

Urban Water Flows and Capital Accumulation

The contradictions of urbanising H₂O under neo-liberalism

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“To allow the market mechanism to be the sole director of the fate of human beings and their natural environment, indeed, even of the amount and use of purchasing power, would result in a demolition of society Nature would be reduced to its elements, neighbourhoods and landscapes defiled, rivers polluted, military safety jeopardized, the power to produce food and raw materials destroyed.” (Polanyi, 1954: 73)

“I would like to have a brief look back at 2002 and 2003, whose disastrous results shook us to the core: the overly hasty expansion of water internationally ended in failures that were painful for all of us; ONDEO and SITA’s acquisitions of companies that should have been sources of growth instead generated losses or were a cause of concern. We were forced to pull out of unprofitable projects (Puerto Rico, Atlanta, etc.) and to sell part or all of companies such as Northumbrian and Cespa, whose development we were no longer able to finance. This sorely tried our nevertheless proved business models and our certainties”
(J.L. Chaussade, 2004)

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The urban water conundrum

With exactly 50 years between them and from radically different political positions, the above two quotes have an uncanny and rather chilling semblance. Jean-Paul Chaussade, Executive Vice-President of Suez, one of the world's leading water and waste companies, admitted that the privatization of public services, and in their case water delivery and sanitation services, had not yielded the expected high returns. Even despite their 'proved business model', they did not succeed in turning water easily into profits. He repeated this claim at the World Water Forum in Mexico in March 2006, confronted with World Bank representatives that stubbornly insisted that the world's urban water problems had to be tackled through market-led strategies, privatisation and private sector investment. Indeed as Odin Knudsen (2003) from the World Bank Environment Department insists: "Billions of dollars are needed [in order to provide clean water to the poor]. The public sector, civil society, and multilateral financial institutions do not have the funds to meet the investment needs, while also addressing health, education, HIV and the multitude of challenges facing developing countries. The private sector needs to be involved." However, John F. Talbot, chair and CEO of SAUR, the world's 4th largest water company, wondered, in a speech to the World Bank in 2002, whether the international water business "is a good and attractive business". His conclusion was that it is not at present in light of "a reduction in grants and subsidies, an often premature or unrealistic emphasis on concession contracts and full divestiture, and a belief that any business must be good business and that the private sector has unlimited funds". He further insisted that private water investment in the developing world had unrealistic expectations because of "increased country risk, increased financial risk, increased contractual risk, unreasonable contractual constraints and unreasonable regulator power and involvement". Moreover, he argued that there is an emphasis on "unrealistic service levels" that expected "highly stringent water quality standards, attempts to apply European standards in developing countries, and demands

‘connections for all’ in developing countries”. All this leads to “overburdened private balance sheets, few new contracts, poor and diminishing returns for private investors, contract and even corporate failures, limited interest in the market, and investors turning to other, more lucrative, markets” (Talbot 2002; see also Goldman, 2007).

This seems to be the world topsy-turvy. International and national governmental agencies insist on the market and the private sector as the main conduit to cure the world water’s woes, while key private sector representatives retort that, despite great willingness to invest if the profit prospects are right, they cannot and will not take charge; the profits are just not forthcoming, the risks too high to manage, civil societies too demanding, contractual obligations too stringent, and subsidies have often been outlawed (the latter often exactly in order to produce a level playing field that permits open and fair competition).

In addition to the rather limited success (as well as volume) of private sector participation in the water sector, many of the publicly owned urban water service delivery organisations have been corporatized. While still under state ownership, many public service companies are increasingly forced to operate in a ring-fenced manner, as autonomous, self-financing organisations that operate according to market logic. In operational terms, there is little, if any, difference between these two types of ownership. They share the same constraints and are subject to comparable conditions and dynamics. This has blurred the distinction between public or private ownership and management of water service companies. As Loftus (2004; 2005) has demonstrated for the case of Durban, for example, public companies that are institutionally and legally forced to act as private corporations (i.e. operate in a competitive and profit-driven environment) behave to a large extent in ways comparable to private companies. In other words, the key problem with respect to urban water services is not the commodification of water (in fact, water has been sold as a commodity for a very long time) or their public versus private character, but rather the corporatization of water service delivery companies and the imposed requirement for profitability and ‘full-cost’ recovery.

The latter has dramatic consequences for the ability of companies, whether public or private, to extend urban networks and improve connections to the poorer segments of the urban population. Of course, Karl Polanyi and, with him, successive generations of political economists, had already conclusively shown that a corporatized liberal market economy, left to its own devices, will ultimately self-destruct socially and environmentally, and cannot possibly deliver social services without proper embedding within a responsive public or social financial and regulatory infrastructure (See Castree 2007a,b; Heynen, et al., 2007).

This observation leads to a paradoxical, and rather disturbing, conclusion. While international organisations and national governments keep insisting on the virtues of pursuing a neo-liberal agenda and a post-political consensual political arrangement (see Swyngedouw, 2007) is largely in place that doggedly holds on to the view that market-led and market-based solutions to questions of public service organisation and delivery will solve some of the most enduring and intractable socio-ecological problems of our times, the key private sector protagonists that are called upon to deliver on this promise increasingly have to admit defeat in the light of mounting evidence that delivering water to the poor or the unconnected remains excruciatingly slow (Pitman, 2002; Winpenney, 2003). Under a hegemonic frame that considers subsidising socio-ecological processes (like safe and reliable water supply) or transferring value from one place, social group, activity and/or sector to another through redistribution policies economically ineffective and politically unacceptable, providing access to water to poor communities will remain a pipe dream. This paper seeks to unravel some of the broader and deeply contradictory dynamics associated with the feeble attempts to improve urban water services worldwide, but in particular in the Global South. Despite the promises of market-led solutions, advocated by international organisations and consortia, the results have been less than encouraging, while no alternative to private sector involvement is currently on offer. In particular, we shall insist that the particular public character

of water services precludes effective corporatization and requires a socialised response to deliver water effectively. In other words, we shall concentrate on the contradictions between corporatised provision (either by publicly or privately owned operators) of water and the collective or social nature of water delivery services.

While the Millennium Development Goals still insist that the world's elites wish to see the number of people without improved access to water and sanitation to be halved by 2015 and maintain that the private sector is the preferred vehicle for achieving this, the urban water problem remains one of the most pressing socio-environmental issues of our time as 960 million urban dwellers do not have adequate access to potable water and over a billion lack proper sanitation services, resulting in water-related diseases to be the number one cause of premature mortality in the developing world (UNDP, 2006). Hall and Lobina (2006: 37-38) estimate that over the 1990 – 2005 period, the 'golden' age of water privatisation, only 600,000 households received new water connections in cities under private water management; a number that falls to 250,000 if public subsidies and investment are excluded. Moreover, privatisation has clearly failed in many cities around the world and is falling apart or faced with serious difficulties in others (Hall, 2004). While private sector participation in the water sector was growing rapidly during the 1990s (from 2 projects in 1989 to a peak of 37 in 1999), it has dwindled to a mere trickle from 2001/2002 onwards (with the exception of China). Private investment in the water and sanitation sector almost halved in the first five years of the new millennium compared with the 1995-1999 period (www.worldbank.org). Only Chinese cities remain an attractive option for international investors and not surprisingly one that is embedded in a strongly authoritarian and interventionist state that organises all manner of direct and indirect subsidies and capital transfers from the public to the private sector (Loong Qi and Danqing, 2006; ICF International, 2007). By 2005, 109 of 383 World Bank listed water and sewerage privatisation projects are in China, while 44 of a world total of 383 projects have been

cancelled or are considered to be in distress, accounting for 32.9% of the total investment of US\$ 50 billion between 1991 and 2005 (ppi.worldbank.org – accessed 15 June 2007). There is by now a long and growing list of cities who saw their privatisation experiments fail or their contracts in serious distress, including Buenos Aires, Atlanta, Belize City, Manila, Cochabamba, Jakarta, Nelspruit, Kelantan, Mozambique, Nkokebde, Conakry, Gambia, Panama, Trinidad, La Paz, Trinidad and Tobago, Belize, Dar es Salaam, and Manila (Prasad, 2006: 682-683; Castro, 2004), while others face all manner of institutional, contractual, or delivery difficulties (see Hall and Lobina, 2007).

It is exactly this conundrum that this paper seeks to address. Many cities in the developing world are now confronted with a double bind. Governmental neo-liberal policies, often imposed or re-enforced by international organisations and donors, have turned to private capital for securing and upgrading urban social and physical infrastructures and a private sector that, while willing to invest if profits are to be made, is faced with mounting problems. The market as a panacea for solving key problems seems to fail, while the public sector is still considered to be too incompetent, under-resourced, and over-burdening to be able or to be allowed to confront the situation. The untested assumption of state-failure in service provisioning still haunts while the private sector strategically withdraws. There is an urgent need, therefore, to assess the contradictions of the current phase of neo-liberalising water urbanisation and the struggle over either replacing or restoring, via a series of surgical operations, the Washington Consensus on the one hand (Mehrota and Delamonica, 2005) or radically re-politicising urban socio-ecological processes on the other. The inevitable conclusion of this experience has to be that clean water and adequate sanitation to the poor cannot be provided on market terms, but do require a public or socialised response, such as, for example, systematic and structural support or subsidies. In short, and this is what we shall argue throughout this paper, sustained transfers of financial means from the better-off (socially and/or

geographically) to worse-off is a key precondition for alleviating the socio-ecological nightmare of the billion urban dwellers that lack adequate water and sanitation services.

Urban Water Flows – The Urban Hydro-Social Cycle and the Problem of Urban Collective (Re-)Production

Water is, of course, a territorial ‘flow’ good that is embedded in a complex hydro-social arrangement (Swyngedouw, 2004). The fusion of human and non-human processes in the production, conduit system, and consumption of water turns the terrestrial part of hydro-social circulation into a mesmerizing and complex network (Kaika, 2005). All manner of material, regulatory, institutional, symbolic, social, cultural and economic processes need to be assembled and become etched into the urban flow of water and render it prone to all sorts of demands, uses, and conflicts. Hydro-social circulation is a heterogeneously constituted networked good, which does not lend itself easily to homogenisation, marketisation, commoditisation, and corporatization. In other words, water, as Karen Bakker (2003) contends, is ‘an uncooperative commodity’ because of a number of fairly evident reasons. It is bulky, non-substitutable, heavy, socially and economically contested, monopolistic, and requiring long-term fixed investment. While inevitably territorially (or geographically) organized and channeled through socio-technical conduits, its vital use is not so much its particular ‘locationality’, but rather its flow character and constant socio-physical transformation and metabolism (Swyngedouw, 2006). It is this material territorial flow character of water that renders it particularly difficult to monopolize privately and turned into a commodity for sale with profit. While flowing, water acquires all manner of different, and often contradictory, meanings: it absorbs value as it is treated, purified, transported; it is subject to competing demands varying from its use as production input in agriculture and industry to fulfilling basic physiological needs; ecological conditions and processes are affected by its flow. It may serve different purposes at once and be required to perform several functions throughout its

hydro-social cycle (Bakker, 2003: 32). This indivisible and combined complex good character of the uses and functions of territorial water flows defy easy commercialisation, while the functional multiplicity of its territorial-networked flow produce bundled (i.e. socialized) use-values that are structured and made possible exactly because of its specific territorial organization. The ‘collective’ or ‘social’ character of water resides, therefore, not solely in its vital necessity to sustain life, but in its complex and non-exclusive character, roles and purposes.

These territorial effects (which can be both positive and negative) and derive from the bundled, networked, multiple, and co-ordinated arrangement of the flow of the resource are exactly what in classical economics is referred to as externalities, but what I have called earlier ‘territorial organization’ effects (Swyngedouw, 1992). The latter permits understanding such effects not purely as ‘external’ to the economic process but as an integral part of the bundled socio-economic territorial structure of the good; a structure that cannot be easily unbundled, the ‘externalities’ identified and isolated, and made subject to market forces (i.e. the market internalization of external effects). Humanly and bio-physically transformed water flows become a productive power exactly through its specific and complex co-ordinated territorial organization through which a range of use-values are created. Urban water and sanitation networks are complex and bundled ‘collective goods’ that embed public and/or private fixed collective capital and constitute the collective (or social) equipment necessary for the production and circulation process (i.e. it is a collective means of production) as well as for social reproduction (Läpple, 1976; Perrat, 1987). In their complex and combined arrangement, they produce territorial effects, a superior collective commodity that derives exactly from the indivisible character of the territorial flow. Such an organizational pattern results in a highly creative and ‘productive’ ensemble, external to the individual agent or actor, but internal to the macro socio-spatial functioning in which the ensemble is embedded. This is a classic example of joint production and consumption in the Marshallian sense (see Marshall, 1920) whereby the socialized or collective character of the network produces

exactly the territorial effects referred to above. These external effects are produced beyond the specific nodes or quilting points in each network; they are quintessentially collectively produced. Or, in value terms, the (positive or negative additional) value derived from the existence of the network is over and beyond the values that can be internalized through the price mechanism in each of its constituting points (Swyngedouw, 1992: 421-422). Consider, for example, the quasi-impossibility to internalize the economic effect of improved sanitation (declining mortality, reduced health costs, etc...) into the water price mechanism. As Preteceille (1977; 1981) argued, bundled spatial or territorial organization produces a) a set of use-values that do not have a commodity character (or are difficult to commodify), b) they constitute an indivisible, and hence complex use value, c) they are essential preconditions for the ‘development’ of social relations, the socialization of individual and social groups, and the development of the productive forces, and d) the fixed capital investment required for the production of these complex territorial use-values is often high and their average turnover time very slow.

It may be useful in this context to retrace some of the arguments mobilized in early critical urban political economy that centered around the tensions between the need to built, maintain and expand collective means of (re-)production on the one hand and the private appropriation of the positive value-effects of such infrastructures on the other (see Läßle (1976); Lipietz (1980); Castells (1975; 1976); Castells and Godard (1974), Lojkine (1974; 1977), and others). As Lipietz (1980: 71-72; see also 1983) argued more than two decades ago, such socio-naturally produced territorial networks constitute the general rule of the urbanization process:

“It should be emphasized from the outset that as soon as space intervenes, ‘externalities’ (of ‘location’ within the branch, or of ‘urbanization’, external to the branch) become the general rule ... This is where the contradiction between the social character of production and the private character of appropriation and economic ownership is expressed at its sharpest in its *material* form ... As soon as fixed capital is installed the field of distances and socio-economic space is irrevocably transformed: by materializing, private capital becomes collective fixed capital”.

It is these contradictions that constituted the pivot of then urban analysis around the production of collective means of production and reproduction and the new social movements crystallizing around these issues (Castells, 1976). Although often couched in Marxist structuralist terminology that has apparently outlived its useful shelf life, the basic tenet of the argument rehearsed some of the key processes specific to Fordist/Keynesian urbanization and the relations between collective infrastructures, the city, the state and private capital. These contradictions, however, did not go away with the turn to neo-liberal forms of urban service governing or with the intellectual abandoning of Marxist urban theory. On the contrary, they became more acute and accentuated in their present neo-liberal form.

There is indeed a fundamental tension between the collective character of the circulation of socio-natural goods like water and the private appropriation of the profits or surplus. It is captured centrally by the Marxist view of the contradiction between the increasing social character of the relations of production and reproduction on the one hand and the private organization of the accumulation process and appropriation of surplus. At the height of Fordist urbanization, this tension was mediated through the particular form of the state that took greater charge of assuring the provision of the collective means of production and reproduction. Infrastructures of all kind, social housing, health and recreation facilities, and all manner of social services were collectively organized, often debt-financed, taken out of the private circulation of capital and organized by collective capital supervised by and invested in by the state. It was exactly this collective provision of the means of production and reproduction that increased, facilitated, and supported the accumulation of capital and surplus production in other spheres. Although this state support could take the form of state ownership of collective means of production and reproduction, it also often took the form of particular private/public partnerships in which the state covered a substantial part of the investment of operational costs, while private sector participants were guaranteed profitable

returns. Moreover, coherent urban capitalist development, so the argument went, rested on mediating social or class struggle around the reproduction nexus (private and collective consumption) on the one hand while assuring sustained private capital accumulation for private investment on the other (Läpple, 1976). This proved to be an extraordinary successful enterprise if one goes by the quality and comprehensiveness of all manner of collective infrastructures provided in the global North during the 20th century, based on private and profitable provision (and in some countries operation) of water infrastructure and public subsidies (see Graham and Marvin, 2001). Of course, there were a series of often conflicting processes at work in the collective and public provision of these (re-)production services. First, the state invested in collective means of production, thereby lowering fixed capital investment requirements for private capital, lowering the organic composition of capital and, consequently, increasing surplus value production and general profitability. Castells and Godard's analysis of the steel complexes in Dunkirk became a classic example of such analysis (Castells and Godard, 1974). Second, the State as a collective investor could mobilize (primarily through tax transfers) sufficiently large volumes of capital (outside the profit-making logic) that private capital was unable or unwilling to provide (Lojkin, 1976). Third, the State marshaled judicial and legal powers to expropriate land and organize it in ways conducive to the provision of collective spatial infrastructures (Dunford, 1988). Fourth, investment in collective means of production and reproduction fueled significant demand for capital goods from other sectors of the private capitalist economy and constituted a core part of state-led Keynesian demand management. Fifth, the provision of collective consumption goods at low or subsidized cost (like housing, education, health, water, and the like) reduced pressure on wages and mitigated class struggle and conflict over working conditions. The state assured or guaranteed the basic collective reproduction of the workforce (Castells, 1976). And finally, social struggle became increasingly mobilized around these collective means of production and reproduction, leading to new 'urban' social movements that cut across traditional class lines. The

overall outcome was a corporatist private-public interaction that was characterized by the more or less generalized public provision of collective services and the private appropriation of the positive socio-spatial externalities produced by such territorial urban provision. In fact, this Fordist/Keynesian urban governance arrangement maintained social cohesion while assuring relatively successful accumulation of private capital that was still largely organized on a national scale. This form of arranging the collective/private interplay and tension became a generalized model for urban governance, both in the capitalist global North as in the global South that was pursuing a ‘developmentalist’ agenda. However, the weak, unconsolidated, often elite-biased, and economically limited ‘third world’ state often failed to achieve the same level of intervention as in the global North.

With the crisis of this model, largely as a result of mounting fiscal problems for the local and/or national state, accelerating accumulation problems for private capital during the 1970s and 1980s, the declared ‘failure’ of the state in both the global North and South, and the rise of neo-liberal hegemony, scholarly attention to this form of analysis waned as well, partly also as a result of the increasing criticisms of ‘structuralist’ urban Marxism. Of course, the fundamental contradiction between the social character of production and the private organization of the production process did not wither away. On the contrary, the neo-liberalization of urban governing in the last decades, combined with the rise of new collective social problems like the ecological crisis (or at least the quality of socio-ecological conditions), accentuated this contradiction as reproduction services became increasingly subject to market forces (Moulaert, et al., 2002). Debt-financing or cross-subsidization of services by the state became taboo as the market was considered to be a more effective and efficient service provider and allocating instrument. Rather than managing the tension, the wholesale privatization of the collective means of production and of consumption accentuated the tension between collective provision of complex goods on the one hand and the

private character of provision delivery on the other (Swyngedouw, et al., 2002). And this is particularly acute for those segments of the population that have limited or insufficient buying-capacity (resource entitlements in Amartya Sen's celebrated analysis) to buy themselves out of the deadlock of inadequate service provision. It is this restructuring of the collective/private interface during the period of intense neo-liberalisation and the ensuing intensification of the fundamental contradictions between the collective and the private that we shall consider further below.

Yet, the transformation of political-economic relations over the past few decades has had an extraordinary effect on capital accumulation world wide. The liberation of capital from all manner of constraints, the shift of the class balance toward capital, and the opening up of all manner of new frontiers for capital investment (of which water services was but one small example) led to an extraordinary capitalist expansion world wide and to a massive built-up of liquidity (see Harvey, 2003; 2005). It is exactly the liquidity disposal problem, characteristic of advanced neo-liberal capitalism, which we shall turn to next.

Crisis as capital glut, the re-organization of class relations and the surplus value realization problem

For David Harvey, the problem that continuously haunts a socio-economic system based on capital accumulation and expansion of value is the surplus value realization problem. The production of value always has to confront the moment of exchange or realisation, a process that is neither smooth nor guaranteed. In other words, there is a fundamental tension between the sphere of surplus value production and the sphere of surplus value realisation. An economic crisis arises exactly at the moment that surplus value cannot be recycled and accelerated devalorization takes place (Harvey, 1982). All manner of strategies and tactics can be mobilised to contain or manage this problem, such as switching of capital investment to different sectors or regions, technological innovation, debt financing of consumption, opening up new activities for capital investment, and

the like. In the global North, successful accumulation during much of the 20th century was maintained via forms of intensive accumulation that was predicated upon expanding natural resources extraction, expansion of production and sustained growth of individual and state spending (the Fordist-Keynesian form of intensive accumulation) (Lipietz, 1987; Aglietta, 1979), politically and socially sustained by geographically highly variegated forms of corporatism, public-private arrangements and public demand management policies. The crisis of this 'embedded liberalism' from the mid-1970s onwards combined a crisis of the model of intensive accumulation exemplified by dwindling profits in traditional intensive accumulation sectors on the one hand (Glyn, 2006) and mounting fiscal problems of the state at all scales on the other. This unleashed a series of transformations that, despite their geographically highly divergent concrete and historically contingent forms, crystallised around two key processes. On the one hand, elite class fractions allied around struggles that would shift relative political and social power away from the working class and the progressively redistributive 'embedded' state in an attempt to restore class power such that there would be a much freer reign in allocating, distributing and investing capital, and in organising the production process (Harvey, 2005). In particular, while the redistributive flows organised through the embedded state flowed generally from the better-off to the worse off, this flow was radically reversed. The ballooning of real estate prices world-wide and the disappearance (or at least reduction) of subsidized housing provision is a case in point to illustrate this perverse transfer flow. Moreover, the retrenchment of the state altered the form of the state from one that strategically managed the private/public interplay to one that regulated and enabled the private allocation and distribution of capital and of goods and services. In addition, vast terrains of life that were hitherto excluded or shielded from capital investment were opened up and became incorporated into the circulation of capital.

While expanded reproduction of capital (i.e. increasing surplus value production through innovation, productivity increases and socio-spatial reorganisation of the production process)

moved ahead at full speed, particularly as regulatory and other red tape was progressively lifted, often with very uneven social and economic consequences for specific regions and cities (and thereby re-choreographing the process of combined and uneven development), enormous surplus capital was amassed, desperately looking for profitable outlets. Indeed, from the late 1980s onwards, the world's capital markets were awash with cash and excess liquidity, desperately seeking new outlets for recycling surplus capital (Duménil and Lévy, 2004). Alongside the expansion and innovation of production processes, investors were desperately seeking new spaces, activities, or things that could be inserted within the capital circulation process in an effort to deal with the hyper-expansion of liquidity. This is the process that David Harvey (2003) refers to as 'accumulation by dispossession', in analogy with Marx's analysis of 'primitive accumulation' as the process through which original capital accumulation, concentration, and centralisation took place. In other words, intensive forms of accumulation are increasingly accompanied by extensive forms of accumulation that take very concrete and specific forms. Harvey distinguishes four key mechanisms of 'accumulation by dispossession', but the one that concerns us most in this context is the process of commoditisation and then privatisation of goods that had remained largely outside the private capital circulation process throughout the 20th century, but were publicly, commonly, or otherwise collectively organised. Water is a key example here. Partial or full privatisations taking place in the Global North together with state divestitures in the former Soviet Union and its satellite states, China, and the Global South offered a vast terrain of activities for capital investment and the absorption of excess liquidity. China became, in the 1990s, the hothouse of the world economy that attracted vast amounts of transnational capital, among others for investment in urban infrastructures of a variety of kinds, but with massive overcapacity and overaccumulation problems as a consequence (Bello, 2006). While many others were successful in terms of profitability (for example, the oil industry in Russia – recently renationalised), others had a much more lacklustre take-off and, as already established, a less than satisfactory performance. The rush

to engage in private sector participation in the water sector after it was prised open by the demands of the international organisations on national states and the increasing belief on the part of states that market-led solutions could be found for some of the most intractable ‘development’ problems constituted a classic example of accumulation by dispossession.

However, their success was less than encouraging, both in terms of solving water access problems for the poor and, more problematically for the water companies, in terms of profitability.

Moreover, as already stated above, the sort of territorial hydro-social flow system that characterizes complex urban water systems, opens all manner of contradictions. First, those dispossessed do not necessarily passively accept the theft of what they consider to be rightfully theirs. Secondly, once under the aegis of private capital accumulation, all manner of social tensions and conflicts arise. Predating competitors loom around the corner, recalcitrant workers raise the specter of new forms of class struggle, disgruntled consumer mobilize the weapons of the weak when it becomes clear that the initial promises fail to materialize, and governments, for a variety of reasons, embed the private operators in a complex web of regulatory arrangements and contractual obligations. Moreover, the network character and the complex investment arrangements required to maintain, update and expand the network (particularly to poorer and more difficult to access areas, and with often unreliable policing of rate payment) and water production in a context of still problematic economic returns, lowered profit expectations, particularly as subsidies or other forms of aid were ideologically considered unacceptable. This intensified the contradictions between the complex social and collective character of the territorial hydro-social flow and the private appropriation of surplus. In sum, by the early years of the 21st century, accumulation by dispossession of the kind pursued by global water companies was beginning to falter as the internal contradictions related to the provision of collective means of production and reproduction exacerbated. Moreover, the financialisation of the global economy unleashed a series of rampant but regionally specific regional crises, in particular in South East Asia in the fall of 1998 and than

spreading to Latin America, with Argentina as one of the worst hit economies. The problems with the Manila (see Lobina, 2005) and Jakarta (see Bakker, 2007) water contracts and the collapse of the Buenos Aires concession (Castro, 2007) were the direct result of the financial turmoil and associated currency devaluation (which ruined the US-dollar denominated spreadsheets of global corporations whose return was dependent on domestic currency) that engulfed the world economy and questioned seriously the wisdom of global neo-liberal financial markets. To make matters worse, a socio-political onslaught against unbridled globalization and privatization had begun to spread around the world, from President Bush who pursued a much more protectionist economic domestic stance than Clinton and Uruguay where the population voted to ban constitutionally the privatization of natural resources like water, to water companies themselves becoming more reluctant to fulfill, without public financial support, the mission that international organizations had outlined for them.

The surplus disposal problem, in short, has become more rather than less acute as the potential sources for profitable capital investment become more arid. A series of new fault-lines are quickly opening up and need urgent attention. The parameters are easily identifiable. For global companies, there is an urgent need to expand existing or find new investment opportunities if they are going to sustain their accumulation rhythms and to satisfy their shareholders, and this requires of course maintaining local and global orders conducive to private investment initiatives. States in the Global North are still reluctant and in the Global South often plainly financially incapable to mobilize the vast resources required to provide adequate water and sanitation services. In the mean time, reliable and safe water access has become a major rallying point for urban social movements around the world while the ‘International Community’, through the Johannesburg declaration and the MDGs, has committed itself to improving vastly access to water and sanitation. A dilemma of extraordinary proportions arises here, one that is replete with new and possibly explosive social, political, and economic tensions. And this is what we shall turn to next.

Retooling the Washington Consensus: Subsidising capital?

The financial needs required to reach the MDG objectives are indeed considerable. According to Agenda 21, the report of the 1992 Rio Conference on Environment and Development, the estimated annual additional investment cost needed to achieve global water security was US\$ 56 billion (see (Cosgrove and Rijsberman 2000)). However, more recent estimates suggest that a much more significant effort is needed. The World Water Vision Report (Cosgrove and Rijsberman 2000) estimates that in the run up to 2025, US\$ 180 billion annually is required to achieve good water access for all. This includes an investment of US\$ 550 billion in dams and irrigation schemes to feed the growing world's population, assuming a 40% increase in world food production. The report also assumes a 1.5 billion increase in population, half of whom will live in cities. Combined with existing deficiencies (1.5 billion) and ongoing rural to urban migration (0.5 billion), this would bring the total of people that need to be serviced to 3 billion. In addition to that, industrial water use will expand, while urgent infrastructure replacement investment is required in the developed world and in the former socialist states. The summary of total annual investment needed up to 2025 (and compared to the actual situation in 1995) and their expected sources is provided in Table 1.

Table 1. Annual Investment Requirements for Water Resources and Anticipated Sources of Investment

USE	Billions of US\$		Share (%)	
	1995	Vision 2025	1995	Vision 2025
Agriculture	30-35	30	43-50	17
Environment and Industry	10-15	75	13-21	41
Water Supply and Sanitation	30	75	38-43	41
Total	70-80	180	100	100
SOURCE				
<i>National</i>				
Public Sector	45-50	30 ^a	58-71	25
Private Firms (domestic)	12-15	90	15-21	45
<i>International</i>				
Private Investors	4	48	5- 6	24
Donors	9	12	12-13	6
Total	70-80	180	100	100

^a This figure assumes an additional US\$ 20 billion in direct subsidies to the poor.

Source: Cosgrove and Rijsberman, 2000

In addition to the quite staggering magnitude of the investment required, 70% of the total is expected to be raised by the private sector. This World Water Council report asserts that “private actors can thus provide the main source of infrastructure investment”. The World Bank endorsed this conclusion, which furthered their push to privatization as the main means through which to elicit private sector participation (Amann-Blake, 2004; Pitman 2002; Gleick 2004; 2006). In light of the argument above, direct investment by the private sector in water and sanitation services is unlikely to be abundant or even forthcoming under the present configuration. Thus, the key challenge for the world’s water elites becomes one of mobilizing public resources to shore up

private profits. Therefore, retooling the Washington Consensus is very much on the agenda, and in such a way that the global neoliberal agenda is not fundamentally challenged.

Two main strategies are actively pursued at this moment. First, a movement away from direct control through divestiture to the financialisation of public services, keeping global investment flows at arms length from the actual process of service delivery, but still assuring its operation in conformity with market logic. The second strategy, and this is the only option available to cities in the global South, is to complement private investment with all manner of subsidies and public support mechanisms or, in other words, the part-restoration of a Keynesian policy under an overall liberal agenda. We shall briefly consider each of these strategies.

Option 1: From direct control to financialisation

The world's capital markets are awash with liquidity. There is no shortage of money in capital markets and an increasing share of the world's liquidity is channeled through all manner of public and private infrastructures (like real estate, roads, ports, railroads, and public services infrastructures). Torrance (2006: 15) defines financialization in this context "as the expansion of the nature and scope of financial markets and institutions to include the provision of urban infrastructures. It involves the continuous assessment of activities by financial markets" (see also Orléan 1999 in Theurillat et al., 2006). The OECD considers this financialization of urban infrastructure to be a major potential investment outlet for all manner of investment funds:

"Investments needed in infrastructure are extremely large, in part because a significant share of this infrastructure has suffered from benign neglect in the past (for example water infrastructure), in part because of the large transformation expected in developing countries in the future (growth, in population, growth in per capita income, rapid urbanization) and in part because of new demands that will be put on such infrastructure for security reasons and in response to growing concerns about the environment" (OECD, 2006: 41).

Macquarie, the Australian investment company, for example, invested in a series of water and sewerage service activities (for example, it acquired Thames Water plc from the German multi-utility provider RWE in 2006) and has become one of the leading infrastructure investment funds. As Torrance (2006) has documented comprehensively, pension and investment funds consider

urban infrastructures as potentially attractive to secure long term returns, diversify risk, and generate new investment opportunities while maintaining a relatively flexible and balanced investment mix. The combination of lackluster public investment in urban infrastructure, the rise of investment liquidity, the stock market turbulence of the late 1990s which prompted a feverish search for alternative long-term investments made infrastructure an interesting option for investment fund strategists, a tendency that did not go unnoticed by the major international agencies like OECD and World Bank who quickly identified such strategies as potential sources to deal with all manner of public service delivery problems in the developing world. However, private fund infrastructure investment depends crucially on secure long-term return, a stable regulatory environment, strictly managed risk, efficient capital markets, and reliable contractual arrangements. Consequently, infrastructure asset investment has been almost exclusively restricted to advanced capitalist economies with solid and conducive regulatory environments. While divestiture and direct investment of water companies in water and sanitation services at least assured a commitment from the investing company to manage in a market-effective manner, investment funds will only enter long-term commitments under conditions that the operational efficiency of the infrastructure can be assured or, at least, the potential risks can be managed effectively and in a market-conform manner. This all but rules out this option for enhancing service delivery for poor or unconnected parts of the urban population in the global South. All evidence suggests that this cannot easily be done in a profitable manner without subsidies or other forms of financial support or transfers, and depends vitally on large initial state (or transnational) subsidies or other forms of redistribution. In other words, the financialization of urban water infrastructure in the global South is dependent upon the prior organization of water and sanitation delivery services in ways that guarantee relatively stable long-term profits. The financialisation strategy as a solution for the water delivery crisis, therefore, depends crucially on opening up significant subsidized capital flows to enhance and expand existing infrastructure.

Option 2: Subsidising Private Capital

Therefore, a sustained private sector involvement in water and sanitation services requires opening up significant capital flows from the public to the private sector or, in other words, the

subsidization of private sector profits. This is, in fact, the tactic the key elite leaders in the water sector are pursuing with renewed energy. In a recent report of the World Panel on Financing Water Infrastructure (Camdessus Report) (Winpenny 2003), a consortium of big water companies and leading international organizations, the modest contributions of the private sector to financing water projects were considered. Moreover, the report considered how private sector involvement could be kick-started again and unashamedly called for greater public sector involvement and direct or indirect subsidization. The report concluded that “multilateral financial institutions will be the pillars of the new water financial architecture. They should do everything to reverse the recent decline in their water lending and make every effort to expand their use of guarantees and insurance” (Winpenny 2003). The latter would include establishing a “Devaluation Liquidity Backstop Facility”. This rather fancy name refers to the establishment of an international public body that would “effectively guarantee the foreign loans and finance the additional debt service incurred from devaluation to be reimbursed by the authority responsible for setting the tariffs” (Winpenny 2003). In straightforward language, as Amann-Blake (2004; 2006) argues, this would de facto mean that the international public sector would carry the risk of private investment and would recuperate potential losses from taxation in case devaluation occurs. In other words, the public would carry the brunt of unfavorable national and international political economic conditions; this will hardly improve the situation of the poor and disempowered. As Amann-Blake continues, “through a review of the historical record [recent in case of the developing world; much longer in case of the developed world] we see that infrastructure ... was not primarily financed by the private sector and therefore questions why this would be different in developing countries today as they face rapid urbanization, unstable economies, and population growth” (Amann-Blake 2006: 16).

The extraordinary expansion of capital liquidity in the market is faced with a condition that not all activities requiring substantial investments are profitable in the short to medium term, yet require

urgent attention. As in the past, in such cases capital turns to the public sector expecting sufficient financial support to permit the further expansion of capital investment. However, the ideological stupor of the unreconstructed Washington Consensus does not permit an easy retooling of the private-public interface. As exemplified above, however, water companies are already actively positioning themselves with the key national and international agencies in an attempt to pave the way for a change of policy that would simultaneously improve profitability and assure the companies' continuing expansion, but based on significant public subsidies. In sum, the uncertain financing of urban water supply services opens up a new set of contradictions and a new front of social struggle. These will centre on the question of who will pay for the necessary investments on the one hand and who will receive these transfers. As the contradictions between the necessity of providing territorial networked complex commodities on the one hand and the inability of either the private sector to profitably do so or the state to effectively do so in the global South intensify, the pressures to provide subsidized but privately managed public services will undoubtedly increase.

Irrespective of the outcome of the above struggle, the terms of the argument will remain decisively linked to questions of commodification, market efficiency, investment returns, and the articulation of the private/public interface. We shall conclude this contribution by arguing for the need to think 'out of the water box', to approach the water problematic in theoretically new and politically innovative manners. And this is what we shall turn to next.

Thinking out of the Water Box: Social Power, Water and the Mythical Debate over Commodification

As discussed above, recent experiences with water privatization experiments have shown abundantly that turning water services into profitable and socially acceptable businesses is not an

easy task. Moreover, demands for full cost recovery of water related activities reduce the possibilities for cross-financing and cross-subsidization. The very term of 'Full Cost Recovery' is of course an oxymoron. It is self-evident that all investment project costs need to be recovered by someone somewhere. The key question is really a political one, that is who will be responsible for the recovery of what kind of costs. When full cost recovery is discussed in the context of water projects, it invariably refers to the view that water projects should be self-sufficient, i.e. that the cost of investment should be met fully through water rates, i.e. that cost recovery is organized via water consumers. This of course limits the possibilities of cross-subsidization to managing the tariff structure of water delivery in a particular re-distributive manner. It precludes subsidies and, thus, the financing of projects from local, regional, or national tax revenues or, through development aid, from tax revenues raised elsewhere. Rates and direct or indirect taxation are the only possible forms for financing water projects. A narrowly defined Full Cost Recovery principle precludes using tax revenue for water projects. However, this has been the only way through which successful development of large scale water works with comprehensive coverage was achieved, particularly as a means to solve the contradiction between the collective character of the system and the private organization of its management. There is no evidence that this will be any different in the developing world. Mobilizing tax revenues permits mobilizing resources obtained from elsewhere or from other activities into other, collectively desirable, ones. Therefore, the narrow definition of Full Cost Recovery needs to be replaced by a much wider social and political-economic understanding, one that permits systemic forms of re-distribution of financial resources.

In sum, questions of investment in collective commodities like water are never independent of question of (re-)distribution. To the extent that the water economy is publicly or privately organized (or a mixture of both), these modalities of redistribution will be organized differently. The pivotal social and political struggles for the years to come will exactly revolve around the modalities of subsidization. In other words, the struggle over mediating the tension between the

provision of bundled territorialized socialized hydro-social networks on the one hand and the private appropriation of surplus value on the other, will be the pivot around which the social struggle over provision of and accession to water will be fought. While the private sector effectively claims that private-sector participation will be dependent on public financial support, there will be increasing pressure on public institutions to sustain private sector investment by means of significant public financial support. While we have argued above that uneven access to water is primarily a question of economic or monetary power (and the lack thereof for large numbers of people in the developing world), achieving the Millennium Development Goals for water necessarily implies a major redistribution of capital resources. Guaranteeing access to clean and safe water for the 1.3 billion people who do not have access will necessitate the transfer of considerable amounts of investment capital whose return will have to be carried by the more wealthy sections of the world's population. This, of course, is independent of the question of whether the actual management of water supply and delivery should be publicly or privately organized. The latter question is one of effective management. Around the world, both public and private (or mixed) companies have proven that they can be effective and efficient. However, the public/private debate should not overshadow (as it has done over the past decades) the question of the origin of the required investments to secure access to water. The private sector, because of the structural requirement for a normal return (profit) on investment, cannot and will not guarantee access to water to social groups with insufficient effective buying power (or, in some cases, willingness to pay) or investment in projects with an uncertain return. The only strategy that can offer a mass solution is one based on subsidies and, thus, on redistribution of capital and income. Moreover, a public organization of investment and of distribution permits considering a much wider range of technological, organization, and managerial options. In many cities in the developing world, a thriving small-scale private economy of water delivery exists. While currently mainly operating through informal, unregulated, and often shady forms of organization, these

micro-businesses show that alternative technological and organizational systems for water delivery are socio-economically sustainable (Swyngedouw, 2004).

The key issue therefore is not about whether or not water is or should be a commodity or commoditized. Water is of course a commodity to the extent that delivering the right volume of water of the right quality to the right place requires major investments of capital and labor and these have to be made available and paid for. The central concern is of course one of who will pay for what part of the hydro-social circulation process. Adequate and reliable access of water for those who lack access will require a major transfer of capital and systematic and sustained cross-subsidization. It is exactly the recognition of water as a commodity that permits effective cross-subsidization. While inter-spatial and inter-social transfer is an absolute necessity if the Millennium goals are to be taken seriously, this should be considered separately from the private or public character of the management of water services understood in a narrow sense. However, the question of subsidization is of necessity a political one in which clear social, political, and economic choices have to be made. This political question needs to be addressed at local, national, and trans-national levels. Cross-subsidization of investment does indeed require embedding issues of water access and distribution within appropriate institutional frameworks that discuss democratically and openly such questions of distribution. In fact, in the same way as a decision to privatize or ring-fence water services (and to insist on its Full Cost Recovery) is an eminently political one, so is the issues of cross-subsidization. Indeed, if the above argument is correct, then the question of who decides on both investment and distribution becomes an eminently political question, and one that relates directly to issues of democracy and of the distribution of political power.

Indeed, even with privatization, private sector participation in the water sector remains limited and the prospects for future private sector investment rather dim. This leaves no other alternative than

public financing to cover the bulk of the required investment. It would be a mirage, if not worse, to believe or assert that the MDGs can be achieved on the basis of massively increased private sector investment in the water sector. It has not happened in the recent past despite great pressure on all actors, the results of the actually existing experiments are mixed to say the least, and the prospects for enhanced investment in context of total privatization are not promising. However, the call from alternative ‘people’s NGOs’ to improve water access by improving local level stakeholder participation and citizen’s involvement will equally prove to be a mirage as a solution for solving the socio-hydraulic problems of the world’s big cities. Without massively enhanced national and international public support, the MDGs will remain an empty promise.

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