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A Bottle Half Empty: Bottled Water, Commodification, and Contestation

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Abstract: Bottled water has rapidly been transformed from an elite niche market into a ubiquitous consumer object. Yet the literature on drinking water privatization has largely neglected the growth of bottled water and its emergence as a global commodity. This article draws on Harvey's analytic of accumulation by dispossession to explore how commodification unfolds differently across multiple forms of water. Based on ethnographic interviews with participants in two conflicts over spring water extraction in rural U.S. communities by the industry leader Nestlé, we make three arguments. First, contestation over bottled water commodification is refracted through competing framings regarding control over local water that illuminate the industry's shifting accumulation strategies. Second, conflicts over specific instances of water extraction draw on rival narratives of the purity, uniqueness, and/or mundaneness of this commodity. Third, bottled water's traits distinguish it materially and conceptually from tap water, necessitating a more nuanced analytical approach to its commodification.

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Daniel Jaffee and Soren Newman

One of the more dramatic shifts in consumption in recent years surely must be the explosive growth of bottled water, which in the space of three decades has been transformed from an elite niche product to a nearly ubiquitous consumer object in both the global North and South. Three-quarters of Americans now drink bottled water regularly, and one-fifth consume it exclusively, shunning the tap (Stephenson 2009). This commodity, and the environmental, social, and cultural effects generated by its meteoric rise, sit at the nexus of vibrant current debates over the commodification of nature, the social and environmental impacts of neoliberal globalization, and the shifting boundary between the private and public sectors.

A substantial body of work examines the privatization of drinking water supplies, most pronounced in the global South, as a transnational water industry has opened public water supply systems to private investment, management, and ownership (e.g., Dilworth 2007; Castro 2007; Bakker 2010). These efforts have spawned local and international opposition movements and in some cases major public protests (Castro 2008; Spronk and Webber 2007; Bond 2005). Yet this scholarly literature on water privatization has almost entirely neglected a parallel modality of commodification: the rapid growth of bottled water and its transformation into a global industry. This commodity renders water far more mobile and profitable than municipal delivery systems can, and its insertion into consumption patterns and accumulation strategies raises fundamental questions about how processes of commodification unfold differently within what is superficially a single resource.

We make three principal arguments in this article. First, contestation over specific instances of bottled water commodification is refracted through competing narratives regarding the loss or retention of control over local water. While these narratives do not necessarily reflect the actual changes in rights and property relations at play, they illuminate large water firms' evolving commodification strategies. Second, conflicts over bottled water extraction draw on rival narratives of the purity and uniqueness, or mundaneness, of this relatively new commodity that have yet to be addressed by the scholarship on water privatization. These narratives illuminate both the rhetorical approaches used by industry to facilitate commodification and the substance of local conflicts over specific instances of bottled water extraction. Third, bottled water requires a reassessment of the ways that scholars have conceptualized the privatization and commodification of water, approaches based largely on analyses of municipal (tap) water. This commodity, we show, is characterized by several traits—key among which are its higher portability and profitability—that make it materially and conceptually distinct from tap water, necessitating a more nuanced analytical approach to its commodification.

In the following section, we examine debates over the privatization and commodification of water, drawing upon scholarship from sociology, geography, and anthropology. We briefly synopsize the issues raised by tap water privatization globally, and discuss the obstacles that drinking water as a market good poses to accumulation. A third section examines the rapidly growing commodity of bottled water, tracing its role within the global water industry and surveying the local conflicts that have emerged in response to the industry's expansion in rural communities. After a description of our data and research methods, the fifth part of the article draws on ethnographic interviews with participants in two such conflicts over proposed spring water extraction in the U.S. by Nestlé, the leading bottled water firm, to illuminate the

relationship between divergent framings of water and shifting corporate strategies. A sixth section analyzes the implications of both the case studies and the broader context for understanding the dynamics of water commodification. Finally, we offer some concluding observations.

Perspectives on Water Commodification

The geographer David Harvey's (2003) influential notion of "accumulation by dispossession" offers useful analytical purchase on the dynamics of water commodification. Harvey extends upon Marx's (1867) framework of primitive accumulation, by emphasizing how capital responds to a crisis of overaccumulation—"a condition where surpluses of capital…lie idle with no profitable outlets in sight" (2003: 149). Accumulation by dispossession is a strategy in which hitherto uncommodified or inaccessible assets are released into the market at little or no cost, offering renewed opportunities for profit. Harvey argues that this approach has moved to center stage during the present neoliberal era, beginning in the 1970s. He describes privatization as the phenomenon's "cutting edge," stressing the role played by international financial institutions in imposing privatization of public goods, services, and property upon Southern debtor nations under structural adjustment regimes. "The corporatization and privatization of hitherto public assets," writes Harvey, "… to say nothing of the wave of privatization (of water and public utilities of all kinds) that has swept the world, indicate a new wave of 'enclosing the commons'" (2003: 148). Such modern enclosures entail commodification accompanied by exclusion, whether that exclusion is physical or economic in nature. Harvey also focuses on the wide range of social movements against accumulation by dispossession around the world, noting their frequent emphasis on themes of "reclaiming the commons" (2003: 166).

Several scholars (e.g., Ahlers 2010) have accepted Harvey's invitation to apply this framework explicitly to the commodification of water, examining both broad processes of commodification and the institutions and policies through which they are implemented, as well as specific case studies of water privatization around the world and the oppositional social movements they have generated. Examining social struggles against water privatization in Bolivia, for example, Spronk and Webber (2007: 32) argue that the concept of accumulation by dispossession encompasses "not merely privatization of formerly state or public resources but their acquisition by transnational capital in the U.S. and other core economies."

However, state involvement is necessary to facilitate and ensure capital accumulation. Water privatization, argues Swyngedouw, illustrates that "without the various state levels paving the way and imposing conditions that guarantee privatization …this accumulation by dispossession could not possibly take place" (2005: 89). Examining markets for water and environmental services, Mariola (2011: 237) argues that "the process of commodification is not as straightforward as predicted…[i]t is contradictory and contested and ultimately more mediated by state intervention than a more typical commodification process might be." These arguments clearly echo Karl Polanyi's (1944) trenchant critique of the "self-regulating market." Polanyi's distinction between genuine commodities and what he termed the "fictitious commodities" of land, labor, and money, is also useful in understanding these dynamics. Water, an element of Polanyi's land, represents a prime example of the commodity fiction and its attendant risks.

Also underlying the widespread conflicts over water commodification is a clash between differing conceptualizations regarding the nature of water itself. While water has long been understood as a public good and a "material emblem of citizenship" (Bakker 2010) by governments, this has changed in the neoliberal era. Beginning with the Dublin Statement and

Principles of 1992, which controversially declared that "water has an economic value in all its competing uses and should be recognized as an economic good," private water firms, international institutions, states, and other actors have increasingly framed water in these economic terms, rather than as a public good or an entitlement (United Nations 1992). Defenders of public water argue that such an approach provides a justification for commodifying public goods. Bakker argues that the status of water is "irrevocably ambiguous" (2010: 201), neither public good nor private good, and, along with other scholars (e.g., Kurland and Zell 2011), advocates viewing it instead as a common-pool or common-property resource. On the other hand, Vail (2010: 324) describes municipal water supplies as a clear example of a public good, which, like other public services, "first originated as private goods before being absorbed into the public domain after hard-fought political and social campaigns and concerted state action." Both of these positions have salience; while tap water does not meet economists' technical definition of a public good[2], universal and affordable access to clean tap water is clearly a common good with great societal benefit.

In the following section, we review the existing literature on water privatization—the bulk of which pertains to tap water systems. This literature is central to establishing the contrast with bottled water that we draw in subsequent sections. We examine the dynamics and key actors involved in the privatization of municipal water, particularly in the global South, as well as the sizeable counter-movements that have emerged in response, and their role in slowing the progress of privatization. We also describe a range of barriers that municipal water as a market

[2] The formal economic definition of public goods involves two criteria: non-rivalry (consumption by one individual does not detract from use by others), and non-excludability (prohibiting use is difficult or impossible) (Feeny et al. 1990).

good has posed to corporate profitability, confounding its portrayal as a successful case of accumulation by dispossession.

Privatizing Tap Water

Inadequate spending on public infrastructure, ecological degradation, climate change, and population growth have all combined to produce what many observers term a global water crisis, leaving an estimated 40 percent of the world's citizens without reliable access to potable water (Shiva 2008; Barlow 2007). Even where quantities are adequate, supplies are often polluted or insufficiently treated (Bakker 2010; Loftus 2009). In many cities of the global South, only upper-income residents are served by the municipal piped water networks taken for granted in much of the North. Middle- and lower-income residents often must rely on a mix of informal sources, including water vendors or locally bottled water (for which they pay many times more than their neighbors served by tap water), communal faucets, rainwater harvesting, or surface water (Bakker 2010). In part because of this growing crisis of both quantity and quality, water has been characterized as the figurative "blue gold" of the 21st century (Barlow and Clarke 2002; Dilworth 2007) and is increasingly viewed as a profitable commodity to be sold to consumers at market rates. This context has facilitated the emergence of a global water industry, now dominated by two French-based corporations, Veolia (formerly Vivendi) and Suez.

The privatization of public water services in the global South was largely imposed, especially during the 1990s, through World Bank and IMF loan conditionalities and structural adjustment programs requiring states to open up public utilities for sale, lease, or concession (Goldman 2005; Castro 2008; Conca 2008). In 2011, private water firms supplied over 900 million people, or 13 percent of the global population—up from 50 million in 1990. (Pinsent Masons 2011).

The official rationale for privatization in the South was the failure of public water utilities to attract sufficient investment to extend service to growing populations. This lack of capacity, however, was often more a result of the strictures of foreign debt than of corrupt or inefficient state management. Nevertheless, the "state failure" argument dovetailed well with the ideological shift toward neoliberalism in international financial institutions, and has prevailed for two decades (Bakker 2010). The private water industry, along with the World Bank and some governments, also argue that creating markets for water is the only effective means to ensure its conservation in an era of scarcity (Goldman 2005; Sjolander-Holland 2005). However, water is also essential for life, irrespective of consumers' ability to pay. In some cases, the privatization of tap water has made it "so unaffordable that citizens are forced to drink water from contaminated sources" (Kurland and Zell 2011: 329). This sets up a fundamental contradiction that has made water a flash point for resource conflicts in both the South and the North (Alurralde 2006; Spronk and Webber 2007; Olivera and Lewis 2004).

A voluminous literature examines the record of long-term water concession contracts in the global South—the dominant model promoted by the World Bank and IMF in the 1990s, involving mainly large transnational firms—which partly reflects the ideological divide over privatization itself. However, the majority of observers concur that private sector involvement over the past 25 years has failed to meet the stated goal of providing "water for all" (Kessides 2005; Prasad 2006; Castro 2008; Swyngedouw 2005). Even the World Bank acknowledges that concession contracts have not generated a significant number of new water connections (World Bank 2005).

Currently, there is a "stalemate" in water privatization in the global South (Bakker 2010). Large transnational firms have pulled out of most long-term concessions, but are still involved in

managing some water supply and sewerage systems, with significant growth in Asia, and particularly China (Barlow 2007; Packaging Digest 2010). The trend of deprivatization has been particularly pronounced in Latin America, with most remaining water contracts now in the hands of smaller, national companies (Lobina and Hall 2007). What led to the downsizing of this project of accumulation by dispossession, so actively supported by international institutions and states? The reasons for the privatization stalemate are particularly germane to the contrast with bottled water we make in the following sections. Lobina and Hall (2007: 4) argue that the two principal reasons for the withdrawal of water multinationals were "public opposition, and the failure to make large enough profits."

Protests against water privatization, while relatively infrequent, have been key factors in the cancellation of individual concessions and in changing the broader industry calculus (Bakker 2010; Lobina and Hall 2007). The archetypal example is the case of Cochabamba, Bolivia (Spronk and Webber 2007; Olivera and Lewis 2004), but major protests have also erupted in many other nations, including Uruguay, Argentina, Tanzania, and South Africa (Bond 2005; Castro 2008; Vidal 2005). Many of these local anti-privatization activists have received support from a growing network of national and international civil society groups (Lobina, Terhorst, and Popov 2011; Sjolander-Holland 2005). This emerging international "water justice" movement has insisted that water be treated as a human right and not a commodity. In 2010, the United Nations General Assembly did indeed declare a human right to water (Lederer 2010).[3]

A key argument by privatization opponents is that public utilities are intrinsically ill-suited to private sector management, because the profit motive (and the profit margins demanded

[3] While a victory for campaigners, the "right to water" framing also poses several problems and limitations (Bakker 2010), and the U.N. system is simultaneously a partner in several initiatives that have facilitated the privatization trend.

by "full-cost recovery") is incompatible with the need for long-term investment in system maintenance and water quality (Snitow, Kaufman, and Fox 2007). They also argue that subjecting a resource necessary for life to the discipline of the market is inimical to public well-being—since the rate hikes needed to ensure profit margins lead to exclusion of those unable to pay—and thus it must be managed on a non-profit basis (Barlow 2007).

Moreover, tap water privatization has often proven to be insufficiently profitable, particularly in the South. According to Loftus (2009: 957), "it is incredibly difficult to make the profits expected by private investors from the large, long-term needs of infrastructural development for poor people." However, the question of what should replace or follow market control has generated much debate among activists, NGOs, and governments. Most deprivatized water utilities have reverted to public control, and many continue to face the same problems of low investment and inability to expand the piped water networks (Spronk, Crespo, and Olivera 2012).

Corporate involvement in the U.S. water sector exhibits many of the same dynamics as in the global South. While private water utilities currently serve only 15 percent of the U.S. population, the largest private utilities are now owned by Suez and Veolia (Snitow, Kaufman, and Fox 2007; Varghese 2007). Since the 1990s, these and other firms have entered into long-term concession contracts with municipalities to manage public water and sewerage systems, and even purchased many smaller public water utilities outright. The poor overall track record of these water delivery and sanitation privatizations (characterized by large rate hikes, more frequent water quality emergencies, and diminished service levels) has led several U.S. cities—including Atlanta, New Orleans, Indianapolis, and Stockton, California—to remunicipalize their water delivery systems in the past decade (Food and Water Watch 2008; Snitow, Kaufman, and

Fox 2007). However, the current recession has reversed this trend yet again, as municipal governments turn to the private sector seeking solutions to their increasingly dire fiscal crises, with a new emphasis on outright system sales (Food and Water Watch 2010). The longer-term infrastructure backlog in the U.S. water sector, estimated at up to $1 trillion, has both exacerbated this new round of privatization and threatened water quality, leading to several high-profile (albeit rare) instances of contaminated water (Szasz 2007; Gleick 2010). These factors, as we describe below, are related to the growth of bottled water.

Bottled Water

As consumption of bottled water has soared, the industry has undergone a rapid transformation. Until the 1990s, most bottled water was supplied by smaller regional firms. However, it has since become a $65 billion industry dominated by four transnational food and beverage corporations—Nestlé, Danone, Pepsi-Cola, and Coca-Cola. The U.S. bottled water market is worth over $15 billion annually, with Nestlé controlling over one-third of sales, and Coke and Pepsi each at 11 percent (Beverage Marketing Corporation 2010; Boreal Water News 2010).

Several trends have driven this growth and concentration. Lifestyle shifts, including a decline in meals consumed at home and demands for greater convenience, have led to rising consumption of single-serving containers of all beverages (Rodwan 2011). In addition, underinvestment in public water infrastructure and industry advertising campaigns have contributed to public fears about tap water quality. Bottled water firms promote their product by appealing to consumer concerns with safety, purity, health, and social status, and often subtly or overtly denigrate tap water quality (Szasz 2007; Parag and Roberts 2009). Between 1980 and 2006, annual U.S. consumption of tap water fell by 36 gallons per capita, while bottled water

consumption rose from 3 gallons to 28 gallons per capita.[4] Opinion polls attribute these shifts to increasing public perceptions of unsafe tap water (Gleick 2010; Stephenson 2009; Parag and Roberts 2009). This reflects what the sociologist Andrew Szasz terms an "inverted quarantine" response to environmental threats. "Rather than do something politically or collectively to improve the public water supply," writes Szasz (2007: 128), people "try, individually, to assure themselves a supply of water that they think is safer to drink." This has important implications for the supply of public water and other goods. The growth of such consumption-based strategies can be seen as both an artifact of neoliberal ideology—because of their emphasis on individual and market, rather than collective, approaches to social problems— and a cause of further loss of trust in government's ability to protect public health, for example through supplying a clean and safe water supply (Author, Forthcoming).

Until recently, the majority of bottled water in the U.S. came from natural springs. However, although many consumers remain unaware of the fact, half of all bottled water sold in the U.S. is now actually tap water (up from one-third in 2000), drawn from treated municipal water supplies, filtered, and sometimes supplemented with minerals. Coca-Cola's Dasani, Pepsi's Aquafina, and Nestlé's Pure Life brand consist entirely of tap water, and overall the industry continues to turn toward municipal sources (Food and Water Watch 2010; Szasz 2007).

The picture in the global South is somewhat different. Driven by the retreat of many states from maintaining the public water networks that do exist, and the lack of access to tap water as urbanization outstrips infrastructure, city dwellers in many places turn to local vendors selling bottled water (of often dubious provenance) as part of a mix of informal sources (Bakker 2010). Mexico leads the world in bottled water consumption at 64 gallons per capita, and

[4] This statistic, however, conflicts with the industry's contention that bottled water displaces consumption of soft drinks, rather than tap water (Gleick 2010).

demand is also rapidly growing in Asia, the Middle East, South Africa, and Eastern Europe (Rodwan 2011; Boreal Water News 2010). Water also increasingly figures in global trade, with one-quarter of all bottled water crossing national boundaries (Barlow 2007).

Selling bottled water, and the commodification it entails, has become central to corporate accumulation strategies. "It's a question of whether we should privatize the normal water supply for the population," said Nestlé's CEO, Peter Brabeck:

> The NGOs…bang on about declaring water a public right. That means that as a human being you should have a right to water. That's an extreme solution. And the other view says that water is a foodstuff like any other, and like any other foodstuff it should have a market value. Personally I believe it's better to give a foodstuff a value so that we're all aware that it has its price. (Wagenhofer 2005)

Bottled water has at least two key traits that make it more amenable to capital accumulation than tap water: it is more portable and more profitable. Its package has allowed bottled water to escape the truism that water is largely place-bound, "used and disposed of locally," (Bakker 2010: 2010) and to become a global commodity. Bottled water firms do not face many of the public health and environmental regulations, or the large fixed infrastructure costs, that affect private firms managing municipal piped water systems (Loftus 2009; Bakker 2005). Nor do they confront the same level of price inelasticity faced by private tap water providers, who have encountered major social protests after raising rates to ensure profit margins of 15 percent (Bond 2005; Castro 2007; Spronk and Webber 2007, Author Forthcoming). Profit margins for bottled water, in contrast, are typically higher, ranging from 25 to 35 percent and sometimes more for large bottlers (Natural Resources Defense Council 1999; Gleick et al. 2007)

The social science literature on bottled water is surprisingly sparse, considering the importance of the cultural and social shifts the commodity has engendered. Treatment of the issue in the news media, popular books, and NGO reports has focused on the key concerns raised

by critics, including bottled water's cost, safety, and environmental impact. Per unit of volume, bottled water costs between 240 and 10,000 times more than municipal tap water (Barlow 2007). Families in the U.S. spend on average between 0.4 and 1.0 percent of household income on this product, and over 10 percent reported giving up other needed items to purchase bottled water (Gorelick et al. 2011). Nevertheless, bottled water is no safer overall than tap water, and sometimes far less so: a 2008 study of 10 major brands in the U.S. uncovered 38 pollutants, including arsenic, bromates, chlorination byproducts, and trihalomethane (Environmental Working Group 2008; Stephenson 2009).

Negative environmental externalities are another concern. According to Gleick and Cooley (2009), the energy expenditure needed to produce, bottle, cool, and transport bottled water is between 1,000 and 2,000 times higher per unit volume than providing tap water. Bottle disposal is also problematic. Of the more than 30 billion plastic bottles used annually in the U.S. alone, three-quarters are not recycled, ending up in landfills or as litter. Much of the plastic that is recycled is exported, predominantly to Asia (Gleick 2010). Effective plastic recycling systems are nonexistent in much of the global South, and plastic litter poses an increasingly large environmental problem.

In response to these and other concerns, movements against bottled water have grown, taking two primary forms. At the consumption end, a movement to "take back the tap" has been led by local governments and allies in Northern cities (including Cleveland, Chicago, Minneapolis, Paris, and London) concerned about the devalorization of municipal tap water and the disappearance of public drinking fountains. In some cases this has taken the form of bans on public purchases of bottled water. A number of schools, universities, and other institutions have also ceased purchasing bottled water, instead promoting refillable bottles (Velasquez-Manoff

2009; Cotroneo 2008). These efforts, combined with the global economic downturn, led to declining bottled water sales in 2008 and 2009 for the first time ever. Although total worldwide sales grew again in 2010, per capita consumption in most of Western Europe and North America has remained stagnant or dropped (Rodwan 2011).

The other major form of opposition has taken place at the production end, involving grassroots opposition to spring water extraction from rural communities. Nestlé, the largest spring water bottler, has been the primary focus of this opposition, which has increasingly coalesced into an international anti-bottled water movement, coordinated by NGOs including Corporate Accountability International, Food and Water Watch, and the Polaris Institute. Conflicts over Nestlé's proposals for new high-capacity bottling plants have taken place throughout groundwater-rich regions of the U.S. (Barlow 2007; Clarke 2007; Velasquez-Manoff 2009). The concerns raised by local residents and environmental groups in these communities include pollution and noise from truck traffic, the depletion of water tables harming local agriculture and fisheries, and the minimal compensation paid for large volumes of extracted water (Snitow, Kaufman, and Fox 2007). Activists in Wisconsin, for instance, forced Nestlé to withdraw a proposed bottling plant in 2000, but shortly afterward, the company successfully sited a similar plant in western Michigan, generating substantial local opposition and a legal battle that eventually reached the state Supreme Court (Snitow, Kaufman, and Fox 2007; Hall 2009). Bottled water extraction has also been a focus of substantial conflict in the global South (e.g., Raman 2010). Below, we profile two case studies of local contention over proposals by Nestlé to extract and bottle water in rural U.S. communities. These cases serve to illuminate both the industry's shifting accumulation strategies and the multivalent narratives regarding the nature of water and its commodification.

Data and Methods

The data presented in the following sections are drawn principally from ethnographic field research carried out between March 2010 and June 2011. The authors conducted semi-structured interviews with participants on multiple sides of the controversies over Nestlé's proposed bottled water extraction facilities in McCloud, California and Cascade Locks, Oregon. These included the staff and volunteers of local, regional, and national NGOs and advocacy groups; community residents; local and state officials; and the Nestlé staff member central to promoting both proposed facilities and negotiating with local officials. Twenty-nine interviews were conducted with 28 participants (one was interviewed twice); they lasted between 45 minutes and two hours, and were audio recorded. The researchers constructed a core list of respondents from a small number of key informants and expanded the list through snowball sampling once interviews began. Table 1 provides a detailed breakdown of the respondents by community and by organizational affiliation.

The interviews were transcribed and coded to identify themes that emerged through analysis. We aimed to construct a sample that was broadly representative of the range of participants and opinions involved in each of the two case study contexts. We present quotes from only a subset of the interviews, for reasons of length and in order to represent the key actors and major issues in each of these sites. However, the entirety of the interview data strongly informs the larger analysis. The choice of which interview respondents to include directly in the article was made with the aim of representing the range of positions regarding water extraction among residents of both case study communities, as well as the key leaders and organizations that were most influential in each local case study and in national conflicts over bottled water in the United States. The interviews were transcribed and coded to identify themes that emerged

Table 1: Interview Respondents and Organizational Affiliations

Organization or Group of Respondents	Headquarters/ Location	Scope of Operations	Type of Organization	Case Study Site(s)	Number of Respondents
Nestlé Waters North America (Nestlé S.A.)	Stamford, CT (Vevey, Switzerland)	U.S., Canada (Global)	For-profit corporation	Cascade Locks, McCloud	1
McCloud Watershed Coalition	McCloud, CA	Local	Non-profit, grassroots	McCloud	2
Sierra Club	Washington, DC	National, Regional	Nonprofit	Cascade Locks, McCloud	1
Food and Water Watch	Washington, DC	International	Nonprofit	Cascade Locks, McCloud	2
California Trout	San Francisco	Statewide (CA)	Nonprofit	McCloud	1
Alliance for Democracy	Waltham, MA	National, Local	Nonprofit	Cascade Locks	1
Community Residents (unaffiliated)	---	---	---	McCloud	4
Public officials	---	---	---	McCloud	1
Community Residents (unaffiliated)	---	---	---	Cascade Locks	12
Public officials	---	---	---	Cascade Locks	3
TOTAL					**28**

through analysis, and which later guided the organization of the article. These themes included the retention or loss of control over local water supplies; the acceptability of market involvement in water supply; whether bottled water extraction constitutes privatization; rival conceptions of the nature and purity of multiple forms of water; the environmental and social benefits and drawbacks of water extraction; and tactical and strategic approaches of bottling proponents and opponents.

Contestation Over Bottled Water Commodification: Case Studies

McCloud, California and Cascade Locks, Oregon are both economically-stressed former mill towns that have experienced major controversies over plans by Nestlé Waters North America to establish high-capacity bottling plants to supply water for its Arrowhead brand, facilities the company claims are needed to meet growing West Coast demand. Nestlé Waters is the largest and most profitable bottled water firm, with North American profits of $4.2 billion in 2009 (Ball 2010). It currently owns 15 water brands and has bottling plants in 15 states.

McCloud is an unincorporated village of 1,200 residents located in California's northeast corner, at the foot of Mount Shasta. In 2003, the McCloud Community Services District (MCSD) approved a contract with Nestlé that opponents claim was negotiated in secret, which would have permitted Nestlé to build the largest water bottling plant in the nation. The proposal would have granted the company access to 520 million gallons of water annually from local springs for 99 years as a customer of the Services District. MCSD officials supporting the contract claimed it would generate $350,000 annually in revenues and taxes, although Nestlé would have paid the district only $0.00008 per gallon for the water, well below the industry norm (Conlin 2008a). After the District approved the contract, local opposition coalesced into the McCloud Watershed Council (MWC), which formed a coalition with two angler groups,

California Trout and Trout Unlimited. MWC also collaborated with Food and Water Watch. A legal challenge by the opponents under California environmental law slowed approval of the plant significantly. Facing a national economic downturn, Nestlé announced in 2008 that it would greatly reduce the size of the facility (Conlin 2008b). In mid-2009, the firm separately signed an agreement with city officials in Sacramento, California, to build a large plant to bottle municipal water there. Later that year, Nestlé revoked its McCloud proposal entirely, claiming it no longer needed the site, although it still owns the property.

Even as Nestlé was downsizing its McCloud proposal in 2008, the firm publicized its plans for another high-volume bottling facility in Cascade Locks, Oregon, a former mill town of 1,100 located 40 miles east of Portland in the scenic Columbia River Gorge. This proposal, at 200 million gallons annually, is smaller than the one proposed for McCloud. However, several aspects of the deal are similar, including providing the company a 50-year contractual guarantee to spring flows at fixed rates (0.2 cents per gallon, much higher than in McCloud), as a customer of the municipal water utility. This plan too would generate about $350,000 a year for the cash-strapped town. The proposal is premised on a complex water swap arrangement that would give Nestlé access to spring water currently used by a state-owned fish hatchery, in exchange for providing higher volumes of city-owned well water to the hatchery. Opponents challenge Nestlé's claims that the plant will generate nearly 50 living wage jobs (Ball 2010). Compared to McCloud, far less local opposition has emerged in Cascade Locks, but a coalition of NGOs (including Food and Water Watch and the Sierra Club) has actively challenged Nestlé's plans at the state level, mobilizing public pressure to persuade the governor to terminate the project. As of this writing, Nestlé has neither released a specific contract nor committed in writing to build the plant, and the proposal is still awaiting a final decision.

Several threads emerged from our analysis of the interview data that illuminate the broader theoretical questions regarding water commodification. These include perceptions of the retention or loss of ownership and control over local water supplies; the acceptability of market involvement in water supply, including whether or not the proposed bottling facilities constitute privatization; and divergent conceptions of the nature and purity of the multiple forms of water at play: free-flowing spring water, bottled spring water, municipal water, and bottled water from municipal supplies.

Control Over Local Water

Local residents in Cascade Locks and McCloud expressed divergent understandings regarding the retention or loss of control over local water that the proposed bottling plants would entail. Some participants focused on the specific elements of the contractual arrangements ensuring Nestlé a steady water supply at a fixed price. A former MWC staff member discussed local residents' perceptions of the practical effects of such a long-term assurance:

> The length of the contract [99 years] was egregious… they [Nestlé] really tied our hands in terms of the water supply. They said "if the water supply suffers, we'll just supply you with some water." That sort of *really* pissed people off. That's their springs … There's a sense of ownership, and so when you play on that—it's like this is your town's water, now read here in this paragraph, your drinking water, right now that you're drinking… what's going to happen to that?

In Cascade Locks, the water swap between local officials and the state has kept Nestlé out of the legal arrangements to move the spring water from the public sector into the private sphere. If the deal is approved, the company will access the water as a customer of the local water utility, but nonetheless a strongly preferred customer with contractual rights. Despite this, a representative of the Oregon Water Resources Division (OWRD) insisted that the state will not be ceding any long-term rights or protections:

> We can protect ourselves in this agreement and turn our water back on from the spring. By holding our water right, we maintain the ownership—the property right ownership of that resource. And then we're exchanging the water, kind of like in a business contract with protections in it for us.

Indeed, many Cascade Locks residents supportive of the proposed bottling plant emphasized a belief that the community would still "hold the reins" in its dealings with this multinational firm. The company's representative underscored this view of the relationship between Nestlé and the town:

> … in communities where we have water withdrawals that are coming from, for example, a municipal supply that has the spring water, those communities are the regulators for us. So for them to claim that we [would] take more than what was more than originally proposed and making it sound like it's some covert plan [is] unsupportable because the community would have the regulatory authority.

Aside from the problematic premise that small communities would effectively regulate a large multinational firm, distinctions between loss of control and loss of rights may be largely semantic. "Even though Nestlé isn't getting water rights in this particular case," the Oregon Food and Water Watch Organizer argued,

> they're gaining a lot of control. Once Nestlé invests millions of dollars building a huge water bottling facility and has a contract in which the city is obligated to give them 168 million gallons of water a year…you don't need explicit water rights in order to gain control of a resource.

The lack of a legal exchange of property rights, then, does not translate to an absence of commodification.

Rival Water Narratives

The second key issue emerging from the interviews involves competing narratives regarding the purity, uniqueness, and/or mundaneness of multiple forms of water. These include the spring water to be bottled, bottled water itself, and the public tap water that—according to different participants—these bottles will either contain, compete with, complement, and/or

supplant. These divergent framings illustrate the complex, multivalent process of boundary-drawing regarding commodification that underlies these conflicts.

When the interview participants were asked about the acceptability or desirability of market control over local water, several supporters of the bottling plant drew a comparison between bottled water and other beverages. "I would compare that to the same situation as a beer manufacturer, a soda manufacturer, anybody that uses water," said one resident of McCloud:

> I mean they're buying it just like they would be buying water there, and they're making money off of that product, so I'd say let's equalize this thing out, you know? ….you're buying the water and you're selling it… it's a commodity that people want to buy.

This portrayal of bottled water as merely one of an interchangeable set of beverages is strongly promoted by Nestlé. The firm goes to great lengths to counter bottling critics' arguments that drinking water should have a fundamentally different status because of its necessity for life, and yet at the same time works hard to differentiate its product from tap water. The Nestlé staff member promoting both the McCloud and Cascade Locks bottling plants stressed this dual narrative:

> If bottled water disappeared today, people would not be turning to tap water. People would be turning to all the other packaged beverages that we're in competition with right now. Those with sugar, alcohol, caffeine and artificial flavors and sweeteners. So we firmly believe that there is a valuable place in society for our product and we essentially want to be treated equally with all other packaged beverages. So [if] these organizations and universities and etcetera are banning bottled water, they should also be banning soda and fruit beverages and everything else in the vending machine on their properties.

Organizations opposing the corporate extraction of bottled water acknowledge the challenges of drawing a clear line regarding commodification. An organizer with Food and Water Watch argued that it makes tactical sense to focus on the unabashedly clear commodification that bottled water entails, particularly in the case of bottling municipal water:

> It's easier to explain to a person that taking water from a tap, putting it in a bottle, putting a top on it and charging you $1.50 for that is ridiculous. If they took the water and added

> vitamins to it or processed it and made it into beer and put a cap on it and then charged you five dollars for it, which argument is easier? I mean it's the low-hanging fruit; it's the ridiculous one that we go after first.

Bottled Water and Market Control

A third theme emerging from the interview data regards the issue of how water bottling challenges existing conceptualizations regarding water privatization and commodification. These frameworks, grounded in the literature on more than two decades of municipal water privatization, encounter limitations when applied to the proposed instances of water bottling.

When asked about the nature of the change represented by the proposed McCloud bottling facility, a representative of MWC responded directly, "That is water privatization. That's taking local control of a water resource out of local hands." On the other hand, a resident of Cascade Locks drew a distinction between privatization and Nestlé's rights under a prospective contract:

> I would say I'm opposed to private water ownership because I think it's a little bit like gasoline, that it could get out of hand at some point, you know, with water rationing or water control. Because I don't think private water is in the public interest. [But] the City in this case would be selling water to Nestlé, they would not own any water rights…So, I guess I'm able to separate the two issues out; it's really not a private water thing.

Yet neither of these two respondents accurately portrays the nature of the transformations that would be taking place: neither a legal transfer of water rights from the public to the private sector, nor a benign arrangement devoid of structural change. This suggests that bottled water requires a reassessment of the terminological and conceptual palette used to describe water commodification, particularly given the industry's changing legal and tactical strategies—an issue we discuss in greater depth in the following section. One of the most significant of these shifts, described in the previous section, is the turn toward bottling already-treated municipal water supplies, relatively new for Nestlé but not for its main competitors Coca-Cola and Pepsi.

The Nestlé representative involved in the McCloud facility portrayed the shift in the California case as based on the firm's changing business needs:

> Our business needs and plans changed during that four- to six-year process…We terminated [the McCloud plant] because we were able to open a facility in Sacramento in an existing building that met our business needs at the time.

Food and Water Watch's California organizer suggested that Nestlé's shift to municipal water sources will ultimately affect their efforts to site new spring water facilities. "I think they realize that they're having to fight like hell for Cascade Locks," he said,

> and that's maybe looking less appealing now, less likely for them…So if it's easier for them just to bottle tap water and deal with the [Sacramento city] council, and most consumers don't really care either way…then they can make just as much money, because I'm guessing Pure Life sells for the same amount as Arrowhead.

To the extent that the bottling of municipal water piggybacks on and profits from the long-term public investment in clean drinking water provision, it may represent a new, less contested, and perhaps more successful means to commodify the tap, as opposed to privatizing municipal water systems or enclosing public springs—not to mention a more effective strategy of "hollowing out" the public sector.

Discussion

As the previous section indicates, bottled water raises intriguing issues regarding the dynamics of water commodification and privatization, which simultaneously illuminate and complicate the application of Harvey's framework of accumulation by dispossession to this context. We identify three key areas in which these issues play out. First, social contestation around specific instances of water extraction is refracted through divergent understandings regarding the retention or loss of control over local water. Opponents stress the prospect of ceding control to distant, powerful corporations, whose pursuit of profit is antithetical to

sustainable use of local resources. Supporters of bottling, on the other hand, mobilize strong pro-market ideologies to justify a new round of economic reliance on raw material provision. They also emphasize Nestlé's proposed role as a utility customer rather than the ultimate owner of rights, to underscore the premise that local government and citizens will retain control over water resources. However, in the cases of McCloud and Cascade Locks, neither of these portrayals correctly reflects the actual changes in property relations or water rights that would take place. The long-term contractual guarantees of water supply and price stability, upon which Nestlé insists in order to protect its substantial investment, belie claims of an easily revocable, arms-length commercial relationship. On the other hand, because of Nestlé's tactical choice to purchase water as a utility customer, the assertions by local opponents and activists that the proposed bottling plants constitute privatization or a literal change in water rights are also inaccurate. These competing framings illustrate the complex ways in which contestation over the commodification of water at the local level is linked to transnational firms' broader (and evolving) global strategies for achieving control over fresh water supplies (Barlow 2007).

Second, our two case studies illustrate how conflicts over bottled water extraction draw on rival narratives regarding the uniqueness, purity, and safety of this commodity, particularly relative to tap water. These narratives shed light on what Opel (1999: 68) calls "the two-pronged strategy of the bottled water industry: establish the purity of their sources while raising the fears of contaminated public drinking waters." The Nestlé representative spearheading the company's efforts in McCloud and Cascade Locks illustrated this approach to consumer fears regarding purity and safety:

> If I stopped off in one of these truck stops where everybody stops to go in and get some candy or food or something…if I walk in there and my only choice is to go into the men's room and get water out of the tap there, I'm not going to do that. I have no idea who cleans that, I have no idea how sanitary it is. It has nothing to do with public water

> supply or the delivery system. It has to do with the point of delivery that's not regulated by the city health department. And that's the only source of tap water that's available. So I would want to have that alternative to buy a bottled water that I know. The product that they are paying for is not just for the water, but the sanitary conditions that the water is packaged in and everything that goes into the protection of that product.

Setting aside the irony that bottled water is actually less regulated than tap water (Stephenson 2009), this quote demonstrates the second half of the dual rhetorical strategy employed by industry and adopted by local proponents of bottling. For these actors, bottled water is no different from other beverages or from tap water, and yet is simultaneously quite distinct: purer and safer than the risky or contaminated tap. Thus, these opposing narratives of bottled water's utter mundaneness and novel purity are mobilized interchangeably—as both a justification for the need to commodify water and as an argument that nothing transformative is, in fact, occurring.

Yet ultimately, the notion of water's equivalency to other beverages runs into a more fundamental objection: water is a necessity for life, and unsubstitutable. There is, opponents argue, something fundamentally transgressive about commodifying drinking water, particularly when a safe, nearly free, publicly provided alternative is readily available. "Bottled water sales," argue Gleick et al. (2002: 12), "must not be considered acceptable substitutes for adequate municipal water supply. Bottled water rarely provides adequate volumes of water for domestic use, and the costs of such water are typically exorbitant." The mere availability of bottled water, that is, cannot mitigate the harm of the enclosure that makes it possible in the first place.

Third, bottled water challenges some of the predominant ways in which scholars have conceptualized the commodification of water, based largely on the dynamics of municipal water privatization. Bottled water is characterized by several traits—key among these its greater portability, price elasticity, and profitability—that render it both materially and conceptually distinct from tap water. These differences indicate the need for a more nuanced analytical

approach to this issue. As the case studies indicate, although bottled water unambiguously represents commodification, and is a clear instance of accumulation by dispossession, it does not typically constitute outright privatization. While for Harvey, privatization constitutes the leading edge of accumulation by dispossession, as Bakker (2010) makes clear, privatization is far from the only path by which the market can exert control over water. Yet bottled water, in its multiple forms, raises questions regarding the control of nature by the market that are distinct from those raised by tap water supplies. This distinction requires a reconceptualization of the phenomenon of the commodification of water more generally.

Conclusions

While accumulation by dispossession has long been a strategy of capital, Harvey argues that this phenomenon has assumed renewed importance in the neoliberal era, in which "a new round of 'enclosures of the commons' [became] an object of state policies" (2003: 158). This new dynamic is epitomized by privatization and the rapid erosion of the boundaries of the public sector that pertained for much of the 20th century, with the (often forced) retreat of states from the provision of many public services.

In this article, we have argued that bottled water complicates the principal frameworks that have been employed to understand water commodification, approaches that emerge primarily from the literature analyzing tap water privatization. While the extraction of water for bottling—whether from publicly-owned natural springs or from already treated tap water supplies—does represent accumulation by dispossession, shifting industry strategies mean that it no longer typically constitutes privatization in a legal sense. These changing forms of commodification shed light on the flexible strategies employed by capital in order to assure continued accumulation, in the face of resistance from social movements and local communities.

By addressing these shifting forms of commodification and analyzing the complex relationship between multiple modes of drinking water provision, this article aims to contribute to expanding current debates regarding the ways in which commodification, accumulation, and contestation intersect.

The dramatic insertion of bottled water into the consumption practices of the global consumer class likewise requires a consideration of the changing broader political-economic and cultural context in which transnational water firms and NGOs shape and contest popular understandings of water's role in society. "This conflict," writes Opel (1999), "can be seen as embodying the tension between the fears surrounding public water supplies and the corporate desire to exploit those fears and sell repackaged tap water." Yet while many of the dynamics at work with bottled water are distinct from those in tap water, the rise of this highly portable and profitable commodity does contribute to the neoliberalization of water more generally. Bottled water, argues Barlow (2007: 100-101), "allows people to view water as a commodity and sets the stage—one bottle at a time—for the complete corporate takeover of water." Nevertheless, the two case studies considered above also indicate the limitations of such framings. They show that contestation over water extraction for bottling mobilizes multiple and sometimes nuanced narratives among local residents, activists, and corporate representatives regarding both the retention or loss of control over local water, and water's purity, uniqueness and/or mundaneness. Understanding such dynamics, we argue, adds an important discursive dimension to these debates, facilitates a fuller appreciation of the complex ways in which commodification is manifested in particular local settings, and potentially indicates routes toward more effective responses.

Some observers have embraced the concept of decommodification to describe a range of social movements and alternative practices that push back against the extension of market control into new realms of nature and human society. Vail (2010: 313) defines decommodification as "any political, social, or cultural process that reduces the scope and influence of the market in everyday life." Laxer and Soron (2006: 28) argue that the goal of decommodification need not be necessarily the wholesale "rejection of commodities, consumption, and markets," but rather the imposition of limitations on the reach and power of the market. To the extent that local bottling opponents and larger social movements contesting the expansion of bottled water are able to link their local-control, social-justice and sustainability critiques to broader questions of the expansion of market power over society and nature, they may encounter unexpected allies in a wide range of other decommodification efforts.

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