Disciplining de facto development: water theft and hydrosocial order in Tijuana

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Abstract. Informal and illegal water provision is increasingly targeted as an impediment to state authorities and water development in the Global South. In contrast, this paper uses a biopolitical approach to argue that state authorities use illegal forms of water provision as a source of power, particularly to discipline certain spaces and sectors of the population; and moreover, that such power geometries are deeply uneven. To support these claims, I examine the production and enforcement of illegal provision in two communities located in Tijuana, Mexico. I examine how water theft functions—including the key objects and practices that shape the illicit abstraction and distribution of water—and then examine how water theft is policed and enforced by state authorities. Following Foucault, I suggest these processes occur on a bodily and infrastructural level to discipline water users. Findings indicate that while water theft supplies a vital resource for marginalized citizens—often in communal ways that exceed state power—the alternating tolerance and repression of water illegality is largely used by authorities to maintain hydrosocial order and, in effect, to control informal modes of development. The paper concludes with implications for understanding water informality and the uneven spatiality of state power.

Keywords: water, illegality, informal development, state power, Tijuana

Introduction
As dawn breaks over a canyon in western Tijuana, Doña Rosa gets up for a drink of water. The hot August morning is already choked with dust from the unpaved roads of her neighborhood, Divina Providencia.(1) Rosa paces through the house—a tiny shack made of corrugated metal and discarded garage doors—and grabs a kettle, heading outside. Clotheslines and electricity wires zigzag above the small backyard patio, casting a lattice of shadows over colorful tins and potted plants. Rosa pauses and stares up at the web of white plastic tubes braced against steep canyon walls. High above the canyon floor, a toma clandestina—or unauthorized connection—diverts water from the municipal network into a maze of plastic pipes. Water is carried via gravity and piped to backyard spigots, such as Rosa’s, where she fills the kettle to boil water for breakfast. Like many unconnected urban dwellers, Rosa and her neighbors rely on an intricate assemblage of unauthorized taps, unpaid labor, and nonmarket transactions to supply water and survive. In the absence of the grid, Rosa and other ‘midnight plumbers’ build networks and self-organize management of water that municipalities are unable or unwilling to provide (Bakker, 2010; Gandy, 2006, 2008; Swyngedouw, 2004).

Informal and illegal water development, not surprisingly, is coming under greater scrutiny worldwide. World Bank experts estimate that over 48.6 million cubic meters of potable water—enough to supply 200 million people—escape daily from municipal networks, including 30 to

(1) To protect informant confidentiality, I use pseudonyms and concealing geographic details for specific individuals and places. Divina Providencia means “divine providence” in English. Neighborhoods in Mexico are often named after notable people, events, or dates.
50% of all treated water in developing countries (Kingdom et al, 2006). In some Mexican cities, the loss rate exceeds 50% (CONAGUA, 2010). In contrast to authorized consumption, this ‘nonrevenue water’ (NRW)—consisting of physical leaks and commercial losses (eg, metering inaccuracies, data inadequacies, corruption, and theft)—works against core principles of neoliberal water management, such as commodification and full cost recovery. Indeed, “a high NRW level is normally a surrogate for a poorly run water utility that lacks the governance, the autonomy, the accountability, and the technical and managerial skills necessary to provide reliable service to their population” (Kingdom et al, 2006, page v). To remedy such ills, the World Bank encourages greater private sector involvement in urban water governance, with the goal of achieving development by restructuring municipal provision presently controlled by ‘weak’ state institutions and public utilities (González de Asís et al, 2009; Holden and Thobani, 1996; Kingdom et al, 2006; Thobani, 1997; UNWWAP, 2009).

Two themes run through these characterizations. First, as water is increasingly valued as an economic ‘good’, illegal use and users are targeted as a social ‘bad’—producing, in effect, a new practice to discipline and punish. For Doña Rosa and her neighbors in Divina Providencia, water theft actually works—liquid is produced, livelihoods are sustained—but such practices are broadly cast as dysfunctional and antidevelopment. Second, and perhaps more significantly, water illegality is seen as symptomatic of a weak state. Informal and illegal water provision is depicted as working separately from or in opposition to state power and formal development efforts (González de Asís et al, 2009; Kingdom et al, 2006), even as scholars have questioned the degree to which informal and unauthorized institutions operate against—or even ‘outside’ of—neoliberal water management (Boelens, 2009; Boelens and Zwartveen, 2005b; Boelens et al, 2005; 2010; de Vos et al, 2006; Gaybor, 2008; Peña, 2005; Perreault, 2008). While these dual assumptions are prominent in mainstream development discourse, they raise a number of key questions related to water informality and its broader role in development.

In this paper I argue that state authorities use illegal forms of water provision as a source of power, particularly to ‘discipline’ certain spaces and sectors of the population; and, moreover, that such power geometries are deeply uneven. To support my claims, I draw on ethnographic research of two cases of unauthorized water provision in Tijuana, Mexico. While I recognize water informality as an umbrella category of diverse practices (Meehan, 2010), in this paper I specifically focus on one facet: illegal water provision. I first examine how water theft functions—including the key objects and practices that shape the illicit abstraction and distribution of water—and then examine how water theft is policed and enforced by state authorities. Building on the notion that officialdom rarely ignores informal and illegal water systems (Boelens, 2009; Boelens and Zwartveen, 2005a; 2005b; Boelens et al, 2005; Ferguson, 1994; Kooy and Bakker, 2008), I explore how these practices produce and occasionally exceed state power, including neoliberal modes of water governance.

This paper advances a biopolitical approach to water development. I start with Michel Foucault’s concept of ‘popular illegalities’—the tacit and tolerated nonenforcement of laws—that form a foundation for his insights on prisons, punishment, and social justice (Foucault, 1977; 2000a; 2000b; 2000c). Foucault shows how modern penal systems were designed not to eliminate petty crimes like theft of wood and water, but to distinguish particular ‘rights’ from ‘wrongs’ and assign punishment in differing ways. For example, water is constructed as a fundamental human ‘right’ by the United Nations, even though that same privilege may constitute a legal ‘wrong’ in certain regulatory and geographic contexts, in which water use

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(2) Losses are conservatively estimated at $14 billion per year, with a third of them occurring in the developing world (Kingdom et al, 2006).
transgresses property regimes (Meehan, 2012). In this sense, as Karen Bakker suggests, water is simultaneously political and biopolitical.

“Modern governments seek to optimize both water resources and our individual water-use practices in order to secure the health and productivity of the population. This control is enacted through formal regulation, but also self-policied through the cultural aesthetics of health and hygiene, ranging from entire bodies of water to individual human bodies” (Bakker, 2012, page 619).

This process of policing, I suggest, occurs on a bodily and infrastructural level, which collectively serves to discipline water users. As Rutgerd Boelens (2009, page 310) points out, the capillary politics of recognizing and denying water access “play a crucial role in modern, neoliberal policies to discipline ‘unruliness’ and include all water user communities in a uniform framework.” Alex Loftus (2006, page 1023) further reveals how infrastructure (like the water meter) regulates everyday life in the household, “ensuring what volume of water residents will receive, and at what times that water will be available.” I advance this framework to explore the ways in which Tijuana water theft emerges as a site of both achievement and punishment, and to better understand how certain informal practices (and practitioners) fit within modern hydrosocial order.

The paper is composed as follows. First, I draw on Foucault and other thinkers to frame how resource theft has historically operated in relation to state power. Following a contextual description of the study area, I examine the production and enforcement of illegal provision in two Tijuana neighborhoods: Divina Providencia and the Tijuana River Canal. In the penultimate section I discuss the uneven exercise of state power: by alternating tolerance and repression, state authorities produce differential power geometries for marginalized citizens, a process used to discipline de facto development. The final section highlights conclusions and implications of the research.

A biopolitical ecology of theft

Since the widespread emergence of private property in the 17th and 18th centuries, resource theft has maintained a close but uneasy connection with state power and capitalist economic development. In feudal Europe, certain practices of civil disobedience—such as theft of wood, water, fodder, food—were widely tolerated by the landed elite, who saw such activities as types of ‘payment’ and tacit privileges for the survival of the working poor (Foucault, 1977; 2000a; 2000b; see also Hobsbawm, 1965; 1969; Linebaugh, 1976). Tolerance displayed many guises.

“Sometimes it took on an absolutely statutory form—as with privileges accorded certain individuals and groups—which made it not so much an illegality as a regular exemption. Sometimes it took the form of a massive general non-observance, which meant that for decades, sometimes for centuries, ordinances could be published and constantly renewed without ever being implemented. Sometimes it was a matter of laws gradually falling into abeyance, then suddenly being reactivated; sometimes of silent consent on the part of the authorities, neglect, or quite simply the actual impossibility of imposing the law and apprehending the offenders” (Foucault, 1977, page 82).

Illegal practices were ‘popular’ because of their widespread presence—indeed, the plurality of norms, rules, and rights in resource management continues today (eg, Roth et al, 2005). Examples of nonstate normative orders range from customary water institutions in rural settings (Boelens and Zwartveen, 2005a; 2005b; Boelens et al, 2005; Guevara-Gil, 2010; Hendriks, 2010; Perreault, 2008) to informal and illegal water use in the city (Bakker, 2010; Gandy, 2006; 2008; Meehan, 2010; Swyngedouw, 2004). The presence of normative orders was not only plural, but also necessary for lawmakers and law-breakers alike; illegality
was perceived as essential for the political and economic functioning of the broader society (Foucault, 1977).

Contrary to characterizations of resource theft as chaotic and disorderly, illicit activity often took a systematic form, subject to informal codes of conduct, internal hierarchies of power, and class-based expressions of political resistance (Foucault, 1977; see also Boelens et al, 2010; Scott, 1985). Illegal resource use does not necessarily indicate the absence or failure of institutions, but often marks the presence of alternative norms of resource appropriation, management, and distribution (Agrawal, 2005; Boelens and Zwarteveen, 2005a; Boelens et al, 2005; de Vos et al, 2006; Klooster, 2000; Robbins, 2000; Robbins et al, 2006; 2009). For example, informal institutions in India sustain an extremely sophisticated system of informal rents and access rules, leading to highly specialized livelihoods strategies built around specific forest subsidies to agrarian production and reproduction (Robbins et al, 2009). While these systems are perhaps not normatively desired, it is clear that “illegal use is neither anarchic nor uncontrolled” (Robbins et al, 2009, page 573).

Industrial capitalism dramatically reorganized resource ownership, however, and the punitive dimensions of theft changed. “The illegality of rights, which often meant the survival of the most depraved, tended, with the new status of property, to become an illegality of property. It then had to be punished” (Foucault, 1977, page 85). Landlords no longer ‘looked the other way’ during the unauthorized collection of water or wood; resource theft was now punished under a two-pronged regime of property rights and liberal rights.

“This great redistribution of illegalities was even to be expressed through a specialization of the legal circuits: for illegalities of property—for theft—there were ordinary courts and punishments; for the illegalities of rights—fraud, tax evasion, irregular commercial operations—special legal institutions applied with transactions, accommodations, reduced fines, etc. The bourgeoisie reserved to itself the fruitful domain of the illegality of rights” (Foucault, 1977, page 87).

Punishment was a bodily practice, including biopolitical techniques to differentiate, regulate, and mark the ‘good’ citizen from the ‘bad’ (Driver, 1985; 1994). The unequal treatment of water theft by poor urban dwellers versus the rich reflects this imbalance. On one hand, recent work in Ecuador (Gaybor, 2009) demonstrates that while formal water accumulation by the wealthy is enormous, the informal and illegal accumulation by this same group is far more significant and widespread. On the other hand, illegal water provision by the poor tends to be criminalized by mainstream development as a wasteful, undermining, and regressive practice (eg, González de Asís et al, 2009; Kingdom et al, 2006).

In some cases, de jure and de facto institutions mix like oil and water. The characteristics of customary and collective rules may actively frustrate water commodification, marketization, and privatization: neoliberal processes that hinge on ‘efficient’, uniform, and universal principles and policies, and—in the liberal tradition—tend to privilege an autonomous, individual legal subject (Boelens and Zwarteveen, 2005a; 2005b; Morgan, 2008).

“By asserting that flows of money and water follow universal, scientific laws, and that human beings share the same aspirations and motives everywhere, neo-liberalism establishes a universal rationality and efficiency, based on a ‘natural’ and ‘objective’ truth. The policies that are based on new institutional theories, in their turn, establish universal criteria for optimizing water management. Such universalization can be seen as a process of Foucauldian disciplining and normalization, while at the same time actively depoliticizing the water debate by labeling decisions about resource allocation as technical interventions” (Boelens and Zwarteveen, 2005b, page 753).

For example, Roth et al (2005) show how the collective norms and practices associated with the Balinese subak (a traditional, common property irrigation system) ignite friction when
married with state-initiated, technoscientific irrigation schemes. Official water discourses in the Andean region simultaneously obliterate customary rule and present ‘neoliberalism’ as the only viable cure, discriminating against or undermining local normative frameworks (Boelens and Zwarteveen, 2005b; de Vos et al, 2006 Perreault, 2008). Water illegalities may even be understood as a form of civil disobedience: they reveal the contradictory position of the water consumer as criminal and subject of human rights (Morgan, 2008) or serve as a method of direct action against perceived environmental and social injustices (Meehan, 2012). In some situations, illegal activities are explicitly organized as resistance to state-drawn property rights: “a kind of forcible poor tax to replace the gifts and wages they no longer receive” (Scott, 1985, page 269). Indeed, because theft often supplies the poor with vital resources for life and livelihood, de facto practices have become critical sites of political struggle.

Yet a Foucaultian analysis also reveals how resource theft operates in tune with the state. In Mexican and Indian forests, for example, unauthorized timber extraction, grazing, and fodder collection are typically negotiated between forest officials and residents, shaped around longstanding local networks of power and mutual trust (Klooster, 2000; Robbins, 2000; Robbins et al, 2009). The byzantine bureaucracy of timber management in Oaxaca actually encourages tree theft, facilitated by intricate systems of corruption and social power (Klooster, 2000). Corruption in Rajasthani timber extraction mirrors the authority structure of state management, but with different sets of on-the-ground rules and allegiances to classed, casted, and gendered power (Robbins, 2000) or with the consistent cooperation and even collusion of state authorities (Robbins et al, 2006). In sharp contrast to neoliberal discourses of the ‘weak’ or ‘absent’ state—evidenced in World Bank rationale for water theft (eg, González de Asís et al, 2009; Kingdom et al, 2006)—illegal activities may be tightly woven into the fabric of state power.

A biopolitical approach to development, then, situates water theft not simply as a technical matter or isolated system, but foregrounds the practices and infrastructure that unleash state power in uneven and uneasy ways. Framing water as biopolitical, as Bakker suggests (2012, page 618), requires attention to the consolidation and reproduction of power, even in the spaces of the ‘non-state’. Indeed, “local water rights systems are not just incomprehensible and inadequate to conventional wisdom (labeled rationality) or standard concepts of justice; in the eyes of officialdom they are most of all unmanageable—expressing ‘unruly disorder’ and going beyond official control” (Boelens, 2009, page 310).

Law and disorder in Tijuana?
In Tijuana, the proliferation and control of illegality have been central to the city’s development. Located in a semi-arid watershed with only 196 mm (less than 8 inches) of annual rainfall, Tijuana relies on imported Colorado River water to supply its estimated 1.2 million citizens (CONAGUA, 2010; Mumme and Aguilar Barajas, 2003). The physical limits of water supply, governed by the 1944 Colorado River compact, coupled with contentious development patterns and rapid growth following the Second World War, has produced an uneven geography of provision (Ojeda Revah and Espejel Carbajal, 2008; Pombo, 2004). “Since the beginning of [Tijuana’s] population boom in the early 1950s,” observes Mike Davis (1996, page 35), “the city has suffered from chronic shortages of water and urban infrastructure. In large part, this environmental crisis is the result of deliberate disinvestment by a federal government that for decades has used Tijuana as a cash cow to finance modernization in more central regions.” Officials claim 88% of Tijuana households are connected to the municipal

(3) Known officially as the 1944 Treaty for Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande.
water network and 73% to sewerage, but these numbers are criticized as low estimates and unreflective of rapid growth rates and patterns (Pombo, 2004).

Service deficiencies are further complicated by the raw geography of untenured land in the city. Tijuana is unique in Mexico for its unusually high proportion of asentamiento irregulares (illegally tenured settlements), which cover approximately 45% of municipal land surface and include nearly 53% of the population (Alegría Olazábal and Ordóñez Barba, 2005). Not all asentamiento irregulares fit stereotypical images of poverty: swanky high-rise condos, gated middle-class communities, and even the international airport share irregular tenure status alongside colonias populares—the unannexed shantytowns that pepper Mexico’s cities. But for Tijuana’s poor untenured residents, legal and bureaucratic complexities delay public provision of water and force residents to utilize informal and illegal means.

To better understand the institutional mechanics and broader implications of water illegalities, I focus on two cases of unauthorized provision in Tijuana: first, a relatively stable network managed by the neighborhood of Divina Providencia; and second, a series of roving taps created by an itinerant population based in the Tijuana River Canal. While both groups steal water from the municipal network, they were chosen because their experiences signal different polarities of state power in Tijuana.

Divina Providencia, despite its irregular status, epitomizes the conditions of many working-class neighborhoods in the Mexican borderlands (Herzog, 1990). Economic migrants from central and southern Mexico established the community roughly ten years ago, attracted to employment opportunities in a nearby Korean-owned maquiladora (export-oriented assembly plant) within walking distance. Few lots in the densely populated canyon were available, so migrants squatted on a sliver of privately owned land. Residents built ramshackle homes with available materials, hoping the city would eventually provide a way for settlers to officially purchase their land. Ten years on, the settlement remains irregular, but a few shacks have been replaced by more permanent structures of concrete block and metal roofs. Divina Providencia residents still lack key municipal services: piped water, sewerage, electricity, and paved roads.

Canal residents, by contrast, live in even more precarious conditions. In 1973 the Mexican government—with the support of US federal counterparts, and during the strong arm of the Echeverría presidency—initiated construction of the Tijuana International Flood Control Project (TFCP): a ten-mile concrete canal designed to channel and control Tijuana River as it bisects the downtown core. The Mexican federal government provided no opportunity for public input to development plans; nor did it consider ecological repercussions for downstream estuarine habitats (Dedina, 1995). Prior to construction, the federal government forcibly evicted residents of Cartolandia—or ‘Cardboardland’—a squatter settlement of 10 000 to 15 000 residents in the floodplain, living in homes made of cardboard, wood, cement, abandoned cars, and other readily available materials (Dedina, 1995, page 92). “The result was the elimination of one of the largest areas of low income housing in Tijuana, and the subsequent creation of an urban zone [designed for middle and high-income Tijuana residents] that provides little open space, recreational amenities, or affordable housing” (Dedina, 1995, page 103). While the channelization project facilitated new opportunities for capital investment in the city (Herzog, 1990), the infrastructure also laid the material conditions for increased state presence and control.

Today, Canal dwellers include homeless Tijuanenses and recent deportees from the United States, deposited across the border without resources and far from family—as recently profiled in a video by The New York Times (2011). Residents inhabit large stormwater outfall pipes that punctuate the sloped concrete walls of the Canal. An estimated 200 people reside in the stormwater outlets, relying on a mix of drug trade, sex work, and informal labor to
generate income. Because their homes are the city’s sewers, Canal residents rely almost exclusively on illegal water supply to survive.

Ethnographic research was conducted over four months in 2008 and during two follow-up trips in 2009, as part of a broader, thirteen-month study on informal water use in Tijuana. Given the sensitive and often risky nature of the research, I visited sites, met informants, and conducted interviews in the company of two local organizations (a health clinic and an environmental group), each with distinct outreach projects in the vicinity. No interviews were recorded, but some photographs were allowed and extensive field notes were taken immediately following each visit. The next section suggests that while Divina and Canal residents rely on similar sources, water theft is differently policed—creating what Foucault might call ‘usable asymmetries’ to maintain hydrosocial order.

Water illegality in Tijuana
Divina Providencia

The journey to Divina Providencia begins with a million-dollar view of downtown San Diego. At 400 feet above sea level, the colonia’s southern entry is framed by views of the Pacific Ocean to the west and the Tijuana River Estuary, Imperial Beach, and San Diego to the north. From here, an unpaved road descends into the canyon, winding past abrupt cliff edges, eroded hillsides, and new settlements. While most neighborhoods in the canyon are regularized and legally connected to municipal water and electricity, many still lack sewerage and paved streets.

Divina Providencia resembles other colonias populares in Tijuana. Houses are constructed from concrete block and inexpensive, readily available materials: plywood, wooden pallets, corrugated metal, tarps, discarded car tires, and second-hand garage doors from southern California. A primary school is located nearby; public transport is available on the arterial road that bisects the canyon. Churches, auto mechanics, and fruit stands interrupt a row of homes; tamale trucks and natural gas vendors slowly wind through the narrow grid of streets.

But unlike nearby neighborhoods with sanctioned, subterranean networks, the visibility of Divina’s infrastructure exposes its lack of formal provision. Electricity, for example, is openly pirated from the city grid. Residents latch wires directly onto electricity transmission lines—often in dense hives of tiny wires, known in Mexico as diablitos (little devils)—that bypass meters and connect directly to homes. According to community members, costs to install an illegal connection run between $260–340 pesos (US $21–27), far less than utility connection fees.

Despite the ‘clandestine’ nature of water illegality, Divina’s water network is clearly exposed: a brazen white web against canyon walls, visible to any who pass by (figure 1). The network begins high above the canyon floor, where it taps into the municipal water grid, next to a few neighbors willing to look the other way. From here, water flows nearly vertically in white PVC tubes, precariously braced against the canyon walls. At the base of the canyon, water is then distributed to households through a maze of conduits, most of which are plainly visible from the arterial road. Residents primarily access water via private backyard spigots, although a few homes share faucets. Water is used for a variety of uses (such as cleaning, bathing, and irrigation) but like nearly all Tijuanenses, residents purchase bottled water for drinking and cooking (Pombo, 2004).

(4) The research coincided with a dramatic spike in violence in Mexico (particularly in the northern border cities), following President Felipe Calderón’s declaration of a ‘war on drug cartels’ in late 2006. After the arrests of members of the Arrellano Félix cartel, violence in Tijuana escalated sharply in late 2007. Due to increased state surveillance (especially in the Tijuana River Canal), certain data collection techniques—such as recording conversations and taking field notes during site visits—were deemed inappropriate and dangerous for all involved.
Maintaining water—even from illegal sources—requires a high degree of planning, decision making, and collective effort. In Divina Providencia, water management is handled by a neighborhood comité del agua (water committee): an annually elected board of seven adult residents who maintain the infrastructural and institutional systems, such as who is permitted to access the network, how often, and under what conditions. The water committee is similar in formation to other civic committees, such as school–neighborhood relations and public safety, which are common throughout many neighborhoods in Tijuana. Every other Thursday night, the Divina water committee meets to discuss access issues, make key decisions, resolve disputes, and organize any maintenance of the water network.

During one meeting I attended, committee members gathered around the kitchen table of Don Mario (the committee head and a respected local leader) to discuss the issue of water loss in the network. Pastries and instant coffee were passed around as representatives traded gossip for plumbing advice. Finally, Don Mario called the meeting to order. A committee
member reported low water pressure in households in the northern (and lowest-elevation) end of the neighborhood—indicating either a leak or an ungenerous user. Afflicted residents suspected that a neighboring comelón—or ‘water hog’—located upstream was consuming a greater amount of water than usual. Rather than speak directly with the potential offender, the residents had approached the committee representative to intervene. After much discussion and more cups of Nescafé, the committee voted to mediate the dispute by having Don Mario talk directly with the potential offenders. While they agreed not to disconnect the comelón, they believed that a serious discussion would “bring him around.” Similar to other common property management institutions operating ‘outside’ the law (eg, Boelens et al, 2010; Robbins et al, 2006; 2009; Roth et al, 2005), the water committee’s decisions revealed a surprisingly communal ethic of water distribution, aimed at resolving conflict and sharing resources.

The Tijuana River Canal
Life in the Tijuana River Canal is far more precarious and insecure. During my first site visit, as health clinic staff organized HIV tests and a soccer game with Canal residents, a clinic worker introduced me to José: a tall, wiry man of about thirty years. José was born and raised in Tijuana; he knows the streets and sewers of Tijuana well and confirmed the presence of a toma clandestina in the Canal. “Right up the way”, he pointed, “Let’s go. I’ll take you.”

We walked east along the bleak, exposed riverbank. The stench of wastewater hung in the air, intensified by the noontime desert sun. We passed wide outfall pipes, each marked with a hand-painted number. Some are homes to packs of feral dogs; others, like number seven, are dwellings for ten to twenty people (figure 2). Not just anyone can live in a sewer outfall. In a typical setting, occupants nominate a leader: an informal ‘head of household’ who settles

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(5) The numbering system was developed by CESPT (the public water utility for Tijuana and Rosarito) for stormwater outfall identification and engineering purposes. Over the mouth of each pipe, CESPT has painted an identifying number, which Canal residents use as ‘addresses’.

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Figure 2. Stormwater outfall number 7, Tijuana River Canal (source: author).
arguments, protects residents from local threats or police, and asks for a small rent (such as drugs or money) in exchange. Potential cohabitants must meet approval of both the leader and sewer occupants. During the winter rainy season, most residents remain in the sewers, moving their beds to higher ground to avoid hazardous high-volume stormwater flows.

As we walked, José pointed out sites of former water sources that Canal residents deliberately abandoned. As in Divina Providencia, water access in the Canal is very exposed. Residents rely on a shifting configuration of illegal taps, often operating in broad daylight but placed at relatively safe distances from city hall and police training grounds. Residents tap into the grid based on a variety of factors: distance from state offices and active neighborhoods, location of the subterranean water network, and available materials. José described how a poorly placed tap might attract too much attention from the nearby neighborhood, and more significantly, the police.

Canal water is managed less formally than in Divina Providencia. At the *toma clandestina*, we found four men washing laundry—the site also serves as the neighborhood bath, laundry facility, and gathering area. José introduced us and explained the mechanics of the water system: a small valve, linked to the underground city network, had been carefully tapped open by a piece of metal (or any suitable object) until it leaked a slow trickle of water. The pipe opening was encircled by a discarded car tire, which was weighed down with rocks and plugged with plastic bags to prevent leaks (figure 3). Residents carefully drew water from the tiny basin for washing laundry, dishes, and themselves. The area was well maintained, relatively clean and free of trash. One man had finished washing clothes and was methodically scrubbing algae off the concrete bank. When I asked why state authorities hadn’t shut down the tap, one resident replied, “Well, maybe if this was a major leak, then they would care. But not much water flows from this tap. [CESPT, the state utility] just passes by.”

![Figure 3. A *toma clandestina* in the Tijuana River Canal. Potable water is drawn from the small basin inside the car tire, not from the adjacent river, a ‘dirty’ source according to Canal residents (source: author).](image-url)
These snapshots of Divina Providencia and the Canal suggest that the illegal appropriation of water is neither lawless nor uncontrolled, neither boundless nor untamed (Robbins et al., 2009). Water in Divina Providencia is exclusively distributed among households within the limits of the informal settlement and within reasonable reach of the bootstrap network. Illegal water use by Canal residents generally covers the area within the contours of the Canal, but given the tremendous mobility of Canal dwellers, boundaries typically morph around the practices of illegal water use as opposed to a fixed or single geographic location.

Moreover, provision in both communities is self-governed, shaped by specific norms, rules, and conflict resolution mechanisms. In Divina Providencia, the water committee collects small fees from residents to coordinate infrastructure repair, such as a leaky pipe or faulty fitting. Grievances are aired at biweekly meetings; sanctions for overuse are graduated and intended to ensure eventual cooperation, not punishment.

Canal residents, by contrast, have developed more fluid and informal processes of making rules and reaching decisions. Residents employ a ‘guard’ who maintains the area and alerts water users to police activity or outside surveillance. “The guy who does this stays here day and night, guarding the site,” José explains, “He’ll charge five to ten pesos per use, or take drugs in exchange.”

Policing theft
Water theft functions as a productive site of water provision, community organization, and—as Foucault would assert—uneven displays of state power. The Divina network, for example, has been in continuous operation for years, in spite of its visibility from the main road. Interruptions in water service are rare and flow is nearly always constant. During a site visit, I asked one of the water committee members why she thought the Divina network operates with impunity. Sitting in her small corner shop, she waved toward the canyon walls outside. “Listen”, she explained, “We are citizens. We vote, every election. The political representatives from this area would never shut down our tap. Who would vote for them then?” Local representatives (such as members of the city council), she suggested, would never politically rebound from a media flurry surrounding the closure of illegal taps used by working-class Tijuana citizens. Of course, not all colonias are granted a free pass. Communities with illegal provision have highly fragile relationships with Tijuana officials: some are entirely ignored by city government, others have lobbied for and won utility services despite questionable tenure status, others have remained in squalid living conditions without any access to basic services for decades (Alegría Olazábal and Ordóñez Barba, 2005).

The experience of Divina Providencia contrasts sharply with that of the Canal residents. During a visit to the Canal, two months after my first trip, the force of policing water theft became particularly evident. As the clinic staff and I drove along the concrete riverbanks, we immediately sensed trouble. The Canal was eerily empty—of refuse and of residents. On both riverbanks, teams of city workers cleared weeds, picked up trash, painted over graffiti, and swept dirt into small piles for removal. Overhead, billboards advertised an upcoming concert by a famous norteño band, the centerpiece event of the city’s 115th anniversary festivities. The concert, it proclaimed, was to be held in the Canal, directly in front of city hall, one of the few open outdoor spaces in an otherwise dense city core.

Accompanied by Cabrera, a former Canal resident, we drove two miles east to the toma clandestina. What was a heavily used and well-managed tap two months earlier (figure 3) was now cemented over and deserted (figure 4). Remnants of tattered clothing, strewn along the river’s edge, were the only indications of previous use. “This [abandonment] is normal”, explained Cabrera, “although it surprises me because this toma had been used for a long time, almost two years.” Closer to city hall and police training grounds, illegal taps are routinely shut down and cemented over, Cabrera explained, but this particular site was well established
and had been relatively safe from city authorities. “CESPT, the police—this place didn’t matter to them”, he explained, until now, on the eve of the anniversary celebrations. Later, we learned that residents had been rounded up by police, loaded into the back of pickup trucks, taken to police headquarters, and booked into city jail. CESPT arrived later to cement over the taps.

The timing and manner of the forced eviction suggests that state authorities closed down the tap not because it taxed the municipal water network, but because the Canal residents (and their bootstrap system) interfered with city hall’s quest for order in the city. Residents were hauled off and their taps closed when the city government wanted this space for its concert spectacle. The eviction was not an effort to help residents solve their many problems, but a clear attempt to erase any marking of their existence, to punish them for their unacceptable visibility. In effect, Canal residents were not

**Figure 4.** An abandoned *toma clandestina* in the Tijuana River Canal. This tap is the same as the one pictured in figure 3, but taken two months later, following a forced eviction of Canal residents by police (source: author).
punished for illegal activity; they were punished for being the wrong bodies in the wrong place, in the name of order.

**Discipline and order in the waterscape**

State tactics to control the distribution of water—whether by extending the grid, participating in bribes, silent recognition of unauthorized networks, or cracking down on illegal users—shapes development by defining the water consumer, a process of scripting the ‘bad’ or ‘invisible’ citizen as well as the ‘good’ (Kooy and Bakker, 2008; see also Boelens, 2009; Boelens and Zwartveen, 2005b). Water development is a bodily and biopolitical act: the construction of bootstrap infrastructure, the surveillance of clandestine connections, the tracking and punishment of specific people, the deliberate disregard of illegal networks, the corporeal differentiation between and among the urban poor and waterless. On one hand, ‘acceptable’ citizens like the residents of Divina Providencia are able to retain their highly visible but illicit water network. On the other hand, the ‘unacceptable’ denizens of the Tijuana River Canal face frequent displacement and abuse from state authorities. Such tactics result in the tacit legalization of some accompanied by the illegalization of others (Boelens, 2009).

What implications do these practices hold for understanding the relationship between illegality and state power? Clearly, water theft is simultaneously political and biopolitical (Bakker, 2012). State authorities use illegal forms of urban service provision as a wellspring of power. In the words of Foucault, disciplinary practices are used to mark and register different types of ‘delinquency’ among the populace and, more significantly, to use disorder for productive ends.

“Philippe Boucher says it very well: the issue is not in the smaller or larger quantity of disorder but in the nature of the effects that it produces. Now, the fact is, in the judicial apparatus that watches over us, the disorder produces ‘order’. And in three ways. It produces ‘acceptable irregularities’ under the cover of which (assisted by habit and convenience) we find ourselves in a state of tolerance assented to by just about everyone. It produces ‘usable asymmetries’ providing benefits to a few at the cost of the others who either don’t know it’s happening or are too dumbstruck to protest. But finally, and above all, it produces what has the highest value in civilizations like ours: social order” (Foucault, 2000c, page 437).

Illegality, in certain cases, is productive for state power. The act of stealing water is an ‘acceptable irregularity’ in Tijuana: water theft provides a vital resource for marginalized citizens, transfers the burden of water governance to self-managed systems, and shifts the responsibility for operations and maintenance to individuals and communities. State authorities tolerate relatively established communities like Divina Providencia, a neighborhood that refuses to pay for water service, in the broader service of social order and control.

Yet popular illegalities are fragile achievements: state power unfolds unevenly among various infrastructural and institutional assemblages. For every tolerated community, there is crackdown and clearance: sites in which state authorities distinguish those deemed ‘out of order’ through mechanisms of water surveillance (eg, meters, visual patrols, flow technologies) and punishment (eg, disconnection, bodily harm, physical removal). In Foucaultian terms, the uneven exercise of state power is advantageous; by alternating tolerance and repression, state authorities create a ‘usable asymmetry’ (Boelens, 2009). “Penality would then appear to be a way of handling illegalities, of laying down the limits of tolerance, of giving free rein to some, of putting pressure on others, of excluding a particular section, of making another useful, of neutralizing certain individuals and profiting from others”, explains Foucault (1977, page 272).

At the same time, and as the Tijuana cases suggest, state power is never complete. To push Foucault a bit further, consider Jacques Rancière’s (2004) notion of ‘the police’. For Rancière,
the police is more than a technique of governance or an institution; it is an ontological law, a rule governing the appearance of bodies, a configuration of occupations and the properties of the spaces where such occupations are distributed (2004, page 29). The logic of appearance authorized by the police is not a transcendent order imposed by humans; it emerges from the dense materialities of bodies and objects: the water meter and city network, for example, or the car tire and illegal tap. This conceptualization of the police builds on Foucault’s practice-oriented theory, but gives space to the slippages and failures that are inherent in any exercise of power (Shaw et al., under review), even in the liminal spaces of a Tijuana colonia.

These insights also push critical understandings of water development in several ways. First, de jure and de facto systems are deeply intertwined in what Boelens calls a “shotgun marriage” of officialdom and local law systems (2009, page 315): both modes of development depend on each other in complicit and complicated ways. Beyond mere voting and representational issues—as voiced by Divina residents—the state (including its formal legal and policy framework) bases its very survival on the continued existence of illegal and customary water rights (Boelens, 2009; Roth et al., 2005). Because many developing countries, including Mexico, are unable to provide water for all sectors of society, the state relies on informal (and even illegal) modes of water supply to reach the citizenry and guarantee its legitimacy. In this case, neoliberal policies and institutional changes may force reliance on informal and illegal provision—even as state authorities crack down on illicit abstraction and the World Bank encourages the reduction of nonrevenue water losses.

Second, all modes of water development—whether explicitly ‘neoliberal’ or implicitly ‘informal’—are enacted through particular bodies, objects, and practices: the homeless deportee, the clandestine tap, Doña-Rosa-as-plumber, the entangled mess of PVC pipes. Certain modes of informal development are tolerated; others are severely punished. A key point is that the differentiation of water rights and wrongs, as Foucault suggests, occurs on a bodily and thus biopolitical level—where the voters of Divina Providencia are tacitly accepted by authorities, while the denizens of the Tijuana River Canal are deemed out of place, forcibly removed, and hauled off to jail. The fragmented nature of such power geometries indicates that “not all uses and customs are denied; some essentialized local rules and rights are allowed and institutionalized, at the expense of most others and at the cost of intensifying the repression of more fractious, defiant, and disloyal norms” (Boelens, 2009, page 318). Because water provision is so fragmented, site-specific, and complex—often characterized by both formal and informal infrastructure, institutions, and use—the lack of a hard edge and linear ‘logic’ to state enforcement may help explain why grasping the extent and effects of ‘neoliberal natures’ has proved to be a conceptually difficult project (Perreault and Martin, 2005).

Finally, the Tijuana cases carry serious implications for envisioning and enacting alternatives to mainstream water development. On one hand, water theft does not necessarily operate ‘outside’ of or even ‘against’ mainstream development (Boelens, 2009). Indeed, many informal water institutions are considered to be the direct result of state restructuring and ‘roll-back’ policies (Bakker, 2010; Gandy, 2006; 2008; Swyngedouw, 2004) or are thoroughly embedded within broader neoliberal projects of water governance and infrastructure development (Boelens and Zwarteveen, 2005b; Guevara-Gil, 2010; Hendriks, 2010; Perreault, 2008). In these cases, then, water theft constitutes a form of double exploitation: first exclusion and failure by one arm of the state, then intimidation and violence from another.

On the other hand, the Tijuana cases reveal that even theft can create a ‘commons’—an autonomous communion of humans and nonhumans that work and live together (Shaw et al., under review)—guided by decisions that cultivate horizontal planes of resource accumulation and distribution. The water committee in Divina Providencia, for example, elected to
resolve conflict face to face rather than immediately disconnect a *comelón* member. In the Tijuana River Canal, water is never denied to residents, no matter how down on their luck. Beyond Tijuana, informal water provision may even run counter to neoliberal objectives in the water sector: whether through explicit struggles to reconfigure state power (Perreault, 2008), through strategies of ‘civil disobedience’ against policies perceived as socially or environmentally unjust (Meehan, 2012; Morgan, 2008), or via the creation of norms and normative structures that elude bureaucratic definition and control (Boelens et al, 2010; Roth et al, 2005). Together, these practices “form part of strategic, political struggle for counter-identification and legitimization of own authorities, which also includes the construction, by local user collectives and *campesino* and *indígena* federations, of their own discourses about the meaning of ‘community’” (Boelens, 2009, page 329).

**Conclusion**
Informal and illegal water provision has emerged as a major object of concern for mainstream development. In particular, water illegalities are increasingly pinned on ‘weak’ state agencies and technical failures, and blamed for inefficiency and underdevelopment. Yet, as this article has demonstrated, so-called ‘water losses’ are anything but technical matters. Stealing water in Divina Providencia and the Tijuana River Canal requires a great deal of institutional effort: the design of networks, the sweat of fitting pipes, the headaches of quarreling neighbors, the worries of security. Choices must be made over where to connect, who to supply, and how to distribute. Leaks require maintenance, overuse obliges sanctions, and conflicts demand resolution. Producing water informally, in short, requires biopolitical work.

The aim of this paper is not to celebrate illegal water provision as an antidote to neoliberal modernity. Theft, as J K Gibson-Graham (2006, page 98) observe, is “violently and coercively present” in the diverse economic and normative landscape; and not all illegal modes of development facilitate ethical communion. Water cartels, for example, are common in many cities and contribute to water monopolies, severe price inflation, and microgeographies of exploitation (Bakker, 2010; Gandy, 2006; 2008). Nor is there any guarantee that illicit resource provision is more ‘just’ than state, corporate, or public–private models of water management (Bakker, 2010).

What I do suggest, however, is that understanding water theft as biopolitical, as a crucible of both achievement and punishment, allows us to better situate informal practices and practitioners as generative of water development. Furthermore, the article suggests that illegal water use is not necessarily antithetical to state power, but operates in subtle acts of material differentiation and discipline. Policing water theft is a biopolitical act: the monitoring and tracking infrastructure and bodies, the differentiation among the urban poor or dispossessed, the tolerance of ‘acceptable irregularities’ while creating ‘usable asymmetries’ to maintain hydrosocial order—and, in effect, to discipline informal modes of development.

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