Antipode

A Radical Journal of Geography

Gay Hawkins, Emily Potter and Kane Race, *Plastic Water: The Social and Material Life of Bottled Water*, Cambridge: MIT Press, 2015. ISBN: 9780262029414 (cloth); ISBN: 9780262329514 (ebook)

Bottled water's rapid rise as a disposable consumer object has been accompanied by a similarly swift mobilisation of diverse voices of opposition. Few commercial products of the new millennium have become so emblematic of the environmental and social consequences of free market expansion into everyday life. Since early critiques of bottled water were first mobilised in the late 1990s by NGOS such as the Polaris Institute, exposés of the industry now abound across research, NGOs, media, and even state policy. As the authors of *Plastic Water* note in their opening chapter, the bottled water industry has served as a focal point for a wide array of actors expressing concerns including the environmental impacts of the petro-chemical industry, the commoditisation and privatisation of water, and the social and labour relations implicated in a product with a seemingly excessive mark-up. It is therefore easy to approach another book on bottled water with apprehension, expecting forgone conclusions and well-rehearsed moral indignation. However, *Plastic Water* expertly identifies and addresses some limitations of prior research and in doing so posits some new and frankly far more interesting questions.

The majority of prior analysis of the bottled water industry has assumed an ontology of macro political and economic forces of neoliberalism and corporate interest, coupled with a conventional leftist critique of bottled water as an instrument of capital accumulation. While Hawkins et al. are careful to clarify that they do not deny these larger socioeconomic drivers, they do deny that cause and effect within the bottled water market, or indeed any market, can be reduced to a single logic or an isolated collection of agents and interests. *Plastic Water* sets out to examine how the bottled water market emerged out of multiple and highly situated processes and the equally varied new economic identities and practices these

markets now co-evolve with, reflecting a broader trend towards so-called hybrid, dispersed, or networked ontological positions in political ecology.

The book begins by examining the conditions under which bottled water was transformed from a niche health product aimed at a social elite into a mass-marketed disposable item. Somewhat appropriately given the book's theoretical leaning towards approaches borne out of the sociology of science (such as Actor Network Theory) the first chapter pays close attention to developments in research and industrial science which shaped how water was measured, evaluated, and packaged, and the new possibilities these developments introduced. The authors' account of the advent of polyethylene terephthalate (PET) plastics is a particularly strong example of their insistence on approaching causality from an "emergent" position, and their willingness to account for the causal efficacy of bottled water rather than simply viewing it as a passive and predetermined object. Post-Second World War developments in the plastics industry generated a new material which was strong, light, and had the translucency of glass. The authors argue the invention of this material was less a means to an end and more of an event which introduced a new material with its own performative agency, opening up new possibilities for ascribing meaning and values to water. For the first time, water could be sold as a self-contained, portable, disposable item, while still retaining the aesthetic value of appearing "pure".

Chapter 2 then examines the material and semiotic processes which allowed the beverage industry to reframe bottled water from a health product to one implicated in everyday practices ranging from sports and rehydration to a lifestyle accessory for those "on the go". From the early sponsorship of hydration studies by Gatorade, to later sponsorship of the Hydration for Health Initiative by Danone, the authors demonstrate that rather than simply promoting a product, the bottled water industry has sought to insert itself into notions of "healthy citizenship" and the practice of perpetual self-monitoring and regulation which now typify modern sports and wellbeing marketing. Bottled water is not even specifically

mentioned in many of these initiatives, or at least not by brand; what is important is the establishment of practices which depend upon bottled water. These observations then serve to underpin Chapter 3's observation that the rise of PET packaging and the reframing of its contents have ushered the rise of "frequent sipping" in modern developed consumer economies. Hydration is no longer achieved at taps or tables, but is instead a continuous endeavour dependent upon having a portable and disposable bottle of water to hand.

Having developed a strong account of the rise of bottled water, the book then moves to address an empirical blind-spot in prior research. The contestation of bottled water has largely arisen from and found its audience in developed economies. As the authors note:

> Most of the opposition to bottled water is confided to places where state provision of water is both expected and emblematic of citizenship. In many of these places, it seems no sooner had the plastic bottle of water appeared as a mass commodity as opposed to a boutique item than it became [what Bruno Latour calls] a "matter of concern". (p.146)

Analysing bottled water through such a situated lens has introduced some empirical limitations, as studies have tended to place corporations and Western consumers at centre stage of the bottled water story. Overlooked has been the role bottled water has played in the biopolitics of water supply in developing economy contexts where water and sanitation services are far from universal. Chapters 4, 5 and 6 address this gap through detailed studies of the economic identities and everyday practices which bottled water now helps to constitute in Bangkok, Chennai and Hanoi, respectively.

In Chapter 4, the authors further demonstrate the value of dispensing with exclusively macro-scale perspectives of urban water supply. Such perspectives have tended to employ dichotomies of public versus private supply and have viewed the water utility as something of

a monolithic hegemon. Instead, the authors develop their micro-scale assessment, borrowing from other works which have noted the heterogeneous and fractured nature of actually existing water and sanitation practices in urban contexts (Bakker 2010; Graham and Marvin 2001). Bangkok now has a thriving bottled water service industry underwritten by a supply network entirely independent of water utilities. Consumers pay for the delivery and collection of polycarbonate (PC) containers which contain water perceived as more reliable than public supply. Alongside such service industries, the micro-scale analysis employed by the authors reveals how differentiated and multi-tiered the bottled water industry has become: where quality ranges from bottled water which is still boiled after purchase, to higher-cost bottled water subject to greater quality control.

Chapter 5 explores how the rise of bottled water in Chennai is more than just a symptom of a water scarcity and limited public supply, but now represents an "established, ongoing participant" (p.135) in the new reality of drinking water practices within the city. No longer is bottled water a luxury item; in some places it is now an essential component of urban water supply infrastructure. Its ability to stratify its quality and price also means it now plays a significant role in reinforcing inequalities in water access and security by offering differing standards of water supply to different economic groups while arguably displacing the water utility as focal point for ensuring access.

Chapter 6 explores how the "Plastic Villages" of Hanoi navigate the contradiction between the disposable nature of bottled water emphasised in its marketing and the reality of PET waste management. These communities consist of a highly complex collection of practices of economization related to the sorting, processing, and re-sale of PET. The chapter describes how waste pickers, mostly women with no other income source, work ten hours a day and walk 15-20 kilometres collecting PET bottles. This work is usually carried out from midnight onwards when dump site authorities allow access. Analysis shows how these pickers are continually making economic calculations as regards to the market value of

specific forms of PET which are in turn driven by larger macro-economic trends. Equally, pickers are enacting economic subjectivites which are in stark contrast to recycling practices in the global North which have been portrayed as an intrinsically ethical undertaking.

The final chapters address a further empirical blind-spot which has arisen from prior work being overly focussed on corporate interests and Western consumers. Critiques have shown little inclination to analyse their own provenance and struggle for power in the post-representational political arena. Chapter 7 explores how issue networks have reflexively developed in relation to bottled water markets; how they establish legitimacy; and their role in contesting bottled water when governments are seen to be failing to do so. The chapter demonstrates that such networks are just as varied as the practices of consumption and externalities which have supported bottled water's growth. Perhaps more importantly, it also challenges the conventional wisdom that these networks are divided along public versus private lines. In what is described as "cause-related marketing", the authors point to the example of the Filter For Good campaign, a marketing initiative by Brita GmbH designed to mobilise consumers around the cause of reducing waste PET from bottled water through purchasing Brita filters instead. The structure of this campaign, as well as the subsequent online backlash to its claims about the environmental performance of filters, is used to explore how the materiality of bottled water has its own generative power. In a similar manner to the Plastic Villages of Hanoi, bottled water has impacts which are at one moment treated as negative environmental externalities and the next as further sources of value to be realised. This theme is then developed further in Chapter 8, when the authors explore the rise of "ethical" bottled water initiatives. Products such as One Water now offer a curious value proposition to the consumer, offering water as a privatised commodity while also claiming to enable acts of citizenship through channelling all profits back into water and sanitation development initiatives.

Plastic Water's rejection of conventional political economic models in favour of a study of bottled water as entangled in networks of meaning and practice brings to mind issues raised by an earlier paper in this journal contrasting such approaches to more conventional eco-Marxist models (Castree 2002). The first issue is that such a highly contingent approach struggles to *explain*; that is, there is a difficulty in separating the determining and the determined when accounting for social change. Related to this is a difficulty in abstracting any common rules and processes across case studies. Yet *Plastic Water* demonstrates how focussing on the specifics of bottled water markets allows us to understand just how contingent their rise and development has been. Far from denying that larger and social economic forces are at play, *Plastic Water* demonstrates how the categories we use to describe those forces–public, private, local, global, natural, man-made–all require a far more careful treatment than perhaps has been given in the past. Bottled water has assumed a much more varied role than conventional critiques have assumed, serving as both a frivolity and a necessity, as a prop of aspirational consumerism or an assumed means of enacting social change.

It has also been noted that such relational forms of analysis can also appear fairly agnostic towards questions of power, fairness, or the environment (Castree 2002). Instead, *Plastic Water* struck me as being deeply empathetic towards its subjects as a direct result of its theoretical approach. Bottled water's role in everyday life is expertly explored, and through doing so more nuanced questions in regards to policy and consumer responsibility are brought to light. In addition to the immediate and well documented concerns surrounding the bottled water industry, *Plastic Water* raises harder questions regarding what effect water scarcity and uneven access to water infrastructure may have on the conventional wisdom of bottled water as an indulgence, how we as citizens are expected to act on our concerns in post-representational politics, and, perhaps most worryingly of all, how these concerns are then sold back to us in new packaging.

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