Enterprise and Politics:
The Narrow Course of the Water Services of Lima, Peru

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Introduction

The attainment of universal and reliable public services constitutes an old promise of the Latin American governments since the early years of independence. After nearly two centuries of history, however, the situation is still one of marked inequalities, patchy coverage and controversial handling of public matters. Despite political agreement about the importance of public water services, the region is unlikely to achieve the Millennium Development Goals by the deadline of 2015.\(^1\) In that broad context of socio-economic and political challenges, the still partial provision of freshwater to the entire metropolitan area of Lima represents a vivid example of insufficient responses and pending demands. It is true that the local water services have been improving in the last twenty years under the influence of broader macroeconomic and legislative reforms.\(^2\) Investments were urgently needed in order to cope with the dramatic growth of the Peruvian capital since the middle of the last century. Internal migration led to a ‘demographic explosion’ and Lima grew from 645,000 inhabitants in 1940 (10.4% of the national population) to more than 9.0 million in 2010 (approximately 30% of the Peruvian population and almost half of the national GDP). The circumstances of Lima are not uncommon in other parts of Latin America, but the local problems are even more acute due to extremely limited water reserves\(^3\) and new settlements fast spreading over hills and sandy areas. The low availability of water is aggravated by the extensive degradation

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of urban catchments and the contamination of aquifers by salt water and diffuse pollution, as well as a high percentage of leakage and only 9% of sewage treatment.\textsuperscript{4} The overall result is that, notwithstanding the recent initiatives, 8.5% of the population (around 720,000 inhabitants) still depended on water trucks, 3.9% on public fountains and 4.3% extracted water from boreholes or watercourses.\textsuperscript{5}

Using Lima as a relevant case study, we will demonstrate that water neoliberalization comprises a fluid, and highly contingent, combination of discursive constructions, technocratic rationality and, at best, circumstantial improvements. Rather than a straightforward process, the neoliberalization of the water industry of Lima epitomizes a range of intricate transformations that attempted, directly or indirectly, to incorporate water use and conservation into market-like transactions. What happened in the water sector of Lima in the last two decades has been strongly influenced by the reconfiguration of the national state after the heterodox economic experiments of the 1980s. With the election of Fujimori in 1990, the time was ripe for a close alliance between national and international business groups. The reconfiguration of the local water company (SEDAPAL) and the introduction of a new regulatory framework (managed by SUNASS) constitute unquestionable evidence of the spread of neoliberalism to new realms previously beyond direct market transactions. In effect, the neoliberalization of the water sector of Lima – essentially, the adoption of market-based institutions of water management and the commercial-like operation of public utilities – has become a key feature of the expanding business environment in the country. Water neoliberalization is a dynamic, non-linear process of specific, sectoral reforms that is intimately connected with other scales of activities and capital accumulation strategies. In general terms, this current discussion will show that the institutional water reforms implemented in the 1990s (when privatization was the ultimate, but unfulfilled, goal) can be heuristically contrasted with the more recent phase in the 2000s (marked by other ingenious mechanisms of private sector involvement). When the privatization of the water utility was abandoned due to operational and political risks, the emphasis shifted to more palatable mechanisms, such as the selling of stock market shares, privatized construction works and the expansion of local commercial transactions.

Despite differences in strategies according to the specific historical situation, there exists a clear line of continuity between the two phases of water reforms, which indicates the persistence and growing pervasiveness of water neoliberalization in the metropolitan area of Lima. The overall result is a low-income metropolis where significant sums of money increasingly circulate through increasing water tariffs, local water vendors and private service providers entering in partnership with public agencies. Ironically, Lima is now a city with a large contingent of low-income residents living in slums and sandy hills, but
at the same time where significant sums of money circulate through household water tariffs (US$ 350 million in 2008), local water vendors (more than 800 water trucks in operation) and the contracts with private concessionaries. Our purpose in this article is to investigate the fundamental claim advanced by those in charge of the water reforms of Lima that the strategic involvement of private companies and the delegation of parts of the governmental responsibility bring capital, technology and a more professional provision of water. As it will be presented in the next few pages, the concrete results in Lima show a much more nuanced reality, where political meddling and evidence of corruption persistently remain. If there are constant announcements of new investments in partnership with private operators (national and international), the bulk of the money continues to be apportioned by the state at the expense of larger public debt. Technological dependency and more frequent stakeholder complaints, together with the structural difficulty of the water authorities to engage with local residents, constitute the less attractive side of the reforms. If the failures of neoliberal agendas may be evident to some, there are others who persistently argue in favor of additional doses of neoliberalism as the medicine for Latin America’s troubles.

The next sections will provide a theoretical and empirical discussion of neoliberalism in the water sector, as an example of processes happening in comparable areas of the Peruvian and Latin American society. In particular, it will deal with the ‘contingent necessity’ between water and neoliberalism in Lima, in the sense that the interactions may not be intrinsically related but become increasingly necessary due to the contingent articulation of various causal chains. This discussion is based on fieldwork carried out in Lima between March and June 2009, which was motivated by reports about water scarcity, climate change and institutional reforms taking place in Peru and published in the mass media. The research follows the format of ‘embedded case study’, which starts with the consideration of embedded sub-units of social action and is then scaled up to identify common patterns at higher scales. Embedded case studies are particularly relevant for interdisciplinary investigation because they can be employed to examine large processes that involve many individual organizations. The case study included 54 interviews with local residents (23 interviews), regulators, policy-makers and parliamentarians (10), NGO activists (8), officers, workers and managers of SEDAPAL (7) and representatives of multilateral agencies (6).

Attendance of public meetings and policy documentation also formed part of the methodology. In several cases, the same respondents were contacted more than once to clarify their statements and to invite comment on additional information acquired afterwards. Data were analyzed following a critical realistic approach and a politico-ecological perspective. The text is organized as follows: first, a
brief analysis of the influence of neoliberal policies on water management and utility reorganization. That is followed by a historical account of macroeconomic changes and the evolution of the water problems; and, finally, there is an overall discussion and some conclusions.

Conceptual Framework: The Neoliberal State and Public Water Services

The starting point of our analysis is the conceptualization of water neoliberalism as a complex, multifaceted process of insertion of water into the reform of the state apparatus and the affirmation of pro-market strategies. It includes responses to the old water problems of national development and also creates new opportunities for capital circulation and accumulation. Despite a general framework that emanated from northern countries, UK and USA especially, the advance of neoliberal platforms differs according to location, economic sector and historical and geographical circumstances. The assessment of the public water services of Lima needs to be addressed in the context of the reconfiguration of the Peruvian state, which in the last two decades has operated in favor of market deregulation and business facilitation. Market-like transactions related to water represent an important chapter of the meandering history of neoliberal reforms that have transformed the Latin America continent into a laboratory of wild economic experimentation. The neoliberal ideology proclaims the moral and practical superiority of market mechanisms of production and the importance of monetarist policies (e.g. restricted money supply, macroeconomic stabilization, low taxation, control of labor demands), which is particularly consistent with key features of the bourgeois society, such as private property, free-choice consumption, the separation between economy and state and between civil society and the state. According to Peck, neoliberalism is a composite ideological structure that cannot be reduced to its constituent elements, but is both an expression of free-market libertarianism and neoconservative moral authoritarianism. The neoclassical economic paradigm is essentially a master social narrative and a technology of power that has its internal contradictions hidden by the teleological nature of its assumptions.

The enforcement of neoliberal public policies has been responsible for the destruction of previous arrangements and the creation, always partially and deeply embedded in social relations, of market-oriented economic developments. Yet, the actual experience of neoliberal reforms around the world is normally less radical than the idealized proposals, especially because the state never leaves the activities that the orthodoxy would have preferred done by the market. The form of neoliberalism adopted in Latin America is both a productive and destructive
phenomenon that exacerbates, rather than reduces, the uneven geographies of development. Neoliberalism has remained “the dominant paradigm [in Latin America], albeit in crisis, and constitutes the most obvious sign of the contradictory advance of capitalist globalization”. Impacts of the neoliberal pressures on the local environments of Latin America have varied greatly by nation and by place as a result of different political, economic, environmental, and social conditions, including also areas and peoples that have adapted well to and even benefited from neoliberal policies. Crucially, the adjustments associated with the introduction of neoliberalism are not restricted to the economic realm, but contain a range of institutional changes (considering institutions as broad systems of established rules that structure social interactions). Rules as institutions are both a collective entity encountered by the individual and an internal guide for negotiating the complexity of an external social existence. In that direction, Morgan and Olsen have indicated the importance of mapping out how rules fit together into the institutional framework and, therefore, the need to identify a range of single rule forms. In our case, we tried to identify specific sets of rules that defined the neoliberalization of water in Lima, in particular the constant manipulation of public policies to serve electoral goals, the expansion of market-like schemes and the uneven provision of water services in the city. The neoliberalizing strategies applied to the water sector must be considered as dynamic, non-linear and multiscale phenomena. “There is a need to distinguish not only between neoliberal (as ideology), neoliberalism (as state strategy) and neoliberalization (as process), but also between the scales at which these concepts are relevant”. The complex association between neoliberal strategies and environmental management issues is evident in the reconfiguration of state interventions concerned with the use of natural resources. Environmental policymaking has been profoundly reformulated in the last decades as a required transition from government to governance (which comprises coordinated responses between different sociopolitical sectors that gradually turn the responsibility back onto civil society). The contemporary reform of water management institutions constitutes a privileged case of the neoliberalization of nature and the creation of new sources of capital accumulation under the paradigm of environmental governance. It should be noted that most assessments of neoliberal reforms in the water sector often overlook the fact that, as a process, water neoliberalism had already been initiated in the 1970s with an attempt to restore the ecological condition of aquatic systems. In its early phase, the aim was to recover the productive capacity of managed water systems lost due to environmental degradation in previous decades. The first moment of water neoliberalization was centered on the technical improvement dimension and encompassed a range of measures designed to cope with pending and new forms of environmental impacts, as well
as to restrain the temptation of some economic agents to increase degradation beyond acceptable levels.

It is obvious that the techno-environmental dimension continued to influence the formulation of public policies, but the neoliberalization of water soon moved towards a more direct assistance of capital accumulation in areas formerly inaccessible to market-like transactions. The increased commodification of water developed into an integral feature of an overall agenda that attempted to extend capitalist relations to new socionatural realms through the relativization of previously established ecological and legal boundaries that were already being transgressed since the late 1970s. From the late 1980s, the emphasis shifted from techno-environmental initiatives to a more uncompromising economic rationality. The language changed from a ‘focus on mitigating environmental impacts’ to the internalization of ‘environmental externalities’ and the removal of ‘state failures’. Such economic reasoning is the pillar of the marketization dimension of water neoliberalization, that is, the handling of water as an economic resource that is amenable to market transactions and ‘rational choice’ theory. The marketization of water can be achieved through a range of mechanisms that increasingly commoditize the non-marketable spheres of water management, which include the full divestiture of public utilities, commercialization (i.e. adoption of private sector institutions, such as efficiency, competition and profitability, by public utilities), corporatization (i.e. displacement of the public sector by private operators, while maintaining public ownership, such as in the form of public-private partnerships), water markets (i.e. buying and selling of water permits and licenses) and the payment for ecosystem services (i.e. monetization of ecological processes that bring collective benefits, such as dilution of pollution, stable flows, and regular rainfall).

At the same time that the spreading of water neoliberalization was lubricated by hundreds of international summits and aggressive policy-making, the reluctance to engage with issues of participation, poverty and social differences, whilst focusing only on the technical and economic dimensions of water management, became increasingly attacked by contestation, and even some mainstream groups. Disastrous cases of utility privatization – such as in Bolivia and Argentina, where operation contracts were seen to dishonestly favor multinational corporations at the expense of higher tariffs, corruption and disconnection to the poorer households – prompted a worldwide reaction against the ideology of water neoliberalization. Bulk water charges, one of the tenets of integrated water management, also failed to reallocate resources and produce the restoration of degraded water ecosystems, frustrating the promises of water economists. The reaction to such emerging criticism was quick and, around the turn of the century, the discourse of some key advocates of water neoliberalization started
to incorporate specific social demands whilst still maintaining a top-down and hierarchical decision-making. The third moment is centered on the *legitimation* dimension of water neoliberalization, which is essentially a synthesis of the previous two phases (i.e. technical and economic priorities) and an attempt to overcome the erosion of political support. Those three dimensions of water neoliberalization have operated as main axes of institutional changes in terms of the management of water. Through new institutions developed for its allocation, use and conservation, water management became a privileged chapter in the introduction of neoliberal policies, which required not only economic efforts, but also technical and political adjustments.

The three dimensions of water neoliberalization have played a key role in the expansion of urban water services in Lima in recent years, whilst also following political and macroeconomic developments. Far from contradictory, the ‘neoliberalization’ of water has included a range of processes that expand the reach of market rationality to activities such as water abstraction, distribution and conservation but under the steering and close support of the state apparatus. If the full privatization of the public water utilities, as initially planned in the 1990s, was never realized (except in the northern city of Tumbes) it doesn’t mean that the overall aim of neoliberalizing the water sector was not achieved in Peru. That is why we need a more encompassing definition of the neoliberal goals and strategies. Comparable experiences in neighboring countries also demonstrate the interpenetration of those three dimensions of water neoliberalization and the relevance of political and technological factors. For instance, in Bolivia, water neoliberalism had become a hegemonic policy influence, although the protest against utility privatizations – that was most confrontational in the city of Cochabamba – represented a turning point in popular mobilization against the neoliberalizing agenda in the entire country. Next we will try to demonstrate that water neoliberalization comprises a fluid mixture of ideological statements, disguised private gains, technocracy and piece-meal improvements. The reform of the water sector in Lima has involved a cacophony of voices and attempts to do things differently in the face of systematic cases of corruption and containment of the creative reaction of local communities. If during the second half of the 20th century the uncontrolled expansion of Lima forced the incoming residents to occupy marginal pieces of land, the current responses to water management problems largely maintain the established forms of discrimination.
The Advance of Institutional Reforms in Peru

Instead of a linear evolution from the previous experience of public water services in the city, the neoliberalization of water in Lima was achieved as an imposition over a large universe of social actors and conflicting demands. It should be remembered that the introduction of neoliberalism in Peru came out of the turbulent transition from populist governments in the 1980s to a technocratic-authoritarian regime in the 1990s. The 1980s were characterized by a combination of economic experimentation and political struggle about the role of the national state. After a camping that lasted for many decades, the left-wing APRA (American Popular Revolutionary Alliance) won the general election in 1985 with Alan García, a young and very ambitious politician. In the first moment, and using the weight of his electoral victory, García adopted a series of heterodox measures, which included an emergency plan to control domestic inflation, currency speculation and the current-account deficit. The most controversial part was the announcement of the ‘10% solution’, limiting service payment to no more than ten percent of annual export earnings. Prices of goods and services were frozen and the exchange was devalued and then fixed. Initially, the plan produced very positive results, such as wage increase by 30% in the countryside and 20% in the cities, industrial growth of 20% and GDP growth of 9.2% in 1986. Very soon the limitations of those policies became evident, particularly the difficulty to move from price freeze without creating a new inflationary spiral. The advance of the communist guerrilla added uncertainty and further alarmed the investors. Public finances collapsed in 1987, bringing to an end the economic experiment. The crisis was aggravated by the presidential announcement of his intention to nationalize all private banks, which stirred a fierce political reaction. The economy had a negative rate of growth for a sequence of years in 1988 (-8.4%), 1989 (-11.6) and 1990 (-5.4%), and inflation reached 3,398.7% in 1989 and 7,481.7 in 1990. The dramatic circumstances of the final three years of the García government – when the economy shrank by 35%, which should be added to the 70,000 causalities of the guerrilla – meant that the country was tired and in need of a different political direction.

In that context, the traditional left-wing parties failed to capture the popular imagination, at the same time that the international debate was increasingly dominated by a discourse in favor of market-based reforms. Other countries in the region, such as Brazil and Argentina, were already adopting neoliberal policies and multilateral agencies expected that Peru would follow a similar path. However, the failure to achieve a stable consensus about the scope and the extent of the neoliberal reforms in Peru was significant, which is illustrated by the memories of the novelist and former presidential candidate, Vargas Llosa.
In that context of uncertainty and unfulfilled demands, a well-orchestrated campaign led to the victory of an improvised candidate, Alberto Fujimori, who won the election with an almost empty political manifesto. Internal and external pressures persuaded Fujimori to embrace an uncompromising neoliberal platform that blended authoritarianism, populism and political deception. After the 1992 auto-golpe (self-coup), the regime became semi-dictatorial, which allowed the replacement of an underdeveloped form of Keynesian state with tough measures aimed to stabilize the economy and bring inflation under control.\textsuperscript{28} The recurrent resort to authoritarianism in Peru seems to confirm the intriguing observation of Slater that democracy may not be the ‘best’ political environment for capitalism in peripheral countries such as Peru.\textsuperscript{29} The economic stabilization program of Fujimori (\textit{fujishock}) promoted a dramatic reduction of state expenses, labor reforms and extensive privatization. Between 1991 and 1998, the state sold more than two-hundred state companies and shares that corresponded to US$ 8.86 billion.\textsuperscript{30} Privatization provided supplementary resources to reactivate state spending in social alleviation schemes aimed to regain popular support.\textsuperscript{31}

Under growing corruption scandals and an economic downturn, the Fujimori government crumbled in 2000 and was followed by the interim administration of Paniagua. As happened in Chile, the transition to re-established civil liberties and formal democracy was not followed by changes in the overall direction of the economy. On the contrary, the neoliberal tide was resumed by President Toledo (2001-2006), an economist with personal connections with the international financial system. Negotiations with several countries were begun in order to formalize Free Trade Agreements. In 2002, Toledo instituted a new agency (PROINVERSIÓN) dedicated to attracting and supporting private investors (including participation in public water companies). But Toledo’s initial popularity was quickly eroded, despite economic growth, due to a technocratic style of government and clashes with the congress, where the president had only a parliamentarian minority.\textsuperscript{32} In an unexpected twist of fortune, the winner of the 2006 election was none other than Alan García, the president responsible for the vacillating policies and hyperinflation of the 1980s, who returned to office with a zealous neoliberal platform and the motto \textit{El Perú Avanza} (“Peru Advances”). In December 2007, after ratification of the Free Trade Agreement with the USA, the congress delegated to the president – a process that is not uncommon in Peru – the fast-track authority to legislate for six months on matters related to the agreement. That was García’s ‘Eighteenth Brumaire’ with 102 decrees issued unilaterally by the president, including Decree 1,081, which replaced the previous water law with a centralized legislation that limited public accountability and facilitated participation for private investors (the Decree was converted into a new water law in March 2009). A parliamentarian, a member
of one of the opposition parties, declared in an interview that Decree 1,081 and the new water law profoundly frustrated public mobilization and the national debate about the importance of water management; she emphatically added that it was the influence of powerful sectors (i.e. mining companies, hydropower operators, industries, etc.) that shaped the text of the water legislation (Author’s interview 10/03/2009).

As in many other countries, the result of the introduction of neoliberalism in Peru has been a profound dichotomy between the economic dimension and remaining social and political demands (e.g. according to INEI, around 40% of the population of Lima earn less than US$ 90 per month and are, therefore, in a condition of poverty or extreme poverty). The number of socio-natural conflicts keeps growing at a fast rate (a more than 150% increase between 2008 and 2009, according to the Defensoría del Pueblo [“People’s Advocate”]). A summary of the performance of the Peruvian economy under neoliberal policies is provided in Table 1. One can notice a reduction of government expenditure, lower levels of public investment and, in particular, the role of privatization (full divestiture) in the 1990s.

Table 1: Macroeconomic Statistics of Peru 1980s-2000s

<table>
<thead>
<tr>
<th>Macroeconomic Statistics</th>
<th>Percentage of GDP (annual average)</th>
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<tr>
<td></td>
<td>1980s</td>
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<tr>
<td>National savings</td>
<td>18.8</td>
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<tr>
<td>Investments</td>
<td>24.2</td>
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<tr>
<td>public sector</td>
<td>7.0</td>
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<tr>
<td>private sector</td>
<td>17.3</td>
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<tr>
<td>Balance of payments</td>
<td>(5.5)</td>
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<tr>
<td>Capital expenditure</td>
<td>7.5</td>
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<tr>
<td>Central government expenditure*</td>
<td>16.0</td>
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<tr>
<td>Current</td>
<td>12.2</td>
</tr>
<tr>
<td>Capital</td>
<td>3.8</td>
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<tr>
<td>Central government – interest **</td>
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</tr>
<tr>
<td>Foreign financing</td>
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</tr>
<tr>
<td>Domestic financing</td>
<td>3.7</td>
</tr>
<tr>
<td>Privatization</td>
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</tbody>
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_Data source_: BCRP database (available at: http://www.bcrp.gob.pe/estadisticas.html)

* Except interest
** Payment of interest by the central government
Water Problems under a Context of Economic Reforms

The evolution of the water problems

The material, symbolic and social elements of water management in Lima are all embedded in a long heritage of social exclusion and spatial discrimination. Some popular residences were built in the 1930s for the growing labor population, but the limited number of domiciles for the migrants paved the road to the expansion of an ‘illegal city’ within and around the official conurbation. Until the 1960s, the majority of new settlers came to tugurios (slum tenements) formed in old buildings vacated by families that moved to other high-income areas, particularly in the south of the city, but the barriada (unauthorized neighborhood) soon became the main alternative to the incoming population. Barriada is a form of urbanization where first the plot of land is obtained (normally by invading the area) and then the household is constructed, with urban services (including water) only arriving later. Previously valueless land around the city (sandy areas, hills and valleys) were quickly engulfed by the development process and incorporated into the housing market. In time, the separation between barriada and tugurio became ever more blurred with the development of barriadas in normal urban areas and tugurios inside the barriadas. The period between the 1950s and 1980s constituted the peak expansion of Lima, first to the north of the Rímac River and then to the east and south. The annual rate of population growth was 5.4% between 1961-72 and 3.8% between 1972-81. The consolidation of the barriadas as a major feature of the expansion of Lima has instituted an overarching pattern of spatial inequalities, which exists not just between the barriadas and the ‘legal’ city but also between old and new barriadas. While the new settlements lack the most basic forms of public infrastructure, the old barriadas (if they manage to resist the initial removal attempts) are normally able to achieve some concessions from the public utilities.

Despite localized concessions from the state, the evolution of water supply and, in a much smaller proportion, sanitation, continued to follow the duality of city expansion, in the sense that one part was ‘legalized’ and reasonably attended, and the population in the other part of the city had to resort to various initiatives to have access to public services. Investments in public water services lagged behind a rising demand, aggravated by inadequate planning and the deterioration of the hydraulic infrastructure. The history of the water utility of Lima directly reflects the changes in national policies and the influence of local forms of mobilization. The national state, inspired by post-war interventionist policies, reorganized the water services in 1962 as a new public company (COSAL), which was renamed by the military dictatorship in 1971 as ESAL and, with the return
of a civil government, eventually became SEDAPAL (Service of Potable Water and Sanitation of Lima). SEDAPAL is a public company with private sector configuration. Regardless of the change in legal structure, the performance of the public water services were compromised by low rates of investment, inept management and constant growth of the city towards its hills, which all contributed to enduring problems. The meager investments were systematically directed to the consolidated neighborhoods and new areas controlled by real estate market speculators. After the election, Fujimori encountered a situation of grave deterioration of water infrastructure and a quarter of the metropolitan population were left without water and a third without sanitation. SEDAPAL was plagued by excessive changes of directors and various forms of political interference in technical matters; the authoritarian relationship with the public was the main source of customer complaint, even more than the water tariffs. The scale of the problem was tragically demonstrated when an outbreak of cholera erupted in 1991, which killed more than 153 persons in Lima alone. Something had to be done and the new government, faithful to its neoliberal orientation, soon started a series of adjustments. The actual results are discussed next.

The continuous neoliberalization of water services

In the first moment, the incoming Fujimori administration had to adopt an emergency plan to cope with the alarming situation of water services in Lima. In general terms, this phase was more directly connected with the first dimension of water neoliberalism described above, that is, the search for technical improvements. Some ongoing projects of boreholes and storage tanks were concluded to allow localized supply, but the new government gradually started to pay attention to institutional reforms that included the separation between policy-making and service provision, operation benchmarking within and between water utilities, and novel forms of management incentives (such as charges and water pricing mechanisms). The National Water and Sewerage Program (PRONAP) and a dedicated regulatory agency (SUNASS) were both created in 1992. The entire water sector was devolved to 136 municipal or provincial providers, with the important exception of SEDAPAL that, for political reasons, strategically remained in the hands of the national government. In 1991, SEDAPAL was incorporated into the national utility privatization program, which was the first strong evidence of the marketization dimension of water neoliberalism in Lima (which will have a more subtle configuration in the next decade). In the following year it started to prepare for transition particularly with reductions in labor costs, higher tariffs
and a World Bank loan of US$ 600 million to improve the services. SEDAPAL began to be reorganized according to more clearly defined targets.  

Three international consortia prequalified to bid for the concession of water service in November 1994. Because of the scale of SEDAPAL, the process attracted great international interest, but due to preparatory delays and some political hesitation the tender was postponed until after the 1995 election, followed by further adjournments and, eventually, an official cancellation in 1997. According to our interviews with previous water regulators in May 2009, it was possible to identify two main concerns that undermined the political viability of the privatization in that particular moment: the certainty of much higher tariffs and the fact that the national state would still have to invest in the procurement of new sources of water. The political price of privatization was not affordable to Fujimori, particularly when his popularity was declining nationwide and Lima was one of the main political strongholds of the president. After the election, privatization lost its momentum and SEDAPAL embarked upon a larger program of infrastructure and operational recovery. In formal terms, SEDAPAL sought to implement a more independent management in favor of technical planning and lower government influence, which nonetheless did not remove the continuous political exploitation of water service improvements by Fujimori. In 1998, SEDAPAL was transformed into a ‘plc’ and then incorporated in the sphere of the FONAFE (the government corporation in charge of the entrepreneurial activity of the state). Those measures ended up alleviating the level of problems and, contradictorily reducing the appetite for privatization within the national government. Fujimori, probably the most neoliberal leader in the continent at that time, was responsible for a comprehensive program of investments in equipment and technology, which were estimated at around US$ 2.44 billion in Lima alone (equivalent to 0.5% of the GDP of the 1990 decade).

At the turn of the century, the public image of the water utility had improved, particularly among higher income residents, although there were constant complaints about tariffs, mistakes in the water bill and in the water meter. For instance, 33 out of 49 districts of Lima still had systematic water rationing and intermittent services that affected around 70% of the population. For the experts, SEDAPAL was seen as a company with inadequate system maintenance, a high level of unaccounted-for water, excess staff, low metering rates and low water quality. At that particular point in time, the future of the water reforms depended on some sort of response to the remaining problems and the looming risk (continuously mentioned in the newspapers) of water scarcity due to the growing population and declining reserves. But with the economic crisis, the national level of investments in the water sector had declined from US$ 228.9 million/year in the 1990s to US$ 166.6 million/year in the period immediately
after Fujimori’s removal. The National Plan of Sanitation (Law DS-007-2006) summarizes the lingering problems (i.e. deficient service coverage, bad quality of service, unskilled staff, institutional weaknesses and low cost-recovery). It should be noted that the level of investments started to rise again at the end of Toledo’s administration (although it never recovered to the level of the mid-1990s), especially with the announcement of the Program MIAGUA that included projects of around US$ 1.3 billion throughout the country (US$ 657 for Lima). The need to provide stronger political justification for the adjustments taking place in SEDAPAL, whilst also capitalizing politically on the promised investments, was quickly perceived by García during his presidential campaign in 2006. As observed in an interview with an NGO activist (17 Apr 2009), García seized the opportunity to exploit a large problem as a key source of votes and political support after the election. The program Water for All (APT) was launched in 2007 and included more than 300 projects, out of which 150 would take place in Lima (corresponding to investments of US$ 270 million in Lima alone). See Figure 1 for an illustration of its intensive advertising campaign.

After the controversial years of Fujimori and the technocratism of Toledo, García seemed to be the right leader to personify the institutional adjustments needed to legitimize the neoliberalization of water in Lima. The appealing discourse of economic development and social inclusion articulated by García, combined with a solid parliamentarian majority and firm international support, provided the political authority for the hybrid experiments of late neoliberalism in Peru. The neoliberal conversion of President García has been closely assisted by the multilateral agencies, as can be seen in a World Bank publication that came up with a detailed list of recommendations. That same publication claimed that the key problems of the water sector in Peru were still the low quality of the service, no incentives for ‘good corporate practice’ and generalized lack of investments. In order to respond to those demands, the program APT created a growing space for foreign companies interested in participating in the water services of Lima. From the early days of the García administration, it was strongly reaffirmed that SEDAPAL would remain open to opportunities for private investors to increase profitability. A series of so-called ‘megaprojects’ included the construction of the Huachipa water treatment work (claimed to be the largest in Latin America with investments of US$ 271 million to be constructed by a consortium of Brazilian and French companies) and the expansion of the system in the North Cone of Lima (US$ 250 million), both financed with public funds and foreign loans.

Private initiatives in the form of PPP included the water transfer from Huascacocha (called project Marca IV, US$ 71 million), a desalinating plant in the south of Lima (to be constructed by an entire new PPP water utility, “Aguas del
Sur de Lima”), and the sewage treatment plants of Taboada (US$ 342 million) and La Chira (US$ 155 million).\(^{49}\) In order to secure additional funds, SEDAPAL was listed on the stock market of Lima and started to sell bonds in 2009; under the Decree-Law 1,031, passed in June 2008, SEDAPAL was expected to negotiate at least 20% of its shares. Nonetheless, the bulk of the resources continued to come from the national state (supported by international loans): between Jan-Mar of 2009, SEDAPAL was allocated 126 million soles or 41.4% of the total level investment by the public sector (excluding financial entities) operated by the agency FONAFE. Overall, there have been two main phases of heavy investments in SEDAPAL, one in the middle 1990s, which was mainly dedicated to pipeline rehabilitation and additional sources of water resources and another, since 2005, which focused on the improvement of primary and secondary pipelines.\(^{50}\)

The intensification of business transactions involving water goes much further than large infrastructure projects, but permeates a large part of public policies aimed to improve water services in Lima. In a city where the overwhelming majority of the population has informal jobs or survives by selling whatever they can, the ideology of entrepreneurialism and ample personal opportunities tends to stifle the deeper inequalities produced and maintained under hegemonic economic trends. At the same time that the authorities claim that APT is a program of social inclusion, there is a growing space for market-like solutions, such as

Figure 1. Advertisement of the Program Water for All (APT)
the payment for ecosystem services, increasingly seen as a promising management strategy for the water companies of Peru. Examples of the affirmation of commodifying rationalities include the formation of local water markets in the barriadas of Lima. For instance, an association between national NGOs, government and international agencies has encouraged the formation of ‘small sanitation markets’ in the poorest settlements. The project tries to incorporate the informality of the barriadas within the sphere of business opportunities, such as Pachacútec in the north cone of Lima, where micro-credit schemes encourage local shops to sell sanitation equipment and toilet units, whilst project promoters try to persuade the residents to commit themselves for two or three years of monthly repayment for the investment (Figure 2).

Nonetheless, the intensification of marketized relations and the focus on business-like transactions have resulted in growing customer complaints and social dissatisfaction. The relation between SEDAPAL and the population of Lima remains particularly fraught with tensions and criticism from both sides. A 2003 survey detected that half of the utility clients declared a perceived improvement in the quality of the service, whilst the other half either did not notice any significant change or directly complained about the service (SEDAPAL, 2005). Around 50% of those dissatisfied with SEDAPAL were specifically not convinced about the need to raise water tariffs and another significant percentage mentioned problems such as service restrictions and interruptions in the supply. Systematic increases in water tariffs since 1995 have improved the cost-recovery capacity and financial health of the utility. Lima is now in a financial position that is about average compared with providers in other Latin American metropolises but this has not improved the dialogue with the population. On the contrary, as pointed out in one of our interviews, “SEDAPAL can only really communicate with the
population via the water bill” (Author’s interview 10 May 2009). Likewise, the technocratic attitude of the company has largely undermined the chance to advance other alternative, low-cost solutions that could be based on a more active involvement of local residents and their forms of political representation. The introduction of the APT program, in particular, encapsulates the gap between the top-down initiatives and the grassroots demands of the population, as observed by a former SEDAPAL employee:

APT has a very strong purpose, it is even stronger than the projects implemented by Fujimori. In the 1990s, we did good work with some local communities, particularly in relation to the alternative water supply solutions, called ‘progressive systems’ [based on a water storage tank and community coordination], but now the APT activities only serve the demands of APRA [the president’s party] … which offers no other options and is a missed opportunity to really engage with the public in the solution of water problems (Author’s interview 07/05/09).

A resident in a low-income area in the East of Lima further observed:

The population is really skeptical, we don’t trust these people of the water company. You know, we had so many bad experiences in the last few years, and the water supply problems persist, despite what they say. … In my opinion, the APT is too technical, this is no good for the organization of our community; on the contrary, it increases the level of misinformation and makes the dialogue even more difficult (Author’s interview 21/04/09).

Interestingly, our interview with the engineer of SEDAPAL in charge of ‘social engagement’ (acompañamiento social) also demonstrated her frustration with the constant quarreling with the population in the periphery of Lima, particularly their leadership. At the same time, this engineer recognized that SEDAPAL is not prepared to properly engage with the population, particularly because her team had eight officers and it required at least 34 (Author’s interview 06/05/09).

The Failures and the Limits of the Water Reforms

The developments in the water sector of Lima in the past two decades reveal the complex intersection of a long heritage of politico-economic practices and
rising socio-environmental demands. The three internal dimensions of water neoliberalism – technical improvements, marketization and legitimization – were vividly evident in the evolution of the institutional reforms. With the incorporation of SEDAPAL into the scope of the neoliberal reforms, intersectoral relations around water have been dominated by a hegemonic discourse based on technological and financial targets. The limited scope of the reforms tended to ignore that the geography of Lima is the clear outcome of a perverse mechanism of nation building that historically excluded the majority of its own population. The neoliberalization of water in Lima is just the more recent chapter of that narrative, a process that continues to reproduce exclusionary, technocratic and paternalistic forms of water management. In that sense, the emphasis on service universalization (e.g. ‘water for all’) and the images of water arriving in the driest parts of the city are more than simply technical matters, but help to legitimize the uneven features of water neoliberalization. The narrow interpretation of business efficiency has effectively created higher barriers for the achievement of public targets, particularly because of the problematic dialogue between the water utility, policy-makers and the general population of Lima.

It can be concluded from the dialectics García(1)-Fujimori-García(2) that the neoliberalism introduced in Peru, despite the fact that it was one of the most radical in Latin America, did not follow the purist model advocated by the more orthodox academics. As in other countries around the world, the neoliberal canon had to be adapted to the concrete geopolitical circumstances and class struggle of the 1990s and 2000s. The result has been an idiosyncratic mixture of pro-market initiatives still under strong state control, deeply marked by the long tradition of authoritarianism and private appropriation of public issues that has permeated Peruvian history. What is taking place is a combination of neoliberalism and neostatism, which means a convergence of regulated market competition and state-sponsored flexibility. At the same time, the ongoing process of politico-economic adjustment is fraught with path-dependent trends that often produce inconsistencies between the discourse of senior politicians and their practice. The economic reorganization has not avoided the contradictions of Peruvian capitalism, particularly its impulse towards crisis formation, wasteful use of resources, and social inequalities. Despite high rates of economic growth in the recent years, the social gap keeps widening, for instance, in 2008 the economy rose by 9.8% but at the same time the number of people with inadequate nutrition increased by 11% (affecting then 34% of the national population).

Likewise, the growing capture of water services carried out by the neoliberalizing agenda has not been linear, nor simple. On the contrary, the unfolding of the three dimensions of water neoliberalization (technical, economic and political) had observed specific opportunities and political constraints. After nearly
two decades of interventions, the landscape of water in Lima (‘waterscape’) distinctively reflects the sequence of investments, popular mobilizations and administrative changes in SEDAPAL. Altogether, with more than three billion dollars of estimated investments in the last 20 years, the expansion of the hydraulic infrastructure is undeniable (Table 2), although it also meant a deeper exploitation of wage-labor, higher tariffs, and significantly higher number of complaints. Under the Garcia administration, the water sector of Lima became a favorite locus for investments and business transactions in the form of public-private partnerships, which nurture safe opportunities for private investors, infrastructure and technological improvements, and potential electoral profits.

Table 2: Selected Indicators of the Water Services of Lima

<table>
<thead>
<tr>
<th>Service Indicators</th>
<th>1990</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>6.51 mi</td>
<td>7.94 mi</td>
</tr>
<tr>
<td>Population covered (water supply)</td>
<td>79.9%</td>
<td>90.7%</td>
</tr>
<tr>
<td>Water pipelines</td>
<td>6,527 km</td>
<td>10,707 km</td>
</tr>
<tr>
<td>Sewerage pipelines (km)</td>
<td>6,130 km</td>
<td>9,666 km</td>
</tr>
<tr>
<td>Water production (1000 m3)</td>
<td>544,730</td>
<td>650,762</td>
</tr>
<tr>
<td>Tariff (soles)</td>
<td>0.23</td>
<td>1.36</td>
</tr>
<tr>
<td>Workers/ 1000 connections</td>
<td>5.32</td>
<td>2.00</td>
</tr>
<tr>
<td>Complaints received</td>
<td>22,639</td>
<td>314,811</td>
</tr>
</tbody>
</table>

Data Source: SEDAPAL; INEI

The actual course of the water reforms has not entirely pleased those groups in favor of more orthodox neoliberal approaches to resolving the water problems of Lima. In our interviews, such opinion was compellingly expressed by the executives of the various international agencies with representation in Peru, as well as consultants and academics involved in the formulation of recent projects and plans. The fundamental criticism is that, in spite of significant works now being built by the private sector, the source of investments remains in the hands of the national government. It means that the expansion of the water infrastructure in Lima, for example via the APT program, is still paid by the government instead of those that will benefit from it (i.e. the customers of SEDAPAL). Others complain that political interference has not disappeared, which shows the limited modernization of the water sector so far (Author’s interviews with three union leaders, 05/04/2009). Likewise, SUNASS remains a feeble regulatory agency, increasingly under the influence of political demands (especially because of
García’s populist habits) and incapable of enforcing the required level of tariffs. Some still regret the fact that, in the end, SEDAPAL was not privatized, which would have represented higher gains in efficiency and economic rationality. Finally, it is also not clear whether the APT program will have enough money to fulfill all its targets, particularly in a situation of international instability, as mentioned by a water regulator:

> We have today a situation of too many investments in the water sector of Lima, there is a huge space for business, we are open for business. The problem is how to manage all those simultaneous activities and, more important, what will happen after this phase. SUNASS [the regulatory agency] has less authority and autonomy than before, so we can’t really do much about that (Author’s interview, 03/05/09).

The more critical stakeholders (such as academics, union leaders and NGOs) also protest that the current programs lack transparency and are marred by repeated cases that are evidence of corruption (cf. various interviews during the research). Similarly, serious institutional gaps persist in the coordination between the water utility, the regulator, the government, utility costumers and the general population. The investments that took place both in the 1990s and in the 2000s focused more on the expansion of physical infrastructure rather than on the quality and affordability of the service. Urban planners point out that the water reforms in Lima have improved the situation at aggregate level, but there is no definitive solution for the dilemma of sustaining network expansion at an affordable cost to the population.\(^5\)\(^8\) In addition, some of our interviewees mentioned that the APT program had initially only allocated resources to areas that already counted with water infrastructure (i.e. a political manipulation of construction targets). If subsequent adjustments addressed those distortions, it ended up expanding the scope of work well beyond the operational capacity of SEDAPAL to competently supervise construction companies and service providers. Also the constant quarrel between SEDAPAL and SUNASS constitutes a perennial source of instability and capture of both agencies by party politics. The focus on attracting private investors, higher tariffs and business reorganization has left little space for a more active and creative engagement with the population.

In the end, at least three fundamental trends continue to challenge the overall direction of the recent reforms promoted under the neoliberalization of water. First, the metropolis continues to experience unplanned and unchecked expansion, as well as densification of the consolidated *barriadas*. Because of the uncontrolled occupation of hilly areas above the maximum reference altitude
of the existing system, the distribution of water permanently requires additional and uncertain infrastructure. That represents a vicious circle of social exclusion, reactive action of the state and opportunities for a new round of populism. A related issue is the emphasis on lack of attention to water demand management (something that has little political visibility) and an almost entire reliance on more visible engineering construction and supply augmentation (regardless of the social and environmental impact of the new projects in the source areas). Second, because of the of the low fiscal capacity of the national state and the very limited revenues from those employed in the informal sector (i.e. the majority of the clients of SEDAPAL), the expensive investments on water services continue to depend, for the most part, on foreign loans. The willingness and ability to contract loans and other credit facilities varies from one administration to the next, which reduces the opportunities for long-term planning. Third, the declining availability of water reserves around Lima and in the Andes is a serious threat to the achievement of higher standards of living and socioeconomic development in the metropolitan region.

Conclusions

The previous pages have examined the reform of the water services of Lima during the last two decades under the ideological and political influence of neoliberalizing policies, which have been orchestrated by the national economic elites, influenced by the context of market globalization, as a response to the serious water problems left by previous government approaches. The water industry of Lima was not only turned into a key sector within the reconfiguration of the national state, but was also seen as a locus for the promotion of private-public enterprises and the legitimization of market-based policies. The pursuit of those goals involved constant technical reassessments and had to cope with the dissatisfaction of the population, at least to contain popular protest. The intricacies of the local experience vividly demonstrates that water neoliberalization is a contingent, case-specific combination of three complementary dimensions – technology, marketization and legitimization – that are strategically coordinated in order to facilitate capital accumulation and create a more favorable business atmosphere. Rather than a fixed recipe, the actual process of water neoliberalization varies from country to country, as well according to the specific political and historical conjunctures. The advance of neoliberal plans for the water sector of Lima followed the collapse of national policies at the end of the 1980s and the abrupt transition to distinctive macroeconomic policies since the 1990s. The overall strategy has been largely maintained ever since, with a succession of
periods of high economic growth and downturn. The contradiction between the economic and the political realms is probably the most apparent and disturbing face of the neoliberalization of the Peruvian society.

The experience of Lima is similar to the reform of water utilities in many other large urban regions in Latin America. At the same time, its uniqueness is related to the fact that the first decade of the neoliberalization of water had to focus intensively on both technical and economic goals, due to the precarious condition of the water service and the rapid introduction of state reforms by Fujimori. Because of the fragile political justification and the questionable legitimacy of the semi-dictatorial regime, the government was forced to cancel the desired privatization of SEDAPAL and had to directly intervene with sustained investment in water infrastructure. After an interim period of transition under Toledo, the election of Alan Garcia paved the road for the return of aggressive neoliberalization of water in Lima, but then with more cautious efforts in terms of political legitimization. The introduction of the program Water for All (APT) was systematically presented by the new government with a discourse of universal services and social sensibility. In contrast to other parts of South America (e.g. Brazil, Bolivia, Argentina), a distinctive version of water neoliberalization continues to expand and increasingly attract private investors and construction companies to Lima. Notwithstanding a busy period of interventions and changes in public policies, the quality and effectiveness of service improves very slowly and the overall risk of future water scarcity remains very high. In this case, the application of our conceptual framework (i.e. the three dimensions of water neoliberalism) helped to clarify the malleability and responsiveness of water neoliberalism, which can be adjusted, within the same paradigm of increased capital accumulation, according to the concrete reality of business prospects and popular resistance. Even though substantial sums of money have been invested in the augmentation of the water services and regulatory adjustments have attracted more international operators than the company can actually deal with, much less attention has been dedicated to creating specific solutions to the concrete reality of water problems or to increasing the long-term resilience of the water system.

This research shows the politicized basis of water infrastructure and how localized projects connect historical periods and geographical scales. Investments in the water industry of Lima are not only part of urban planning, but constitute an important element of national development and party politics. Water management is a privileged arena for the expansion of neoliberal plans over nature and the transformation of socionatural relations according to the priorities of capital accumulation. That process has significant consequences in terms of perpetuating the long lasting pattern of social exclusion and environmental degradation, which ultimately undermines the prospects of ongoing
reform. The results of this investigation suggest that the neoliberal reform of the water sector ends up frustrating its social and ecological promises and has mainly served the interest of those already in control of the state and the city. Water management in Lima persists in a situation of marked socio-political inequalities, authoritarian treatment of social demands and uncertainties about the availability of resources (due to environmental degradation) and the long-term provision of services (because of the reliance on foreign funds and private sector expertise). The imposition of the neoliberal agenda over the water industry has so far prevented the emergence of more systematic opposition and criticism, partially because of the ideological representation of water reforms by the mass media. Nonetheless, challenges and confrontation are likely to increase when the failures and insufficiencies become more apparent. Water in Lima remains an object of fierce dispute, exactly because the demands and rights of the large majority of the low-income population continue to be systematically frustrated.

NOTES

3 Lima has a very low rate of rainfall and has increasingly relied on transfers of water from high altitude catchments fed from vanishing glaciers impacted by climate change.
6 Data from SEDAPAL and from interviews with regulators.
18 Hodgson, op. cit. p. 5.
26 Data from the Peruvian Central Bank BCRP; available at http://www.bcrp.gob.pe/estadisticas.html.
42 Between December 91 and December 92 the company lost 721 workers or 23% of the workforce; the reduction of the workforce was a process that continued uninterruptedly in the following years. Tariffs rose from US$ 0.17/m3 in 1990 to US$ 0.41/m3 in 1995; investments increased from US$ 26 million in 1990 to US$ 80 million in 1996 (see Alcázar, Lorena et al., “Institutions, Politics, and Contracts: The Attempt to Privatize the Water and Sanitation Utility in Lima, Peru”, Washington, D.C., World Bank, 2000).
47 A pioneer experience of partnership with the private sector was the 27-year concession, in 2000, of the Chillon Project (called project ‘Agua Azul’ [Blue Water], involving US$ 250 million) to produce approximately 5% of SEDAPAL’s water.
49 These three projects are managed by PROINVERSIÓN, which is the government agency that promotes investment by domestic and foreign private agents.
50 In 1999, a large infrastructure of water transfer from the mountains were inaugurated, the System Marca III (Marcapomacocha). This is part of a series of projects designed to bring water to Lima: Marca I was inaugurated in the 1960s, Marca II (Pomacocha) and IV (Huascacocha) are being planned for the next few years, and Marca V is still being considered.


The annual rates of increase in water supply and sanitation tariffs in Lima were: 17% (1995), 10% (1996), 19% (1997), 14% (1998), 9% (1999), 9% (2000), 2.8% (2002), 3.0% (2004), according to SEDAPAL, Plan Maestro Optimizado (Lima 2005). After a period with relatively low rises in the early 2000s, between July 2006 and December 2008, the average tariff grew 43.8%. The average tariff rose from US$ 0.39/m³ in 2001 to US$ 0.77/m³ in 2008 (an increase of 97.4% in dollar).


