is much less explored. Weak regulatory regimes combined with poorly regulated industries to create new markets for products that can respond to consumers' fear of the tap. This is one of the main reasons bottled water exists: to create a barrier (quarantine) between citizens, their consumed products and potential pathogens [1]. If there is poor drinking water

quality management, citizens will want to protect their health and take it upon themselves to isolate potentially harmful compounds and biological agents. Fear of the tap water [41,42] can also be often coupled with developing a taste for consuming a particular brand of beverage [14,43]. Branding is just a component of the complex phenomenon that is the very existence and explosive growth of bottled water consumption. Global markets for the containerized resource have grown, as commercially-popular brands such as Acqua Panna (Italy), Evian (Switzerland), FIJI Water (Fiji Islands), and Perrier (France) are traded across the globe. Drinking bottled water is a response to external factors but also a product of internal, individual decision-making processes.

In this section I want to highlight the political elements behind bottled water consumption as a combination of socio-political factors at the individual and collective scales. Throughout the paper I highlight that there is a politics to producing packaged liquids as well. However, I do emphasize consumption at this point because, as I will explain below, there is a particular confluence of factors with political undertones that help us elucidate how bottled water became a staple of our daily lives not only in developing countries, where drinking water infrastructure may be poorly maintained [5,6,44], but also in affluent societies where bottled water is a form of healthy hydration, considered fashionable and trendy [15].

The politics of bottled water consumption is underlined by the combination of governmental failure, industrial entrepreneurship and societal risk aversion. Water utilities are often unable to provide high quality drinking water [45], multinational corporations capitalize on this fear of the tap by creating a safer alternative for humans to hydrate [9], and citizens reject any risk of damage to their personal wellbeing, engaging in an inverted quarantine [1] protective process. Wilk suggests that "bottled water is a case where sound cultural logic leads to environmentally destructive behavior" ([17], p. 303). While this is partially true, I do not agree that cultural norms are the only (or main) factors behind the explosive growth in bottled water consumption across the globe. Beyond culture, as I show below, there is a systematic attack on local water utilities' infrastructure, not only on the part of multinational corporations with a stake in commodifying local resources, but also local governments who abdicate their responsibility towards citizens.

Branding is political. Whether a type of containerized liquid is promoted and sold as "ethical" [46,47], or whether its consumption is predicated on the basis of particularly branded properties such as body-strengthening, mind-clarifying, weight-reducing and others [48], the politics of what gets sold and how is complex but extremely interesting. The way in which companies choose to highlight a specific property is also in and of itself a political act. Not only do multinational corporations have the power to embed an idea of purity and healthiness in a packaged liquid, they are also able to maintain this notion ingrained in people's minds for generations. To further explain how branding has facilitated the erosion of public trust, I use an example from my own research and fieldwork in the Mexican bottled water industry. While the 1985 earthquake in Mexico City may have created distrust in Mexican citizens and led them to shun drinking water directly from the faucet, powerful marketing campaigns sustained this belief and carried it over the next generations. Nowadays, it is hard to find someone in Mexico who does not drink bottled water, a testament to the power of multinational corporations to erode the public trust in local water utilities' work and infrastructure. I interviewed government officials in three Mexican cities (Aguascalientes, Leon, and Mexico City). All three cities have created water treatment programmes whose efficiency is solid, delivering high-quality drinking water across the entire municipal network. Nevertheless, people in Mexican households still refuse to drink directly from the tap for fear of getting sick, purchasing 20-litre jugs to provide drinking water on a weekly or bi-weekly basis, and instead use water from the network for bathing, cooking, and other household uses. In this article I focus primarily on the politics of individual single-serving bottles, rather than on these cases of multi-gallon jugs. Their trust in government has been systematically eroded through powerful branding and marketing campaigns.

Increasing the expansive power of branding can also be facilitated by government inaction, particularly when this inaction leads to lack of regulation of the specific text or messaging. If governments do

not regulate messaging, it is unlikely that companies will exercise caution in how they portray their water-based products. Branding bottled water as owning or possessing extraordinary capabilities is a well-recognized marketing strategy, and an efficient one too. Gerber, the baby food marketer, has crafted bottles of water that are "created especially for your baby" (see: https://www.nestle.com.mx/brands/agua-gerber. Do note that although Nestle is a Swiss brand, this particular product is sold in Mexico.). Other companies thrive by selling "highly pure, glacier water, like Whistler Water, a Canadian brand based out of British Columbia's winter skiing and snowboarding resort area (see: http://whistlerwater.com/ Whistler Water boasts having "provided local and global customers with the most pristine glacial water available." WW reports the quality of its water here: http://whistlerwater.com/downloads/BottledWaterReport2018.pdf). Like FIJI Water, which is imported from Fiji, Whistler Water is promoted as extraordinarily pure and neutral (at an alleged pH of 7.2) because it comes from a glacier north of the city of Whistler.

Choosing a specific branding strategy is a political act. Which populations are targeted and with what frequency and through which channels, using what kinds of messages are all technical decisions that have political undertones and/or are motivated by political reasoning. Moreover, exaggerated and misleading branding strategies can be facilitated by governmental responses, either collaborative or through inaction. For example, if local government praises corporate social responsibility efforts by a beer company for providing free canned water to communities affected by disaster, this messaging could also be used as a branding strategy. While apparent collaboration between marketers and governmental actors may be inadvertent it could potentially also be purposeful.

4. Bottled Water Governance in Variegated Regulatory Contexts

The governance of water supply has always been political, but a disintegrated and non-systemic view of the hydrological cycle has led many scholars and policy-makers to neglect that ensuring that the human right to water is universal implicitly involves numerous decisions and conflicting policy objectives. Deciding who gets to access how much water and of which quality is a political decision. As Feldman indicates,

> "[t]he process of water supply politics generally involves an inter-play of interests having unequal power and exercised through various forums, depending on the decisional context—e.g. urban water supply vs. agricultural irrigation. Over time, water supply has evolved from being a local issue in which decision-making has been dominated by public agencies and regulatory officials to a more contested set of issues involving community groups, private entrepreneurs and investors, and environmental activists, among others." ([49], p. 26)

Water quality management is often a function bestowed upon authorities tasked with regulating drinking water sources, but this is done only through standards and guidelines instead of a rigorous command-and-control approach where quality and quantity are systematically monitored on site and where standards are strictly enforced. This is problematic because water quality management and its relationship to bottled water governance are not seen as part and parcel of a broader water policy system. This lack of a systemic approach to urban water management is clear across the board in different countries and has the potential to impose substantive negative effects on urban and peri-urban populations. Bjornlund et al. identify six specific issues at stake:

> "(1) defining water quality parameters for each water use; (2) putting each water quality to its most beneficial use; (3) the soil and water nexus; (4) pharmaceuticals in waters; (5) how to monitor and enforce water quality standards; and (6) balancing economic development and water protection." ([50], p. 324)

Surprisingly, governing bottled water and its quality are not included in the broad theme of water quality management, even though poor drinking water quality is often named as a key factor

driving growth in bottled water consumption [51–54]. It is also surprising because water utilities, while not sharing the responsibility of regulating bottling plants, do have a stake in ensuring that drinking water is of adequate quality for urban contexts and communities [55]. The problem with a lack of integration of bottled water into urban water supply governance concerns is that we treat the problem of water supply, as Melosi aptly put it, "as if its resolution can be found through some black box" ([56], p. xi). We negate the importance of bottled water for urban drinking water delivery if we simply treat the problem of providing sufficient water through engineering or "hard path" solutions. Certainly, providing water fountains and refilling stations could potentially have a positive impact in how much bottled water is consumed. However, the evidence to this end is mixed. In an ethnography of a US university campus' drinking water practices, Kaplan found that preference for water fountains had been waning [57]. Other authors have found growing interest in water refilling stations [58], particularly when peer shaming and socialized motivation strategies are used to shift behaviors and consumptive patterns [59]. As these examples show, how we govern bottled water is not only a matter of regulating infrastructure or mandating its installation, but also changing individual behaviors, and shifting patterns of drinking water consumption away from bottled water. This combination of soft-path and hard-path strategies has the potential to be quite powerful.

Governing bottled water requires us to understand regulatory contexts, organizational architectures and institutional arrangements. Institutional analysis helps us understand how bottled water consumption has become consolidated. In the words of North,

> "[i]nstitutions are the humanly devised constraints that structure political, economic and social interaction. They consist of both informal constraints (sanctions, taboos, customs, traditions, and codes of conduct), and formal rules (constitutions, laws, property rights). Throughout history, institutions have been devised by human beings to create order and reduce uncertainty in exchange. Together with the standard constraints of economics they define the choice set and, therefore, determine transaction and production costs and hence the profitability and feasibility of engaging in economic activity." ([60], p. 97)

Institutional theory helps us explain how new norms and rules regarding bottled water consumption have emerged. Repeated consumption of packaged liquids creates individual routines that lead to the emergence of new norms, rules and, ultimately, an institutionalized definition of what type of water has the appropriate quality levels to be consumed by humans on a regular basis. Individuals consume bottled water out of systematic, continued and enduring repetition and consolidation of self-protective strategies that respond to (among other concomitant factors) extreme risk aversion. Given a choice between consuming a commodity, however negatively impactful it may be on the environment, and risking their own health through acquisition of a waterborne disease, human beings will tend to pursue a logical approach and consume bottled water. This logic is what Szasz calls the "inverse quarantine" [1]. Given the potential risks of damage that drinking contaminated tap water could have on individuals' health, human beings make the conscious choice to "create a bubble" around their consumables. Not surprisingly, "[b]ottled water was the first inverted quarantine product to achieve mass consumer item status" ([1], p. 174).

Empirical evidence drawn from interviews I have conducted during fieldwork in Mexican cities over the course of the past five years supports my claims. Using extensive surveys, ethnographic fieldwork and in-depth interviews, I have investigated whether citizens would continue to consume bottled water were they entirely certain that their local water utility would be able to provide them with continuous, uninterrupted service. I have also asked whether they would consume bottled water if the quality of the water coming out of their tap were high enough to pass the Mexican official norm for drinking water. Shockingly, most responses were of the type: "I don't trust my government, nor do I trust that water is safe, even if the test results are posted right in front of my eyes". I report these results elsewhere, and I do not want to make this the main point of this article. Readers interested in this topic can request publications by contacting me directly. This distrust is not new nor is it volatile and temporary. This strong and collectively-shared belief that drinking tap water will result in physical

harm has been ingrained in Mexican citizens' minds throughout the years. It is not the result of one specific campaign, nor (as some authors have argued) a response to the 1985 Mexican earthquake. It is a systematic, repeated cycle where what once was consumed as part of a survival strategic response to an emergency, has now become commonplace. This behaviour may have been logical one time, but the continued repetition even when infrastructure was repaired and municipalities, specifically Mexico City, were able again to provide safe drinking water, is not logical at all. What this reification of bottled water as the safest option for drinking water provision shows is the potential and power for repetition, routines for the creation of new rules and norms.

One of the biggest problems with the governance of bottled water is that regulation of this industry is quite complex, and quite frequently, encoded regulations are amorphous and complicated, providing little to no guidance as to the subject they are supposed to govern, and the different mechanisms for control, regulation, enforcement, and sanction-setting. An institutional analysis lens shows that weak regulatory regimes, poorly designed and implemented regulations, clever branding strategies and a dereliction of duty on the part of local and federal governments can combine to strengthen multinational corporations' stronghold on public drinking water provision through massive bottled water delivery. As I have indicated above, routinely consuming bottled water as a response to urban water insecurity solidifies the role that this commodity has in the provision of household-level drinking water. This routinization institutionalizes bottled water as the pseudo-official policy choice for governments.

Regulation of bottled water production will depend on where the water comes from. While in Mexico most bottled water is produced through extraction of the vital liquid from aquifers, in other countries this commodity is manufactured by transporting it from a lake or river or other form of surface reservoir. Governing extraction of water for packaging purposes is complicated because there is a great deal of variation as to who is responsible for specific components of the regulatory framework across jurisdictional levels. Water extraction is extremely poorly regulated. Across the globe, water extraction for bottling purposes is often the responsibility of state-level authorities, although, in Mexico, water is "owned" by "the Nation" and, therefore, extractive concessions are the responsibility of the federal government. This is a constitutional mandate which is followed through laws. Provinces in Canada hold responsibility for governing groundwater. In Mexico, states have very little jurisdiction on areas of drinking water governance, whether protection, extraction, or marketization.

5. Regulating Branding and Infrastructure in Weak Regulatory Regimes

If we examine the combined politics of strong branding, poorly-maintained infrastructure, powerful marketing campaigns and weak regulatory regimes we can assess how this specific combination of factors influences the creation, emergence and sustenance of new bottled water markets. Bottled water markets are created through the confluence of several different factors, that include powerful marketing campaigns [61], the interplay of an inability by local governments to provide adequate tap water with the ease of access and global pervasiveness of bottles [9,24], a promotion of living lifestyles that include hydration based on healthy packaged liquids [15], the development of a taste for bottled water [43] and the social construction of "purity" through strategic and smart branding [17,33,36]. Nevertheless, in this paper I have focused specifically on the four ones listed above for three reasons. First, there is very little written, if anything, about the regulation of bottled water as a public policy issue and about the weak regulatory regimes that emerge when countries have poor environmental regulatory enforcement. Second, to the best of my knowledge, there is no discussion in the literature about the specific interplay of branding, regulation, marketing and infrastructure and their impact on the governance of bottled water. Third, an examination of the interplay of weak regulatory regimes with smart branding necessitates a re-theorization of how politics plays a role in which branding strategies are chosen and how these connect with regulatory responses on the part of government actors.

One key reason why government actors are not willing or able to provide adequate drinking water at the city-level is because they are captured by powerful economic interests. As the literature on regulatory capture shows, one of the main strategies for capture is the cooptation of public service delivery through privatization mechanisms and strategic lobbying [62,63]. I also argue that governments that fail to provide safe water engage in what is called "dereliction of duty", an abdication of responsibility that places the onus on individuals to seek proper mechanisms that enable them to provide for their own services, instead of supplying them as public goods. Among a broad range of governmental duties is the responsibility to ensure that citizens receive public services. Therefore, when government actors decide to delegate this responsibility to the citizens they are supposed to serve, they engage in dereliction of duty [64].

Branding strategies intersect and interact with the regulation of marketing campaigns and water supply governance [14,61]. As powerful marketing campaigns take hold without much governmental supervision, controlling how bottled water is marketed and sold becomes more complicated and complex. Brei has documented the case of France while Pacheco-Vega has examined the case of Mexico. In both cases, the federal government has taken a passive stance towards marketing campaigns that promote bottled water in ways that are almost borderline criminal. For example, in Mexico a Gerber-branded bottled water promotes itself as "water especially created for your baby" ((in Spanish): https://www.nestle.com.mx/brands/agua-gerber). Unless Nestlé has managed to create a different type of hydrogen and oxygen combination that is especially suited for babies (and even then, populations are wildly diverse, different and heterogeneous), it is hard to believe that the way in which Gerber bottled water is branded can even be legally used. However, it is, as shown by the market share captured by Nestlé globally, and in Mexico. In France, Perrier brands itself as "an iconic French brand". Perrier harnesses the power of French identity to position itself as the brand for an entire country. This appeal to nationalism and national identity should technically be regulated as national symbols are supposed to be for strict government usage, but as this case shows, regulatory enforcement of these standards fails quite often. French bottled water sellers have also harnessed the popular appeal that global perceptions of French sophistication has as a brand [65].

The systematic acceptance and (in some cases) extensive promotion of the bottled water industry as a mechanism for safe drinking urban water delivery, as the cases of Flint and Mexico City show [39] show a clear dereliction of duty on the part of governments. Leaving a public responsibility in the hands of a private actor is not per se unacceptable. Water utilities' operation is often licensed to multinational corporations to enable city governments to gain leverage, improve their financial and operational performance and ensure that populations across the territory of a particular jurisdiction can access enough water to sustain their livelihoods [66]. Reports of improved utility performance through privatization indicate increased efficiency in a number of cases, though recent assessments have questioned these alleged gains [67].

Privatization of water utility operations and production of bottled water are two related, but very different, facets of water marketization [68]. Whereas privatization refers to the operation of a water utility, which may or may not provide safe drinking water at the household and community level, commodification is the transformation of a common pool resource that should theoretically also be a public good into a tradable commodity through packaging and delivering. Here, I argue that we ought to maintain these two very distinct analytical categories of water marketization if we are engaging in theoretically sound and empirically robust investigations. Avoiding conflation of these categories is important because, though related, one (privatization) is often taken as symptomatic of the other (commodification), and often the causal chain through which marketization occurs can go either way [69–71]. Nevertheless, it is important that we do not conflate both mechanisms of water marketization while recognizing that they can be inextricably linked. As these marketization processes are interconnected, so are their politics. On the one hand, communities lacking access to the municipal water network or with poor daily coverage may engage in bulk acquisition of water (through tankers or at a smaller scale, large 20–30 L bottles). Local governments may decide that to improve coverage,

they may license operations to a multinational corporation. This was the case of the Mexican city of Aguascalientes, where poor coverage was quoted as the main rationale for privatization of the water utility in 1993. On the other hand, private water service delivery may be the only mechanism to ensure that there is safe drinking water for all citizens within a specific region. The answer to the question of whether water utilities should be privately operated is never clear cut and apolitical.

Moreover, while some countries may have a formalized, constitutional human right to water, it is still unclear whether formalized rules work properly to ensure that communities have universal access. This lack of trust in formal institutions leads to the emergence of informal models of water delivery, including the emergence of "pirated bottled water", and an explosive growth in small-scale, household-level commercial purifiers. Wutich and collaborators have reported on how informal water vendors in Cochabamba, Bolivia, organize themselves to provide safe drinking water to communities that may not have access, thereby effectively enabling their enjoyment of the human right to water. Similar cases of informal water access strategies enabling the human right to water and sanitation can be found in India [72,73], Indonesia [74,75], and Mexico [76,77].

Encoded rules about water governance may potentially not match informal rules. In theory, local governments may be tasked with the responsibility as per their legal frameworks, but, in practice, citizens will do whatever it takes to ensure continued access to a safe source of drinking water. This mismatch between policy goals and regulations codified in laws and bylaws and the actual needs of communities creates conditions that foster the emergence of informal water provision systems. There is a very broad range of jurisdictional responsibilities and institutional arrangements for urban water governance with regards to drinking water, but unfortunately there is no systematic, one-stop shop kind of summary of national and subnational jurisdictional attributions. The closest thing to a global overview of drinking water responsibilities as established by various national and subnational legislative bodies is the European Directive on Water. The OECD recognizes that drinking water and water provision (for services and for human consumption) are shared responsibilities across national and subnational levels of government (see: https://www.oecd.org/environment/resources/Council-Recommendation-on-water.pdf). For example, in Mexico, cities (municipalities) are responsible for provision of potable water as stated in the Mexican Constitution. Per Article 115, municipalities are tasked with providing all public services, which include park and garden maintenance, cemeteries, waste collection and disposal and water provision at the household level [78]. Theoretically, this would mean that it is the responsibility of publicly-owned and operated local water utilities to ensure the creation and distribution of a broad-ranging, far-reaching distribution network across urban and peri-urban areas.

The very existence and increased consumption of bottled water is perceived as simultaneously a "contest for authority and public trust between governments and corporations, in a context of heightened anxieties about risk and health" ([17], p. 303). While this perspective integrates a view of the role of governments, industry and citizens in the creation of bottled water markets, it (surprisingly) neglects the role of branding. The existence of an alternative to tap water is not enough to build trust on the part of citizens. Increases in bottled water consumption also result partly from the combination of very powerful marketing campaigns that promote purity [17,36,37,79,80] and remoteness as markers of higher quality and the erosion of trust on local water utilities' networked infrastructure [14,45,81]. There are definite political undertones to this phenomenon because multinational corporations have a stake in strengthening their stronghold on drinking water provision not only at the local level but also nationally. Bottling companies have spent thousands of dollars in lobbying fees not only to enable them to continue extracting water from aquifers across the United States and Canada, but also to position themselves within a governance system where private interests have at least as much say in public service delivery as citizens do, if not more. However, these influencing activities on the part of private actors would not be successful if there were not governments willing to take money, either in the form of financial support for party activities or through water utility operations' takeover.

By discharging local governments from the responsibility of providing safe drinking water to their citizens, private entities can shape water policies from below. While the main topic of this paper is bottled water and I do not wish to expand on issues related to other types of water marketization, there is a symbiotic relationship between utilities' privatization and commodification of water through bottling. This interconnectedness between both modes of marketization is often rendered invisible because bottled water production and consumption remain as the main analytical focus. I argue that because both modes of water marketization are intertwined, therefore, so are their politics.

6. Conclusions

Bottled water, both from a production point of view and from a consumption perspective, is not only a public policy issue but a highly contentious political one. Ensuring that the human right to water can be enacted at the subnational level also involves highly complex political maneuvering across different levels of government, and multiple sectors. Nevertheless, the way in which urban water governance has been presented and discussed in the literature has frequently erased discussions on the political components of governing this vital liquid. In this article I offered a novel reading of various works on "what is politics" and "the political" while integrating scholarship focused on the study of packaged beverages to deploy a new definition of the politics of bottled water.

Bottled water is an effect and a cause for water insecurity. Poorly maintained infrastructure, weak regulatory regimes, powerful branding and strong marketing campaigns and poorly regulated industries can sustain and strengthen their market dominance. My analysis is necessarily confined to governing water in cities as most bottled water drinkers reside in urban and peri-urban contexts. As my analysis has shown, the interplay of powerful branding strategies, weak regulatory regimes and fear of the tap create political conditions that strengthen the power of multinational corporations with strong interests in maintaining a stronghold on local drinking water markets. Furthermore, a dereliction of duty on the part of local governments and apparent regulatory capture at the federal level by powerful interests in the global bottled water business also contribute to the consolidation of this model of drinking water delivery. Moreover, routine consumption and a lack of activist and civil society challenges to the status quo have facilitated and strengthened this new mechanism for public water service delivery. This governance regime responds to political pressure, powerful incentives and action (or lack thereof).

The issue of incentives is rarely explored when discussing the politics of governing bottled water, and although it isn't the central argument of my article, I want to emphasize that there are powerful incentives to sustain a robust bottled water industry and a lack of incentives to improve drinking water infrastructure both play a role in the lack of energic action aimed to reducing bottled water consumption and production. Given its routinized role as the de facto mode of safe water provision in many cities in Latin America and other countries, there is a lack of incentives to improve water infrastructure at the city level. This fact should be concerning, but it is not apparently high neither on government nor on activist agendas. While there is extensive anti-bottled water activism in Canada [82] and the United States [83], particularly against Nestlé, this is not the case in Mexico, where discussions on the human right to water have centered on stopping the privatization of water utilities [14]. How these activist and governmental agendas vary across North America and globally is an interesting issue worth researching further.

It is worrisome that bottled water is not part of any substantive policy agendas at the local level. Given the stark growth in consumption of containerized liquids as the main vehicle for hydration in contexts where infrastructure is weakened, it is quite shocking and surprising that there is little to no interest in having a discussion on the political underpinnings of bottled water consumption. Bottled water is not in the public policy agenda, as I have shown in this paper. A direct implication of this absence is that there is also no interest on the part of government agencies in funneling public resources to solve what isn't perceived as a problem. Therefore, local governments continue to abdicate

their responsibility in providing safe drinking water for all households within their purview simply by not only enabling but encouraging bottled water consumption.

In this article I re-center the discussion on the political elements of water governance focusing on two specific aspects: first, the politics of governing bottled water (specifically its regulation), and second, the role of politics in regulating production and consumption of bottled water within the context of a broader water governance framework. Both elements are interrelated but distinct. While scholarly discussions of water governance have privileged coordination between actors through multi-stakeholder round tables, the so-called Integrated Water Resources Management (IWRM) paradigm, there has been much less discussion about the politics of coordination and participation in these river basin councils, watershed councils, or citizen boards. Nowhere in these roundtables is there a place for discussions around extraction of the vital liquid by multinational corporations. As I show in this paper, bottled water is a public policy issue that suffers from agenda denial. It is simply not on the governmental agenda, and not on civil society's either.

The governance of bottled water involves several political elements. Cities are most often in charge of providing potable drinking water as one of the main public services they are entrusted with. However, as I have shown with the case of Mexico, many municipalities have abdicated their responsibility and instead have left citizens to their own devices. Those who have the financial means to purchase large plastic jugs filled with the vital liquid at affordable prices do so, but there are many individuals in marginalized communities who are unable to acquire these and, therefore, either purchase plastic containers with water that has a lower price or obtain access through illegal means (like redirecting pipes and drawing from non-point sources). These "pirated" sources of water have been growing exponentially and are now one of the main models of water delivery in numerous areas of developing countries.

As I have shown, an unexplored element of bottled water politics has been the compounding, combined and cumulative effects that weak regulatory regimes, badly designed regulations, poor infrastructure, and strong branding and marketing campaigns have had on the emergence of a dominant paradigm of urban water supply: bottled water as a permanent mechanism for drinking water delivery at the city level. An important caveat to posit is that there is not one single ("the") politics of bottled water, but many. Therefore, in this article I centered my analysis on the intersection of weak regulatory regimes and corporate incentivization of commodification, which are compounded by governmental failure to provide for water as a public good. Achieving the human right to water in a context where bottled water is the preferred mode of water delivery will, therefore, posit important challenges worth discussing further.

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