Water Regimes: The International Dimension of Water

and its Role in the Global Economy

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Introduction

Water has become a prominent issue in the contemporary world. The fear of water scarcity has become pervasive and helped to bring about a whole series of policy changes, the most polemical of which is a new approach to water provision based on seeing water as an economic good and on the privatization of water supply. One of the fascinating facts about this process is that this new view of water has been promoted at the international level, even if water has always been and still remains mainly a localized resource. Another key aspect of recent changes is that they have turned water from a publicly provided natural resource to a commodity that plays an important role in the global market economy. How have these changes occurred and what are their implications?

In order to try to answer this question this paper will explore the international dimension of water and its relation to the global economy. I will use the concept of 'water regimes' to try to understand the emergence and the logic of international and global norms and principles about how water should be conceived and managed, including the role it should play in the economic system. To guide my exploration I will build a theoretical framework based on a version of regulation theory supplemented by geographical approaches that will allow me to explore the gaps between a single commodity and the whole economy, and between different geographical levels. I will also draw from international relations literature and from Foucauldian theories of discourse and power.

I will proceed in three different stages. First, I will study the physical and ecological characteristics of water and how it is used by human beings. Second, I will outline the theoretical framework which will allow me to delimit the scope of my exploration and introduce the key concepts that I will use throughout my analysis. Finally, I will present my characterization of three water regimes, which will show how water has increasingly become the subject of international attention and part of the global economy. Finally, in my conclusions I will explore the consequences that this characterization of recent water history has for understanding resistance to privatization of water around the world.

Water

Before I present my theoretical framework, I believe that it is essential to devote some time to explore the characteristics of water as a resource and its role for humans and in human societies. The specificities of water and its importance for human beings have significant implications that need to be taken into account in devising the tools for its analysis. A key element to point out here is that although there are biological (and therefore invariable) features in the relationship between water and human beings, a considerable part of their connection is social, in the sense that it depends on the particular characteristics of the time and place in which this relationship is being studied. Therefore, it is crucial to note that most of the characteristics mentioned below refer to the particular relationship between water and human beings in the contemporary world, even if some of them could be found in previous historical periods. As for geographical differences, I believe that the features reviewed in this section are general enough as to apply to most contemporary societies, although it is worth noting that their particular manifestations would vary from one place to another.

Water and Human Needs

There are five levels at which water fulfills human needs:

First, water is indispensable for human life. Human beings are primarily comprised of water, and can only survive a few days without water. Water is also a key constituent of other organisms, a building material in plant photosynthesis, a solvent for soil nutrients, and the most important regulator in the heat budget of the earth. Water is therefore also essential for humans in that it is a critical component of ecosystems from which men and women feed and in which they find the environmental conditions that allow them to survive (Baumgatner and Retchel 1975; Miller 1977).

Second, water is a basic element for human health (WHO 2001). Water has been seen as having healing properties since antiquity, although it was not until the 18th and 19th centuries in which scientists such as Pasteur were able to prove the role that hygiene and the use of clean water played for human health (Goubert 1989).

Third, water has economic uses. Beyond it being required for the production of food, water is a key input in industrial processes, a source of energy, and a means of transportation (Tölgyessy 1993, p.13; Gibbons 1986). The combination of its effects on health and on economic processes makes water to be considered as fundamental for development (Unesco 2003).

Fourth, water has recreational and aesthetic uses, such as swimming and boating in rivers and lakes, swimming pools, spa resorts, or fountains (Gibbons 1986; Easterly and Renwick 2004).

Finally, water has symbolic and cultural value for human beings. The cultural identity of entire peoples revolves around water, water has religious connotations for some cultures, and worldviews and lifestyles have been built around specific understandings of the relationship of people with water (Shiva 2002).

Water Availability

The five levels of human needs covered by water emphasize the uniqueness of this resource and its importance for human beings. However, another set of specificities about water has to be explored in order to fully understand its place in human societies. As a natural resource not susceptible of artificial production by humans, water availability becomes a key issue in understanding its position in society.

Three quarters of the Earth's surface are covered by water, of which there is approximately 1.4 billion cubic kilometers. If spread evenly over the globe, water would cover the earth to a depth of 2.7 kilometers. Yet only 2.6% of the total is freshwater, and therefore available for human consumption and for irrigation. Only 70 meters of the 2.7 kilometers of water that would cover the earth if evenly spread would be freshwater. But even this 2.6% is not all usable. Two-thirds of total available freshwater is trapped in polar icecaps and permanent snow cover, a negligible amount is in the air in the form of clouds, fog or rain, and an even smaller quantity is in the biosphere (in living beings). The remaining 30% of freshwater is not readily available either, much of it lies too far underground to exploit, and moreover it is constantly circulating in what is known as the water cycle (evaporation, rainfall, runoff towards the sea). Using again the metaphor of spreading water evenly over the globe, the amount of water in lakes and rivers which can

be used by humans would be only 1.82 meters deep (De Villiers 2000, pp.35-6; Pielou 1998, pp.1-4).

The idea of the water cycle means that freshwater is a renewable resource. Yet three qualifications must be made to this assertion. First, the time it takes for the cycle to complete itself is variable (from about six days for most rivers to hundreds or even thousands of years for groundwater and the largest lakes and glaciers) and it depends on geo-hydrological processes which escape human control (De Villiers 2000, p.36). Second, there is a great amount of variability on the availability and specific characteristics of the cycle in different locations and climates of the Earth. 20% of global runoff comes from the Amazon basin alone, whereas in the Arica desert in Chile they went for 40 years straight in the first half of the 20th century with zero annual precipitation (De Villiers 2000, p.37). Third, freshwater is an inexhaustible yet damageable resource. Water use by humans, and particularly the effects of its industrial use, can affect its quality negatively to the extent that it becomes unsuitable for human use and it distorts the ecosystems of which it is a central element (Gleick et al. 2002, p.5). There is also a quantitative element in this process, as water cycles are being affected by human-induced processes of soil deterioration and desertification (and the consequent climate change), or by the use of freshwater resources in excess of the renewable capacity of the cycle (Tölgyessy 1993, pp.6-9).

Water as a Local Resource

A final characteristic of water that needs to be emphasized at this point is its quasi-local character. This is a social and historical feature, in the sense that it is based on its current patterns of availability and the economic characteristics of the contemporary world. What this means is that because of its low price-to-volume value, unlike many other natural

resources water is usually not subject to transfers beyond water basin or national borders. There are a few examples of transfers that have occurred in recent years: through pipelines, the physical transport of liquid water in tankers or large bags towed through the ocean, the capture and use of icebergs, or the increasing sale of various forms of bottled water. However, the cost of such transfers far exceeds the price that most municipalities and industries currently pay for a reliable water supply, and therefore these are isolated and usually short-lived experiences. Even with the high costs and high energy consumption of desalination, this is usually a preferred alternative for regions with water shortages. It is true that there is an increasing trend in the sales of bottled water, which involves long-distance circulation of water. However, it is safe to say that water is nowadays, and has always been, a quasi-local resource (Gleick et al. 2002, p.11-19).

It is precisely the juxtaposition of this local quality and the increasing presence of global discourses and international attention to water issues that is puzzling and claims for explanation. In the next section I outline a theoretical framework that will allow me to explore these questions.

Theoretical framework

For the construction of this theoretical framework I will draw on several bodies of literature, namely regulation theory, geographical approaches to neoliberalism, international regimes, and Foucauldian notions of discourse and power/knowledge.

Regulation theory

Regulation theory was born in France in the 1970s, although some claim it is more a research approach than a coherent theory (Lipietz 1987; Skrypietz 2003). Its *raison d'être* comes from an attempt to explain the changes that Western economies experienced in the 1970s with the end of sustained economic growth (coupled with an increase in inflation, what came to be known as stagflation), the collapse of the Bretton Woods architecture, the end of Keynesianism and the rise of neoliberalism. Regulation theory was born from the ranks of the French structural Marxism associated with Althusser, although regulation theorists tried to overcome some of the features of Althusser's work, such as his complete denial of the subject (Lipietz 1993). According to Boyer and Saillard (1995, p.58), the regulationist approach searches for a sort of middle ground in the sense that it is after "[n]either individualist reductionism nor structuralist invariance" (p.58). Lipietz (1987) identifies four basic tenets of regulation theory: (1) society is a network of social relations which are (2) contradictory in nature. Yet despite such intrinsic contradiction we find (3) sustained periods of time in which the configuration of social relations is stable, conforming a 'regime of accumulation'. This is a concept basically applied to the economy, but as Lipietz (1987) himself argues it can be applied to politics, diplomacy, etc. Finally, the regime of accumulation is achieved through (4) a given set of behavioral patterns and institutions called 'mode of regulation', which shapes individual expectations and behavior so that they conform with the needs of the regime of accumulation. The mode of regulation works through two parallel processes. One has to do with inclinations to behave, durable dispositions to conform in the minds of the individuals of a given culture in the sense of Bourdieu's concept of *habitus*, which is a common reference for regulation theorists (Boyer 1995, p.25). The second process operates through a set of institutions, which may vary within a given regime of accumulation.

These four central aspects of regulation theory outline an approach that is interested in change, in the dynamic character of social relations as much as in their periods of stability (Boyer 1995; Boyer and Saillard 1995). Another key element is that, as I argued above, regulation theory emerged to explain changes that were going on in the economic system in the 1970s. Therefore, even if it has an interdisciplinary component in that it puts politics and culture at the core of its explanatory efforts, its main goal is to explain economic changes. Its primary focus is capitalism as such, and particularly the changes that went from the Fordism and monopoly regulation of the post-war period to the post-Fordist era beginning in the 1970s.

Several elements of regulation theory are interesting for the argument developed in this paper. First, regulation theory is an historical and geographically specific approach, as it needs to take into account the configuration of social institutions and relations (the mode of regulation) that works in a particular context in maintaining the regime of accumulation. Second, even if the original focus of regulation theory is on capitalism as such, its time- and place-specific character and the emphasis in social relations and institutions allow it to be applied at different levels to a variety of objects of study. It is possible, then, to use regulation theory to explore a given sector, or a specific country (regulation theorists originally studied capitalism in France), or even a single commodity. Thirdly, it is possible (and I would suggest necessary) to draw connections between analyses undertaken through a regulatory lens at different levels. As Friedmann (1982) and Friedmann and McMichael (1989) show in their studies of food and agriculture, modes of regulation (or what they call ‘food order’ or ‘food regimes’) in these sectors are directly related to modes of regulation in the economy as a whole, even if they have specificities that require individualized study.

Neoliberalism

One of the big challenges of regulation theory was how to explain what replaced Fordism and monopoly regulation after the crisis of the 1970s as a stabilizer of the regime of accumulation. The emergence of flexible accumulation, the retreat of the state, the emphasis on markets and deregulation, in a word, neoliberalism, apparently seemed to be the opposite of what regulation theorists were positing as necessary for the stability of the system. Was that the case? Or was neoliberalism about something more than just deregulation?

Brenner and Theodore (2002, p.4) argue that we have to distinguish between the ideology of neoliberalism, “in which market forces are assumed to operate according to immutable laws no matter where they are 'unleashed'”, and what they call ‘actually existing neoliberalism’, which consists of a series of contextually embedded restructuring projects. The study of such projects involves the exploration of the “path-dependent, contextually specific interactions between inherited regulatory landscapes and emergent neoliberal, market-oriented restructuring projects at a broad range of geographical scales” (Brenner and Theodore 2002, p.4). Actually existing neoliberalism, then, is not the result of a unitary, perfectly planned scheme to take over the world, but it emerges as the result of the crisis of “inherited frameworks of capitalist territorial organization”, which are “destabilized as capital seeks to transcend sociospatial infrastructures and systems of class relations that no longer provide a secure basis for sustained accumulation” (Brenner and Theodore 2002, p.7). Following the crisis there is, then, a period of search for a new ‘institutional fix’ “in which diverse actors, organizations, and alliances promote competing

hegemonic visions, restructuring strategies, and developmental models" (Brenner and Theodore 2002, p.9).

Brenner and Theodore (2002, p.4) describe this process as one of ‘creative destruction’, but the obvious question that emerges at this point is: if neoliberalism as an ideology promotes deregulation and the preeminence of the market, what is the substance of the creative, regulatory aspect of actually existing neoliberalism? Tickell and Peck (2003) answer this question by identifying three different phases in the development of neoliberalism. The first one, proto-neoliberalism, refers to the “inchoate origins of this ideological strategy in the period until the late 1970s” (Tickell and Peck 2003, p.168). At that point, neoliberalism was formed by unconnected ideological fragments and policy recommendations that had not yet coalesced as a coherent alternative project. The 1980s saw what Tickell and Peck call ‘roll-back neoliberalism’, based on deregulation. The main focus in this period “was placed on dismantling social-collectivist and Keynesian-welfarist institutions” (Tickell and Peck 2003, p.168). This is what neoliberalism is usually equated to. Interestingly, Tickell and Peck argue that this was not the last stage of neoliberalism. The third phase, which began in the 1990s, is what they call ‘roll-out neoliberalism’, “during which active institution building has been increasingly in evidence in the context of an uneasy marriage of under-regulated markets and authoritarian governance” (Tickell and Peck 2003, p.168). Therefore, even if it goes against the rhetoric of the neoliberal ideology, there is a regulatory and actively institutional aspect of actually existing neoliberalism. Still, this should not be seen as the final outcome of a centralized and planned strategy, but as a "contingently realized process” (Tickell and Peck 2003, p.165). Tickell and Peck therefore talk not about neoliberalism, but about *neoliberalization* as a process of political-economic change whose tendential form involves "the extension of market rule and disciplines, principally by means of state power,” even if "the outcomes of

this process will be contingent and geographically specific, since they are working themselves out in a non-necessary fashion across an uneven institutional landscape" (2003, p.165)

Peck and Tickell point out two further relevant features of this neoliberal regulatory project. The first one is that neoliberalization is qualitatively different from the monopoly regulation of the Keynesian-welfarist period. Neoliberalism inhabits “not only institutions and places but also *the spaces in between*”, it plays “a decisive role in constructing the 'rules' of interlocal competition by shaping the very metrics by which regional competitiveness, public policy, corporate performance, or social productivity are measured" (Peck and Tickell 2002, p.40). Neoliberalism is, therefore, something more than just a regulatory project. The second, related feature of neoliberalization is that even if it can be regarded as a regulatory project, this does not mean that its contemporary manifestation has reached some sort of regulatory 'settlement' (Peck and Tickell 2002, p.37). Neoliberalization works through “a radical, emergent combination of neoliberalized economic management and authoritarian state forms" (Peck and Tickell 2002, p.37), which at its core contains an essential contradiction. Its diffuse, non-centralized character means that its regulatory efforts and its institution-building have to be made, to a large extent, at the local level (Brenner and Theodore 2002, p.v; Peck and Tickell 2002, pp.48-50). This is not to deny that there is a global dimension in the regulations, but to say that the institutional consequences of these projects, the necessary regulation involved in the ‘authoritarian state forms’ to which I referred above – and which are essential in the face of measures that lead to increasing inequalities – occur necessarily at the local level. The corollary of all this is that the local level becomes a political space where contestation and resistance are possible (Peck and Tickell 2002, p.50).

Regimes and Discourse

The foregoing discussion has presented the basic tenets of regulation theory and analyzed neoliberalism as a specific and changing form of the mode of regulation. Yet in order to show how all this applies to water, it is necessary to go a bit further in specifying what a mode of regulation is and how it can be applied at different levels of aggregation (a sector, a commodity), as well as the implications of its international dimension.

Talking about the most general level (the economy as a whole), Lipietz (1987) argues that "the mode of regulation which had been a national one, based on a national compromise, is now in contradiction with an internationalization of production and markets stretched beyond domestic boundaries. … [T]his international mode of regulation is what international relations theory labels a 'regime'". Drawing directly from the international relations literature, we find a more concrete and useful definition of international regimes "as sets of implicit or explicit principles, norms, rules, and decision-making procedures around which actors' expectations converge in a given area of international relations" (Krasner 1983, p.2). This definition goes one step beyond Lipietz's in the sense that it acknowledges the possibility of different regimes in different areas and at different levels. My claim here is that the existence of these different regimes is linked and cannot be understood without reference to the more general mode of regulation to which Lipietz refers. International regimes also serve to emphasize the possible implicit character of the norms and principles that are the basis of regimes (Krasner 1983, p.4).

However, it is important to recognize that the notion of international regimes, because of its focus on international relations, sees the regime as stemming from national states, who agree in different ways to a series of norms and principles, which sometimes coalesce in

specific rules. When discussing international regimes in the context of regulation theory, Vidal (1995) identifies three historical interpretations of the processes of emergence of international institutions. The first one is the theory of hegemonic stability, by which the regime follows the designs of the dominant power. The second one is referred to as negotiated order, and it involves voluntary agreements by all or some of the implicated actors. Finally, we have spontaneous order, which has to do with the unpremeditated convergence of different elements that leads to a regime.

I would argue that, in the context of neoliberalism (as it has been presented above) and the emergence of a large group of non-state actors, the origins of regimes must be seen as a much more complex process in which discourse in a Foucauldian sense becomes a key element. We are thus in the presence of a process by which power and knowledge are enmeshed in the production of a discourse that generates norms and principles about a given issue. According to Foucault, it is not possible to locate power in one specific actor, as power is disperse and occurs through “infinitesimal mechanisms” located all over the social body (Foucault 1980, p.99). Here I do not want to support a radical Foucaldian view that denies the role of powerful actors. My aim is to complement the view of regimes as being built by powerful actors (usually states) with this notion of discourse in which knowledge plays a key role and in which many actors participate.

Therefore, I will adopt the notion of ‘regime’ imbued with the insights from regulation theory, the analysis of neoliberalism, international regimes and Foucauldian discourse, and attempt to apply it to the water domain.

Water Regimes

The main question that presents itself when confronted with such a task is: what is the relevant time frame to which the notion of regime can be applied to the water domain? Given the fact that my main goal is to understand the international role of water, and particularly its position in the global economy, I will begin my exploration at the beginning of the 19th century when the exponential growth of cities made water provision needs a prominent issue worldwide, and large investments requiring the inputs of different actors took place.

Another initial problem has to do with the aspects of water that will be considered in defining and delimiting water regimes. As I showed above, the water domain includes such diverse areas as drinking water provision, irrigation, industrial use, bottled water, energy, shared water basins, etc. I believe that international views around water can be said to be related for all of these aspects, but given the impossibility of a thorough exploration of all these sectors in the context of this paper I will focus my analysis on the area of drinking water provision.

First Water Regime: Public Provision of a Non-Economic Resource

As I mentioned above, water has historically had a quasi-local character, as it has never been a prominently traded resource. However, local provision of water as it had always taken place was challenged with the increase in urbanization in the Western world in the 19th century. Technical inventions were necessary to provide water for the whole urban population, as at the beginning of the industrial age the sophistication of water supply mechanisms of ancient Rome had not been surpassed yet (Miller 1975). However, the

need for enhanced and reliable water supply was linked to a discursive element related to the birth of the medical profession and the emphasis put on hygiene in relation to health. Goubert (1989) follows in his work the debates in France about the relationship between health, hygiene and water in the 19th century, and how these debates led to water provision becoming a key issue in the management of rapidly growing towns. Interestingly, he also notes how these developments were originally restricted to urban settings, while the countryside was left aside in terms of improved water provision. It is in this context that technical inventions made possible advancements in water supply, such as the invention of water pumps that could deliver water much cheaper than carriers did (Smith 1975).

The key question here is: did these developments foster or follow any sort of water regime? It seems clear that these advances reflected international linkages. The discourses and knowledge about the relationship between water and hygiene, and technological advancements in water provision, spread across countries in the same degree as modernity in general. Thus, knowledge about the effects of bacteria in water for human consumption discovered by Pasteur in France rapidly spread around the world changing attitudes about water globally, while efficient water pumps were invented in England and were imported from there to France and other countries (Miller 1975). The political configuration of the 19th century, characterized by colonialism, was a clear mechanism for the extension of these ideas and inventions.

However, and to the contrary of other domains in which specific international organizations regulated or issued standards, the quasi-local character of water meant that each country managed its water resources independently based on what was available to them and their own specific circumstances. This becomes obvious if we pay attention to the organization of water supply. In France, for instance, the size of the investments required

very soon led to the creation of large private companies such as the Compagnie Générale des Eaux, created in 1853 (which is still nowadays one of the largest private actors in water provision around the world) and it has remained in private hands ever since (Miller 1975; Laimé 2005). Other countries, such as the United States, initially followed the same path, to the point that at the beginning of the 19th century 94% of water provision was managed by private water companies. However, as municipalities began to face problems with access and service a process of transition toward public control and management took place. In 2000, only 15% of water provision in the United States was in private hands (Gleick et al. 2002). In general, the trend around the world was to follow the path of the United States, but this was due less to the presence of any external pressure or explicit set of norms, and more about following common discourses about the role of the public sector in health and hygiene.

The result of the previous analysis is that, since the beginning of the industrial period and until the 1970s, the international dimension of water was restricted to the unsystematic spread of technical and managerial knowledge about water provision. It can be said that there was a water regime during that period, but it was a weak one as it was based on diffuse discourses about the role of the public sector in health and hygiene issues, and each individual country continued to manage its water resources with a high level of discretion in accordance to their own circumstances and interests. A key element to understand this weak regime is the fact that during this period water was isolated from the market. It was not a traded resource internationally, and nationally it was mainly provided by the public sector, or at least its private provision was heavily regulated by the public sector. The lack of public economic interests around water can help to explain why a stronger regime pursued by powerful actors did not emerge. Moreover, this can also help

us understand why it is hard to detect a clear link between the water regime and the mode of regulation in the economy as a whole.

Second Water Regime: Public Management for Development

After World War II began what has come to be known as the development era. The first two decades after the conflict saw an unparalleled effort for reconstruction in Western Europe, as well as the emergence of development cooperation with what were then called 'underdeveloped countries'. Until the late 1960s development was seen mainly in economic terms, and development cooperation – chiefly delivered by international organizations such as the United Nations Development Programme (UNDP) – took the form of technical cooperation for the building of infrastructures that were left for local governments to manage.

However, in the late 1960s and early 1970s the realization that global economic growth was not being enough to prevent the pervasiveness of poverty in many parts of the world led to a change of point of view and the search for different alternatives. The United Nations proposed a unified approach to development based on 'basic needs', as the International Labor Organization had advocated a few years earlier. Although these basic needs referred mainly to food, shelter and clothing, this micro approach also opened the door for the consideration of other less 'material' components such as health and education or democracy. The link between development, health and water is precisely one of the ways in which water became, at the beginning of the 1970s, an important topic in the international sphere.

Another avenue through which water became prominent at that time had to do with environmental concerns. In 1972, the United Nations organized the first of its now common global conferences, the UN Conference on the Human Environment, which was held in Stockholm, Sweden (World Water Assessment Programme na). The conference triggered the birth of the United Nations Environmental Programme (UNEP), and environmental concerns about the overuse of non-renewable resources and pollution began to build up.

The mix of environmental and developmental (now including health issues) concerns put water in the spotlight, and in 1977 took place the UN Conference on Water in Mar del Plata, Argentina. The conference's Action Plan acknowledged that there was a lack of systematic data on the availability and use of water resources worldwide, and proposed to make water a key issue at the global level by undertaking measurements from which policy recommendations could be drawn (World Water Assessment Programme na). It is important to note that experts had been concerned about the use and availability of water resources for some time. Smith claimed in 1975 that there was already a widespread agreement on the future problems around water in the world, although this was "an expert consensus which has yet to make the desired and necessary impact" (Smith 1975, p.212). Even in 1957, Roscoe noted the pressures that the increase in water demand was going to bring to limited supplies, and called for a 'thrifty management' of water (Roscoe 1957). The Mar del Plata conference was the official recognition of this fact by the international public sector, but it is crucial to note here that the outcome of the conference put its emphasis on the developmental implications of water more than on the environmental ones. Water was declared a human right (Scanlon et al. 2004, p.6), and the United Nations called for national actors to undertake active measures to fulfill this right. Ignoring the advice of experts, the issue of water scarcity and water management was left aside.

The other interesting aspect of this process was that the United Nations were also beginning to put forward a view on *how* water problems should be solved. In that sense, it is illustrative to reproduce at large point 7 of the resolution of the General Assembly endorsing the conclusions of the Water Conference report:

> The General Assembly … *Recommends* that Governments should consider, where necessary, the desirability of designating national water resources committees or other suitable organizations to co-ordinate and monitor the implementation of the Conference's recommendations at the national level on the basis of detailed national action programmes, encompassing areas specified in the note by the Secretary-General on recommendations of the Conference and follow-up action, and recommends more popular involvement in the process of planning and decision making towards the formulation of a national policy (United Nations 1977).

In this statement we find, on the one hand, the recognition that the planning of water resources had not been systematically undertaken even at the national level before the late 1970s, and on the other hand, a direct intervention (even if in the form of a recommendation) on how countries should organize the management of their water resources. The interesting aspect of this intervention by an international institution is that it was not dealing with an issue that involved relationships between states. Water was still a national issue. The United Nations were therefore putting forward norms and regulations to promote what later on has been called ‘beyond-the-border convergence’ (Kaul 2000; Mehta 2004).

The specific policies put forward by the United Nations, in the context of the International Drinking Water and Sanitation Decade (1981-1990), was the promotion of water and

sanitation for all through low-cost ‘hardware’ solutions and the installation of numerous hand pumps, latrines and wells all over the developing world (Mehta 2004, p.3). However, as Mehta notes, soon it became evident that this strategy was flawed and that there was also a need “to focus on the so-called ‘software’ issues (e.g. service delivery, institutions, community ownership, etc.) in order to avoid landscapes dotted with broken pipes and defunct hand pumps” (Mehta 2004, p.3). This realization signaled the arrival of a new water regime.

The second water regime, then, can be said to show a very different form from the first one. Besides promoting a given discourse about the role of water in development, the United Nations system issued specific norms and principles about water management that were adopted by individual countries all over the world. However, the focus of this regime on developmental issues left environmental concerns and issues of water scarcity aside. The consequence was that developed countries were basically unaffected by the regime and kept managing their water resources in the same way as before, and that water remained outside of the economic sphere. Water was still a national and public issue, and only developing countries where its provision presented many weaknesses was addressed in the second water regime.

A key question that emerges at this point has to do with how the second water regime relates to the wider economy, the changes in mode of regulation and the advent of neoliberalism. The second water regime coincided in time with the phase of ‘roll-back neoliberalism’, which was characterized by deregulation and the introduction of the market in all spheres of public life. However, and as I just showed, up to the late 1980s water seemed to be untouched by these processes. This could be explained by the fact that the regime focused essentially on development and developing countries, and because water

was still a local resource whose trading in the global economy was complicated. In this context dominated by the extension of water provision to people with very limited resources, the privatized provision of water was both politically and financially complicated, and it would have probably required the intervention of institutions that neoliberalism had not created yet. Moreover, it could be argued that during the 1980s the deregulation drive of 'roll-back neoliberalism' had many other targets to hit which were more profitable than water.

Third Water Regime: Privatization and Commodification

The realization that the strategy focused on the 'hardware' aspects of water during the 1980s was not working triggered a process of reflection to decide on a new strategy for the future. The different international agencies participating in the International Drinking Water and Sanitation Decade organized the Global Consultation on Safe Water and Sanitation for the 1990s in New Delhi, India, in 1990, from which a new consensus emerged (Mehta 2004, p.3). Just as in the second regime we found a discrepancy between the general trends in the mode of regulation of the economy (roll-back neoliberalism) and what was happening in the water domain, now we see a convergence. The debt crisis in most of the developing world, the realization that water issues were not being solved just by massive public investments, and the increasing strength of roll-out neoliberalism, were joined by the active involvement of powerful private corporate actors to give way to a new consensus that radically changed the way water was perceived and managed at the global scale. This time, the effects were not going to be restricted to governmental policy in the developing world, but would have global effects as it would introduce water in the global economy.

The principles of the new consensus were to be manifested in the International Conference on Water and the Environment, held in Dublin in 1992. The biggest change was involved in the Fourth Principle of the conference's final statement:

> Water has an economic value in all its competing uses and should be recognized as an economic good. Within this principle, it is vital to recognize first the basic right of all human beings to have access to clean water and sanitation at an affordable price. Past failure to recognize the economic value of water has led to wasteful and environmentally damaging uses of the resource. Managing water as an economic good is an important way of achieving efficient and equitable use, and of encouraging conservation and protection of water resources.[1]

Although this principle still recognizes the importance of water for human beings and reinforces the idea that water is a basic right, the introduction of economic rationality in the water domain implied a Copernican revolution in the way water was being managed worldwide. This new principle was based upon the assumption that water is a scarce resource. In fact, the first word in the Dublin Declaration is 'scarcity', and it is around that time that concerns about the future availability of water given the increasing world population became prominent, leading to populist predictions of water wars in the 21st century (see Shiva 2002). It is true that almost all actors in the water debate recognize nowadays that the patterns of water consumption followed in the past as if it were a resource with infinite supplies are unsustainable (Gleick et al. 2002; Mehta 2000). However, and as I have shown above, experts have been concerned about scarcity of water for decades now, so this cannot be claimed to be a new phenomenon. Moreover, and as Mehta (2000) convincingly shows, discourses of scarcity need to be scrutinized in

[1] The whole Declaration can be found online at: http://www.wmo.ch/web/homs/documents/english/icwedece.html

order to tease out what is behind this idea and what its underlying assumptions are. She shows how there is real and manufactured scarcity, both in the sense that water use by humans creates scarcity (and therefore it is beyond water's natural aspects), and in the sense that scarcity is constructed in discourse. This latter practice serves to blame water for the emergence of all types of conflicts, when in fact there are other political reasons, such as inequalities in access, which this discourse helps to ignore (Mehta 2000, p.7). The point is that, even if there is a consensus around scarcity, the way this is discursively used and the policy implications that are drawn from it are not immediate and can be challenged.

In order to properly understand the third water regime it is necessary to explore both its general form and how it came to be. I will deal with these issues in turn.

As for its form, whereas the first water regime had a diffuse discursive aspect, and the second one followed the proposals of international organizations and was implemented independently by national states, the third water regime looks more like a hybrid of the previous two. On the one hand, it is clearly explicit, and it relies on expert knowledge and international organizations to proclaim its main tenets. On the other hand, it is diffuse in the sense that the amount of actors responsible for building up the regime is much larger than in previous cases, and the discourse around water is much more difficult to trace back to a few powerful actors. Moreover, the transformation of water from something to be managed only by the local public sector to an economic good in whose provision a large number of actors are able to participate leads to a much more prominent public profile of water issues in the world, which are not only restricted to experts and relevant policymakers, but affect everyone. This has had a double effect. First, there has been some degree of watering down of the terms of the debate with the introduction of mass

media and marketing efforts in dealing with water and propagating the discourse. Second, it has made the discourse much more pervasive and therefore hard to reject. The idea that there is a crisis of water scarcity appears unchallengeable, and the fact that water has to be managed as an economic resource is also commonly accepted.

However, these assertions do not do justice to the complexity of the issues at hand. One of the key elements of which we need to be aware in order to understand the third water regime is the connection that the general discourse makes between water scarcity and water as an economic resource on the one hand, and the need for water privatization on the other. Innumerable texts have appeared in the last 15 years that deal with water as an economic resource, and invariably we find that a corollary of this economic approach is the need for private sector participation (some examples are Spulber and Sabbaghi 1998; Winpenny 1994; Rodriguez 2004; Brook Cowen 1997; Winpenny 2003). This is done on two grounds. First, there are economic arguments about efficiency (Spulber and Sabbaghi 1998). Second, there are purely financial arguments which state that the public sector just does not have the capacity to undertake the necessary investments to provide water to all the world population, so the intervention of the private sector is necessary (Winpenny 2003). However, within this discourse there is never any discussion of its assumptions and non-economic implications. For instance, the fact that economic arguments for efficiency are based on idealized models and that a selective choice of cases is used in order to prove their validity empirically are never used to question the universality of its conclusions. Or also the fact that the private sector has interests that many times do not accord with those that are supposed to guide the provision of such a fundamental resource for human survival and social development is also conveniently ignored.

Having analyzed the form of the regime, it is important to explore how it came to be. As I mentioned above, this regime sees water as involving many more stakeholders than before, and all of them now participate in the conformation of the regime. Obviously, power issues become a key element in determining whose views are taken into account. It is difficult to distinguish between confluences of interests and deliberate alliances, as well as determining who were the leading actors in pushing forward for the current form of the regime. However, it is possible to identify who the key actors in the conformation of the regime are.

First, an essential role is played by multilateral and international organizations such as the World Bank, the International Monetary Fund, or the World Trade Organization. These institutions are seen as crucial in the process of 'roll-out neoliberalism', and are also seen as big promoters of the economic aspects of water and of privatization. Consequently, and besides the fact that these organizations may have a certain degree of independence, it is to be expected that the countries who have more power in determining the direction of the policies of these multilateral institutions have also played a predominant role in pushing for the new water regime. The United States and the European Union are the major players in this respect, reflecting both the ideological position of their governments and the promotion of interests of large private water corporations which have a high degree of leverage on them (Laimé 2005). Third, several agencies of the United Nations, such as UNDP or UNEP, or the World Water Assessment Programme, which aggregates and coordinates the efforts of a diverse number of agencies dealing with water in one way or the other, have also been prominent in bringing water to the forth and in promoting a new way of managing water in order to deal with water scarcity. Fourthly, there are the private companies interested in increasing their activities (and income) by taking over the services hitherto provided by the public sector. Although theoretically a large number of possible

actors could participate of these activities, the knowledge and financial requirements of such endeavors mean that a very small pool of multinational firms are monopolizing the contracts awarded worldwide. The biggest actors are French companies who benefited from the experience and resources accumulated in their long history of private service in France. These firms have grown tremendously in the last few years, not only by expanding their activities but also by buying smaller firms worldwide. The two biggest firms, who jointly provide water services to more than 70% of the people who receive their water from private companies in the world, are Ondeo (previously Suez) and Veolia (previously Vivendi) (Earle 2001). Finally, we find a growing number of international water organizations, such as the World Water Council (WWC) and the Global Water Partnership (GWP), both created in 1996, or the Water Supply and Sanitation Collaborative Council (WSSCC), created in 1991. These organizations were created and are composed by a combination of the other 4 types of actors mentioned above, and work to raise the visibility of water issues in the international sphere and to promote and advance the main ideas of the consensus of the regime.

It is important to note that, although all of these actors have to some extent been central for the promotion of the third water regime and all agree on its central tenets, they are not a completely homogeneous group and sometimes differ in their recommendations and policies. For instance, a review of some of their publications and their websites shows that the United Nations agencies put more emphasis on water as a human right and on ensuring that water reaches the poorest of the poor than the other actors mentioned seem to do. Also, amongst the new water organizations, the WSSCC seems to be also more people-oriented and focused on low-cost technologies than the GWP and the WWC, who seem to be more about promoting the interests of big business (see Mehta 2004). These nuances are worth taking into account when reviewing some of the literature against water

privatization that talk about the World Water Mafia (International Rivers Network 2003), the Water Barons (Marsden 2003), or the Water Cartel (Barlow and Clarke 2002). These terms are applied to the group of actors cited above, who are accused of conspiring to appropriate world water resources for the economic benefit of a few powerful companies without considering the effects that this has on people's lives. Some of the evidence given to support these claims consists of the porosity that there seems to be between high positions in Western governments, management jobs in water companies, and board seats in the GWP and the WWC (see Laimé 2005; International Rivers Network 2003). Although these links do exist, I believe that things are more complicated than some of these analyses show. As I mentioned above, the WSSCC and the UN agencies do not seem to be part of these supposed conspiracies, and in fact are systematically absent of all the analyses about the 'water mafia', yet I still argue that they are key actors in the third water regime. They believe in the need for a more efficient use of water and collaborate with the rest of the key actors mentioned above in many ways. In all fairness, it must be said that those who are most critical with the regime also share the need for a different approach to water and, to different degrees, agree that it should be seen as an economic resource.

The third water regime, therefore, is less homogeneous than it appeared in the beginning. I believe that a key explanation for this fact resides in the Fourth Dublin principle quoted above. Alongside the idea of an economic management of water, there was a reminder that water is a human right. The key question is: are these two assertions compatible? If so, to what extent? Is it licit to pay for a human right? Where is the limit? If water is subsidized and the full cost of water provision is not paid by the customer, is it still possible to say that water is being managed economically and therefore it is not being wasted? Moreover, to what extent an economic management of water requires the role of the

private sector? What should be the role of the public sector in that case? The lack of clear-cut answers to these questions lies at the basis of the regime, whose main tenets are not a well-structured set of propositions and policies, but include contradictions and disagreements between some of its main actors.

I believe that some of these puzzling findings can be understood by recurring to my theoretical framework and linking back the third water regime to the mode of regulation of the economy as a whole. The third water regime is directly connected to the phase of roll-out neoliberalism, as it involves a deliberate process of institution building in order to promote the extension of the market to a new area. However, in this case roll-out neoliberalism is simultaneous with the deregulation process (the retreat of the state) of roll-back neoliberalism, which had not hit the water domain in the 1980s. The third water regime exemplifies that regimes are not pre-planned but emerge out of the conflicts between different projects, and are dependent on the forms of previous configurations. In this respect, it is crucial to see that the contradictions of the third regime obey to the fact that it has at its core (as the Dublin Statement showed) both the notion of water as an economic good and as a human right, and particularly to the fact that the compatibility between both views of water is not evident. Therefore different actors, even if rhetorically agree with both principles, in their actions promote one or the other with different intensity. That water as a right is inherited from the second water regime, in which the core actors were the UN agencies who are still active in the third regime, proves the path-dependency of regimes as suggested in the theoretical framework.

Despite the validity of all these observations, it is necessary to restate that the complexity inherent in the third water regime and the nuances in the position of the different actors do not preclude the fact that, in the end, the correlation of forces and the power struggles

between different actors determine the specific outcomes of the regime in terms of the particular policies adopted. In this respect, it seems that those actors in the regime who prioritize privatization to the right to water are being able to push forward their agenda, which is having very serious consequences worldwide.

Conclusion: The Third Water Regime and Local Resistance

This paper has shown the usefulness of using regulation theory and the concept of water regimes to understand the changes in how water has been dealt with at the international level and its role in the global economy. However, the story is not concluded yet. The third water regime is in full swing as the drive towards privatization extends throughout the world. Much more can be said about this process, about its effects in increasing the price of water that poor people have to pay all over the world, about the effects on the quality of the services provided, and about whether this move has increased the efficiency in the use of the resource. What is true at this point is that water has already entered the economic sphere and is now being regarded by the corporate world as a site of investment and a source of revenue, and this has changed the social aspects of the resource itself and had very significant consequences. I would like to conclude this paper by saying a few words about the instances of resistance that these changes have brought about.

In the presentation of the theoretical framework I stated that 'roll-out neoliberalism' involves a creative project of institution building which necessarily has to occur at the local level, in a given place. By directly linking the privatizing efforts of the third water regime to this process of roll-out neoliberalism, it becomes evident that the outcomes of privatization have to be felt at the local level with the privatization of the operation of water supply services in particular municipalities, whose effects are felt by its citizens. This allows us to

reinterpret the Foucauldian notion of ‘infinitesimal mechanisms’ of power not as something that only obscures power as it is diluted in discourse, but as the specific sites where power operates and therefore can be confronted. Whereas this spatial characteristic is hard to find in other sectors that have been liberalized recently (i.e. financial markets), the materiality and locality of water reinforce this feature in the water domain. It is then understandable that we have seen so many instances of resistance to particular cases of water privatization all over the world, but particularly in developing countries, where the effects on the destitute have been more acute (see Mehta 2004 for a review of a variety of cases worldwide). In the context of this paper, interested in the water regimes and the role of water in the global economy, what is the significance of these acts of defiance? The proliferation of these acts has created a network of resistance whose gaps and spatial distances are filled by a multitude of small- and medium-sized organizations that, sometimes deliberately, sometimes in a contingent way, have started to develop a sort of counter-regime, or at least an alternative understanding of the basic tenets of the third water regime which prioritizes water as a human right to water as an economic good. Whereas the dominant third water regime is clearly a top-down initiative, the counter-regime comes from the spontaneous eruption of instances of resistance to particular privatization activities that are modifying in unacceptable ways the relationship of people with water, and from there goes up by aggregation to confront the regime at higher levels. Is this a significant threat to the regime itself? Will it change the face of the water domain? We will have to be attentive to future developments, but again it is important to understand these processes around water as connected to what is happening in the wider economy, and to link resistance to water privatization to the more general anti-globalization movement. Here, again, we are confronted with the question of whether bottom-up resistance is capable of providing coherent and viable alternatives and whether the configuration of power relations will allow real change to happen.

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