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## CA☆ FORUM ON PUBLIC ANTHROPOLOGY

## Water and the Commons Imaginary

by John R. Wagner

## CA+ Online-Only Material: Supplement A

The term “commons” has come to signify a much broader set of meanings than that assigned to it by academic scholars. In public discourse, water is often referred to as a commons in situations where it exists as public property under the control of the state or as private property in the form of state-issued water licenses. In recent studies of the “new commons,” such as music, the Internet, and policing, the term is used to signify virtually any form of collective interest or public good. In this paper, I argue that the term has come to constitute a kind of social imaginary with powerful political and ethical implications, especially with regard to water management. This has important implications for social scientists who seek to inform public debate on water issues. On the basis of research conducted in the Okanagan Valley of British Columbia, I argue that the notion of commons-as-social-imaginary maps much more accurately onto observable events than do conventional definitions of commons. I conclude with a discussion of the concept of distributed, multilevel governance, pointing out its congruence with the concept of commons-as-social-imaginary, and I propose a public anthropology research agenda that is reliant on both concepts.

Contemporary literature on the commons displays a bewildering level of inconsistency in terminology. Much of the groundbreaking literature published by academics in the 1980s and early 1990s defined common property by distinguishing it from private or public property, open access systems, and public goods (Berkes and Farvar 1989; Bromley 1992; Bromley and Cernea 1989; Feeny et al. 1990; McCay and Acheson 1987). Many academic researchers and authors have subsequently adhered to these basic distinctions, but many have not, and many others have proposed additional terminological distinctions that have gained only partial or negligible support. In public discourse, meanwhile, the term is used in ways that directly contradict academic usage. These inconsistencies create enormous challenges for anthropologists who seek to communicate their research findings and policy recommendations to the general public, water managers, and elected politicians, as well as to a diverse, interdisciplinary academic audience.

In this paper, I argue that understanding commons as a social imaginary rather than as a distinct set of institutional arrangements could allow researchers to bridge these inconsistencies

and thus bring greater clarity to their analytical approaches. I begin with an examination of terminological conventions within academic theory, pointing out some of the weaknesses of those conventions. I then review use of the term “commons” in public discourse, pointing out some of the most significant inconsistencies between public and academic usage, and on that basis I construct my argument that the commons concept is an emergent social imaginary with broad public appeal. I then apply this approach to case study material from the Okanagan Valley of British Columbia to demonstrate its applicability within a typical North American water governance setting. I conclude with a discussion of how understanding water commons as social imaginaries might contribute, in particular, to support for distributed, multilevel approaches to governance, as opposed to conventional control-and-command approaches.

## How Is the Term “Commons” Actually Being Used in Academic and Public Discourse?

*Academic Discourse*

Common property is normally defined by distinguishing it from public property, private property, and open access. Common property is managed and perhaps jointly owned by a relatively autonomous local user group, public property is owned and managed by a state agency, private property is

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controlled by an individual or a corporation, and open access refers to a situation in which no property rights exist and the resource is available to all (Berkes and Farvar 1989; Bromley 1992; Bromley and Cernea 1989; Feeny et al. 1990; McCay and Acheson 1987). These basic distinctions have been fundamental to the field of commons theory since it emerged as a distinct interdisciplinary field of study in the 1980s.

The concept of a common-pool resource (CPR), as developed by Ostrom (1990), has also been very influential. Ostrom argues that some resources, by their physical nature, predispose them to management as a commons. If the cost of excluding other potential users is high but not impossibly high, as is often the case with grazing lands, forests, and water resources, both private and state rights become difficult to enforce, and users themselves must independently create rules that they can enforce on their own. While it is certainly true that exclusivity of access is more difficult to achieve for some resources than for others, water, often represented as a classic example of a common-pool resource, also provides a classic example of how new technologies—dams or higher-capacity groundwater pumps (Dubash 2007), for instance—continually facilitate the creation of exclusivity in situations where it did not previously exist. Use of the term “common-pool resource” is perhaps best understood as an attempt to naturalize the commons concept and de-emphasize its dependence on cultural behavior. The term does provide a useful means, however, of distinguishing between the resource itself and the property “regime” through which rights are exercised—a critical distinction long ago emphasized by Bromley (1992:4).

Even a cursory examination of the literature quickly reveals, however, that these careful distinctions among property, resources, and regimes are not universally adhered to, and even more telling is the fact that a surprising number of academic researchers still fail to distinguish between common property and open access regimes, a distinction that is absolutely fundamental to post-Hardian commons theory (Berkes 1989; Bromley 1992; Feeny et al. 1990; McCay and Acheson 1987; Ostrom 1990).

The tendency of many authors to use the terms “common property” and “communal property” interchangeably (see, e.g., Berkes and Farvar 1989:7–10; Feeny et al. 1990) is also troublesome since, for many readers (myself included), the latter term invokes the evolutionary theory of Henry Lewis Morgan, who proposed that every society, at some primitive, early point in its history, was organized communally in promiscuous “consanguine hordes” whose members were “ignorant of marriage”—this notion carrying with it the presumption that rights to resources within such a society were entirely equal and equivalent for all members (Morgan 2000: 500–501). But detailed case studies of commons generally specify the ways in which access to so-called communal resources actually differ among individual family groups, consistent with the fact that each family, historically, will have their own specific pattern of resource use and with the fact that all societies, including those Morgan and others have

classified as communal, exhibit some degree of inequality. Use of the term “communal” is particularly troublesome in settings where colonial administrators once assumed that all “native” property-rights systems were communal and where precolonial practices were then altered and distorted on the basis of the colonial policy and legislation that followed on that assumption. This process has been described in detail for Fiji (France 1969; Tanner 2007; Ward 1995) and for several African countries (Bassett and Crumme 1993).

With the advent of the new commons, such as music, policing, highways, public housing, digital libraries, and cyberspace (Benson 2000; French 2000; Hess and Ostrom 2007a; Levine 2001; McCann 2000), terminological inconsistencies have expanded yet again. At the 2008 conference of the International Association for the Study of the Commons (IASC), organizers of a workshop on the new commons wrote that “new commons have no history and often have no rules or governance systems in place” (IASC 2008). Since conventional definitions distinguish commons from open access systems precisely on the basis of whether a governance system is in place, new commons of this type might better be classified as open access systems. Many of the creative productions licensed under the Creative Commons<sup>1</sup> designation conform more closely to what economists typically classify as public goods, since use by one individual does not diminish the opportunity for use by others. Hess and Ostrom (2007b), in their discussion of knowledge commons, abandon the careful distinctions routinely applied to “traditional” commons in order to employ the term in a “more general” way, defining it simply as “a resource shared by a group of people” (4–5). They also acknowledge, although without further analysis, the following:

Curiously, most of the interdisciplinary work on the knowledge commons to date is not an outgrowth of the natural-resource commons literature (although the tragedy of the commons still “plays” at all the knowledge-commons theatres). Rather it is rooted in two distinct intellectual histories: the history of enclosure and the history of openness and inclusiveness—that is, democracy and freedom. (Hess and Ostrom 2007b:12)

Inconsistencies of terminology do not, by themselves, invalidate commons theory. But the scale of terminological inconsistency can be interpreted as a signal that many conventional commons terms and definitions do not map well onto the hybrid property regimes that characterize life in an increasingly complex, globalizing world. Together with other Pacific Island scholars, I have argued in a previous publication (Wagner and Evans 2007) that the term “commons” is over-applied to customary property systems, which are usually

1. Creative Commons is the name of an organization that offers “free licenses and other legal tools” that allow individuals posting materials to online sites the ability “to mark [their] creative work with the freedom the creator wants it to carry, so others can share, remix, use commercially, or any combination thereof” (<http://creativecommons.org/about>).

complex, mixed, multilevel property regimes that contain many noncommons elements (Wagner 2007; Wagner and Talakai 2007). As the increasing body of literature on multilevel organizational principles indicates, commons generally exist as a part of governance networks and rarely in isolation from other types of property regimes (Armitage 2008; Bache and Flinders 2004; Berkes 2008; Carlsson and Sandström 2008; de Loe et al. 2009; Folke et al. 2005; Hooghe and Marks 2003; Kerr 2007; Schlüter and Pahl-Wostl 2007). And as Fennell (2011) pointed out in her recent discussion of semicommons, “property, as experienced on the ground, is never wholly individual nor wholly held in common, but instead always represents a mix of ownership types” (16).

In some cases where commons theory does map well onto real-life situations, it does so because it applies equally well to noncommons as to commons. Several, if not all, of Ostrom’s “design principles” for “long-enduring CPR institutions,” for instance, apply equally well to property regimes dominated by a mix of public and private rights (Ostrom 1990:90). No property regime is likely to endure (i.e., achieve success) if it does not operate within “clearly defined boundaries” or achieve “congruence between appropriation and provision rules and local conditions.” In addition, as my Okanagan study and countless other studies of resource management demonstrate, conflict-resolution mechanisms are essential to the processes through which any democratic society makes decisions about resources. Despite the growing tendency of commons theorists to apply their theory to mixed property regimes, they rarely acknowledge that very little commons theory applies exclusively to commons as they are conventionally defined. Carlsson and Sandström (2008), for instance, in an otherwise excellent paper outline a theory of how “sustainable governance of the commons” (35) might be achieved through improved forms of “network governance,” but they never identify the type of commons to which their theory might apply. They do make it clear that their theory applies to complex, multiscalar networks in which a conventional commons could be one component, but a careful reading of the article suggests that their theory could apply equally well to networks without a commons component. This seeming paradox finds immediate resolution if we classify all complex, multiscalar governance networks as commons, but such an approach would contradict fundamental aspects of common-property theory. Classifying all large, complex water governance networks as commons would be consistent with much public discourse about water resources, however, and, as I demonstrate below, with the notion of commons-as-social-imaginary.

### Public Discourse

In the first volume of the *International Journal of the Commons*, van Laerhoven and Ostrom (2007) describe some of the interesting trends in commons literature over the past 2 decades. Surprisingly, however, they refer to forests, irrigation,

water management, fisheries, and animal husbandry as the “big five” topics in commons literature despite the fact that these topics, taken together, represent only 17% of their total sample (1,753 of 10,587). They devote only one short paragraph to the remaining 83% of their database, which they report is focused on “newer fields” such as “biodiversity, climate change, intellectual property and copyrights, and especially commons related to computers, software, and the internet” (van Laerhoven and Ostrom 2007:8). Although their study was focused mainly on academic literature, the newer fields they describe are all very prominent in nonacademic discourse as well.

In 2008, I commissioned Kasondra White, a graduate student, to conduct a series of three distinct searches to assess the ways in which the term “commons” was being used in academic publications, newspapers, and websites.<sup>2</sup> Her review of academic literature<sup>3</sup> yielded a database in which 30% of the publications dealt with local, physical commons, including the big five described by van Laerhoven and Ostrom. Another 26% dealt with global physical commons, such as biodiversity or the atmosphere. An additional 20% were about knowledge commons, many of which were Internet based; a further 8% focused on public spaces, such as urban parks and sidewalks; and 6% dealt with service commons, such as medical and police services.

White classified an additional 10% of the articles as metaphorical and/or anomalous, since they described commons that were entirely theoretical in nature, did not occupy either physical or virtual space, or did not fit into any of the other categories. These uses of the term “commons” were of particular relevance to my investigation, since they demonstrated the ever-broadening range of uses that are occurring. They included such things as altruism, reproductive success, scheduling, and doctoral education. Two articles discussed the “tragedy of the commons as a result of root competition,” analyzing plants as resource users that, through overcrowding and increased competition, were effectually degrading their own commons in “root space” (Gersani et al. 2001; Maina, Brown, and Gersani 2002).

The theme of commons as metaphor stood out as one of the most significant findings of White’s survey of academic literature but was even more prominent in her survey of newspapers and websites. Only 9% of that sample focused on physical resources, while the remainder focused on shared public spaces (51%) or knowledge and/or service commons (40%). Among the news articles focused on public spaces as commons, the most prevalent (more than half) were shopping and dining commons, followed by recreation commons such

2. Kasondra White carried out this research project under my supervision when she was a graduate student enrolled in the University of British Columbia Okanagan Interdisciplinary Graduate Studies Program.

3. The search for academic literature was conducted using the Web of Science online database and was restricted to articles published between 2000 and 2008. The only search term used was “commons,” and the search was restricted to titles rather than the full text.

as parks. The idea of parks as commons has a long history, of course, and makes literal sense even in cases where a park might more strictly be defined as public rather than common property. But the representation of stores and malls as “shopping commons” when in fact they are institutions primarily devoted to the exchange of private property clearly moves the term “commons” into the realm of metaphor and appropriation.

Google website searches were also very revealing. Since a search for the term “commons” without qualifiers resulted in several hundred million hits, White conducted a series of advanced searches to screen out the least relevant material and reduce the sample to a manageable size of 97 sites.<sup>4</sup> As with newspapers, the majority of these websites were concerned with public spaces and knowledge commons, and only 14.4% addressed physical commons.<sup>5</sup>

### The Commons as Social Imaginary

The term “commons” has been appropriated over recent decades by individuals, corporations, and interest groups seeking to benefit from the positive emotional responses that the term seems to evoke. In some cases—shopping commons, for instance—use of the term appears to be mainly a marketing strategy, but in other cases the term carries a definite political argument, most typically an argument against commodification, privatization, or enclosure and in favor of egalitarian, grassroots approaches to resource management. It is at this point that a clear break occurs between commons as a particular kind of institutional arrangement and commons-as-social-imaginary.<sup>6</sup>

In applying the term “social imaginary” to the commons, I rely especially on the work of Benedict Anderson (2006) on imagined communities and of Appadurai (1996) on imagi-

nation and globalization.<sup>7</sup> Commons constitute a very different kind of imagined community than a nation-state, but much of Anderson’s analysis is applicable nevertheless. According to Anderson, the nation-state became a compelling imaginary in Europe during a time when the clustering of ideas we now refer to as modernity first came into prominence. The influence of two previously dominant imaginaries, the “religious community” and the “dynastic realm,” were much diminished as a result, and the Western world was in search of a new master narrative (Anderson 2006:12).

The commons imaginary can similarly be understood as a response to more recent but equally fundamental changes in our social, economic, and political lives, particularly those associated with economic globalization, the accelerated pace of erasure of place-based communities and social identities, and global environmental and economic crises. The commons imaginary, like the nation-state, is also dependent for its construction on print and electronic media. The recent proliferation of the use of the term “commons,” as discussed above, clearly attests to the manner in which it is being constructed.

There is a third and equally striking parallel between the imagined nation, as described by Anderson, and the imagined commons. Anderson (2006) argues that nationalism, as a social phenomenon, is characterized by a number of paradoxes, one of which arises out of the fact that it possesses readily visible forms of political power, despite its philosophical “incoherence” (5). Nationalist ideologies, for instance, tend to “naturalize” the idea of nation; they tend to represent the nation as ethnically, linguistically, and culturally unified even when it is strikingly diverse. Political boundaries are as likely to divide people with common languages and histories as they are to encompass them. Incoherence arises because of the fact that national imaginaries tend to map poorly onto the social realities to which they refer. As I have argued above, this is also true for some aspects of commons theory.

Despite this incoherence, nation-states do exercise a very significant degree of political power, and this paradox lies very much at the heart of the whole concept of the social imaginary. Charles Taylor (2004) defines a social imaginary as “that common understanding that makes possible common practices and a widely shared sense of legitimacy” (23). My reading of Anderson and Taylor, taken together, leads me to emphasize the fact that the “common practices” that arise from a social imaginary tend to obscure or even silence the incoherence of the social formation that underlies it. In the case of the commons, I would also argue that it is an emergent rather than a fully actualized imaginary. It informs a discourse of political activism in diverse cultural settings, but this activism rarely leads to the acquisition of a significant degree of political power by the organizations involved. The anti-privatization movement in Cochabamba, Bolivia, can be un-

4. Least relevant websites were those that used the term “commons” but did not include any discussion of a specific commons. The millions of sites that merely noted their use of Creative Commons criteria for sharing or protecting digital information, for instance, were excluded, whereas the Creative Commons website itself was included (<http://creativecommons.org>). “House of commons” websites and marketing sites that included the term “commons” in their web addresses were also excluded. The final sample was also restricted to information posted during the previous 12 months.

5. While preparing this paper I attempted to replicate White’s survey but found that the number of sites devoted to knowledge commons, virtual commons, shopping commons, and public spaces had proliferated beyond the point at which useful results could be obtained.

6. Why and how has the term “commons” become so appealing during the last couple of decades? Full credit should be given to the scholars who came together in the 1980s to create the IASC and generate an impressive first wave of post-Hardian scholarship in this field (Bromley 1992; Feeney et al. 1990; McCay and Acheson 1987; Ostrom 1990). It is tempting to believe that their efforts are responsible for the current popularity of the commons concept in popular imagination, but the IASC, I suspect, is simply one manifestation of a much larger global process in which ideas about historic commons are being deployed in the construction of a new social imaginary.

7. Edward Said (1979) has also made an important contribution to this topic in his discussion of “imagined geographies,” as has Castoriadis (1998) in his work titled *The Imaginary Institution of Society*.



derstood as a situation in which a significant degree of political power was mobilized through a commons imaginary. Privatization of the water supply of Cochabamba occurred in 1998, under concessions granted by the national government to a transnational consortium led by the U.S.-based Bechtel Corporation. The changes introduced by the corporate water purveyor, most notably dramatic increases in the price of water, quickly led to an extraordinarily effective resistance movement and cancellation of the Bechtel concession. It could also be argued that the subsequent election of Evo Morales as the first indigenous president of Bolivia was a direct outcome of the Cochabamba water movement (Assies 2003; Laurie and Crespo 2007; Olivera and Lewis 2004). Such success stories are rare, however, in the world of water management.

The work of Appadurai is particularly helpful in explaining how and why social imaginaries, including the commons imaginary, are characterized by a high degree of incoherence. As an “ideoscape”<sup>8</sup> (Appadurai 1996:33–37), the contemporary imagined commons relies heavily on European ideas about and nostalgia for a premodern, preenclosure period when peasants and other inhabitants of rural areas held shared access to common forestlands, pastures, and other resources. This idea of a peaceful, rural, communal commons is strikingly at odds, however, with other widely understood characteristics of European feudal life, which, by definition, was constructed on the basis of class differences and economic exploitation. Even access to so-called commons resources was strongly differentiated on the basis of class, with the rights of peasants continually subject to interference by the rights and actions of feudal lords and officers. Rather than dismiss the commons imaginary as “nostalgia for a past that never existed,” however, following Appadurai (1996:76–77) it is more constructive to recognize it as an attempt to selectively appropriate positive features of historic European commons in ways that could serve us well in the present. But the contemporary commons imaginary is not entirely European in nature. It represents a confluence of global flows of ideas in which the customary property-rights systems of indigenous people, despite those systems’ tremendous variability and complexity, are conflated with and entirely subsumed under the idea of a commons (Wagner 2007). This now-universal notion finds wide appeal not only among Europeans and their descendents in former colonies around the world but among indigenous people, peasant communities, and others who join forces in their opposition to various contemporary forms of state intrusion and economic development, most notably those involving contemporary forms of “enclosure” and privatization. From this perspective, the commons idea is char-

acterized by incoherence, in the sense discussed previously, but also by disjuncture<sup>9</sup> as described by Appadurai (1996:37–41).

The commons-as-social-imaginary corresponds in many ways to Appadurai’s notion of an ideoscape, but at the same time it stands in opposition to the “Enlightenment worldview” that informs the ideoscapes he describes (Appadurai 1996:36). It is certainly true that the commons idea is best understood as a counternarrative to the master narrative of modernity, a point that sheds some light on the fact that it has remained relatively powerless in political terms or why, in terms of Taylor’s definition of social imaginaries, it has not passed the threshold test of engendering distinct and identifiable sets of “common practices and a widely shared sense of legitimacy” (Taylor 2004:23).

I draw attention here to the incoherent and disjunctive characteristics of the commons ideoscape not in order to discredit it but in order to support its movement toward legitimacy as an alternative to the neoliberal imaginary that has so dominated the world economic system over the past several decades. Understanding commons as a social imaginary rather than a set of institutional property-rights arrangements makes it, in fact, more coherent as a social phenomenon and brings into play the role of imagination in creating alternatives to current power structures. As Appadurai (1996) has stated, “The image, the imagined, the imaginary—these are all terms that direct us to something critical and new in global cultural processes: the imagination as a social practice. . . . The imagination is now central to all forms of agency, is itself a social fact, and is the key component of the new global order” (31).

## Water as Commons and Commodity

Antiprivatization writers and activists routinely represent commons and commodification as diametrically opposed, but in this paper I wish to argue that this opposition is often overdrawn and, on that basis, counterproductive. It is easy enough to draw a sharp distinction between the two in ideological terms, especially if one employs an overly simplistic definition of commodity, but when examining the actual practices that underlie most environmental governance<sup>10</sup> systems

9. Appadurai (1996) perceives “disjuncture” as a fundamental attribute of the “current global economy,” using the term in its literal sense to refer to disconnectedness among domains of life that were once more cohesive. He speaks, for instance, of the “fundamental disjunctures between economy, culture and politics,” and he identifies five dimensions of “global cultural flows” in order to more fully develop his argument. These five dimensions include ideoscapes, as discussed above, and also ethnoscapes, mediascapes, technoscapes, and finascapes (1996:33).

10. I use the term “governance” throughout the remainder of this paper to refer to the full network of institutions and agencies that have decision-making power in the realm of water management. This usage follows the lead of other researchers who distinguish “governance” from “government” (see in particular de Loë et al. 2009) and who acknowledge the role played by informal as well as formal relationships within actor networks.

8. Appadurai (1996) defines ideoscapes as “concatenations of images” that “are often directly political and frequently have to do with the ideologies of states and the counterideologies of movements explicitly oriented toward capturing state power or a piece of it. These ideoscapes are composed of elements of the Enlightenment worldview, which consists of a chain of ideas, terms, and images including *freedom*, *welfare*, *rights*, *sovereignty*, *representation*, and the master trope, *democracy*” (36).

the dividing line tends to grow less distinct. Social scientists have realized for a very long time that the social meanings of commodity relations are highly variable and not uniformly negative, and we would be wise not to lose sight of this fact during the highly charged debates about water management that are now occurring with such regularity around the world.

Vandana Shiva, for instance, writes in *Water Wars* that “the culture of commodification is at war with diverse cultures of sharing” (Shiva 2002:x). Maude Barlow deploys the term in a similar manner in *Blue Covenant*, when she argues that water should be treated as a “global commons” and not as “a commodity to be sold and traded on the open market” (Barlow 2007:xiii). These are certainly legitimate uses of the term—ones that emphasize the profit-seeking nature of global commodity markets and the role of transnational corporations in creating and exploiting those markets. I admire the work of Vandana Shiva, Maude Barlow, and other “water warriors” in drawing the world’s attention to the forms of exploitation associated with the privatization agendas being promoted by the World Bank, the World Water Forum and other influential international agencies, national governments, and water corporations. And it is also true that the commodification of water, unlike the commodification of houses, cars, cell phones, or even food, can lead to some exceptionally negative outcomes, as in the case of Cochabamba, described above, and other situations where water monopolies deprive poor people of access to the minimum amount of water needed to sustain life.

Popular representations of the Cochabamba struggle and other water wars as battles against commodification are only plausible, however, if the term “commodity” is restricted to a very specific and limiting definition. In classical economic theory, including Marxist theory, any good or service offered for sale on a market is considered a commodity (Blunden 2008). Anthropological use of the term can be traced back to Marcel Mauss, who distinguished commodities from gifts on the basis of their alienability (Mauss 1990). Arjun Appadurai, in his introduction to *The Social Life of Things*, begins by defining commodities simply as “objects of economic value” (Appadurai 1986:3) and then goes on to argue, following Simmel (1978), that their value is not intrinsic but is generated by the process of exchange itself. It is this particular approach to commodification that I have applied in my own research.

According to the definition given above, the water that is delivered to homes like mine, in Kelowna, British Columbia, is a commodity. It is available only within a limited, local market, but there is a market, and we can choose to purchase it or not. This is true even though our water purveyors are public utilities, not private corporations. Since three of the five public utilities operating in the greater Kelowna area are farmer-run irrigation districts, which behave in some regards like common-property institutions, I could also argue that the water that many residents consume is part of a water commons. Two of the utilities charge clients on the basis of how much water they use, while the others charge clients a

flat rate. In this paper, I use these seemingly conflicting arrangements as my entry point into a detailed analysis of how common-property theory does and does not apply to a study of water management in the Okanagan Valley.

## The Okanagan Water Governance Network

The Okanagan Valley is one of many settings in the world where water occupies a critical position in both symbolic and economic terms (Wagner 2008). The pattern of distribution of property rights to water in this setting is also typical of what occurs throughout western Canada and much of the western United States, particularly the arid West. And not unlike many other parts of North America and the world, it is also a setting in which critical water shortages are likely to emerge over the next few decades if adaptive innovation in water management practices does not occur (Cohen and Neale 2007; Cohen, Neilsen, and Welbourn 2004). A careful mapping of the water governance network in this setting will therefore serve to illustrate the two key arguments I have made so far in this paper: (1) that overly sharp distinctions among common, public, and private property and between commons and commodities obscure rather than clarify the issues at hand in many settings and (2) that the concept of commons-as-social-imaginary, despite its seeming incoherence, could be used to inform the types of policy innovations that are likely to be appropriate in this and other similar settings.

## Research Methods

When I began my research project in 2005, I was interested in determining the extent to which changes in water management, in response to growing water scarcities, might result in a shift in power among water-rights holders. I therefore had to understand who actually “owns” Okanagan water and who has the power to change the rules or alter practices on the ground in a way that could favor one interest group or community at the expense of another. Since agriculture accounts for approximately 70% of water allocation in the valley and since the face of agriculture was changing dramatically, I decided to focus much of my attention on this sector.<sup>11</sup> In addition to studying water legislation and the history of agricultural development, this required that I analyze water management institutions and institutional networks in the valley as well as the on-the-ground practices of key water users. My approach thus combined elements of political ecology, environmental history, and a form of institutional analysis similar to that employed by Ostrom (1990:103–142) in her study of groundwater basin management in Southern

11. With the assistance of an indigenous Okanagan graduate student, I also focused a good deal of attention on the issue of indigenous water rights, since Syilx communities are clearly disadvantaged by the current system and future changes to policy and legislation will need to remedy that fact. Indigenous-rights issues are not a primary focus of this paper, however.

California. Water governance in the Okanagan, I quickly discovered, though less complex than that in Southern California, also involved a complex set of public and private water utilities, voluntary water associations, government agencies, and government-enabled water districts.

To understand how water use practices were carried out on the ground and how water use decisions were made at local and regional levels, I conducted 25 interviews with agricultural water users and 12 interviews with water managers and individuals working for regional water associations. Although I did not set out to apply social-network theory, I did ask my respondents to identify which other institutions they communicated with most regularly, and I asked them to assess the benefits and effectiveness of those lines of communication. Carlsson and Sandström (2008) have recently developed a model for applying social-network theory to the analysis of resource comanagement networks, but rather than quantify the effectiveness of the Okanagan network in terms of its “density” and “heterogeneity,” as they propose, I focused instead on qualitative analysis, identifying key individuals and institutions within the governance network and examples of recent forms of institutional innovation. I also gathered detailed information from respondents about the physical characteristics of their water supplies, distribution infrastructure, and irrigation technology. By the end of the project, I recognized that my approach had begun to approximate actor-network theory (Latour 2005), since the networks I was mapping included material objects and ideas as well as institutions and individuals.

As the study progressed and certain limitations of common-property theory became obvious, I conducted the discursive study of academic and popular commons literature that I described above. As a result of that study, which led me away from a narrow, definitional approach to understanding commons and toward an understanding of commons-as-social-imaginary, I began to pay more attention to the ways in which my respondents thought about water and the relationship of water to community.

### *People, History, Geography*

The Okanagan Valley extends 200 km north to south from Vernon, British Columbia, in Canada, to Brewster, Washington, in the United States. A series of large lakes stretch along the valley bottom within Canada and are drained by the Okanagan River, which is tributary to the Columbia. The large lakes, the outcome of a glacial retreat that occurred 10,000 years ago, belie the aridity of the region. The Okanagan receives an average of only 30 cm of rainfall a year and significantly less in its southern reaches, where it is continuous in many respects with the Great Basin Desert of the American Southwest. Lower elevations are classified as grassland steppe and are typically populated by species such as sage brush, antelope brush, bunchgrass, and scattered ponderosa pine forest (British Columbia Ministry of the Environment 1998a).

This region has long been occupied by the Syilx, a hunting-gathering people whose traditional adaption involves use of habitat at all elevations from valley bottom to subalpine forest. The first European settlers, who arrived in the area in the mid-nineteenth century, relied mainly on ranching for their livelihoods, but during the first few decades of the twentieth century, following construction of extensive irrigation systems by land development companies, the valley became home to a thriving orchard industry. Most of the irrigation systems had fallen into disrepair by the 1920s and were taken over by the orchardists themselves on the basis of provincial legislation that enabled their conversion to user-operated systems known as irrigation districts or improvement districts (Dendy 1981; Wagner 2008; Wilson 1989). Okanagan settler culture was dominated by a cooperative, family-farm-based orchard industry until very recently, and current water management practices reflect the historic importance of orchard agriculture. Fourteen of the 50 largest water utilities in the Okanagan Valley today are irrigation or improvement districts, despite the fact that urban development has overrun many agricultural areas.

The first irrigation systems in the Okanagan utilized upland waters through a system of dams, storage reservoirs, and diversion ditches. Many irrigation districts and municipal water utilities continue to rely mainly on upland waters (see CA+ online supplement A, fig. A1), whereas other utilities pump their water entirely from one of the valley-bottom lakes. Groundwater is also an important source of water for several public and private utilities and many individuals, for both agricultural and domestic uses.

The tourism potential of the region was recognized from the outset, but only recently has tourism surpassed agriculture as the region's leading industry (Wagner 2008). The Okanagan is now a major resort area and retirement center, and an interesting synergy has also developed between tourism and agriculture. Commercial orchards, which have become less and less profitable as land prices have increased, are now being cut down and replaced with vineyards, cottage wineries, and hobby farms, and wine tourism has become a dynamic new industry (Senese 2008; Wagner 2008). The most troublesome and destructive form of water commodification today in the Okanagan Valley arises, arguably, from the way in which lake views and water recreation opportunities are being marketed by the region's residential housing and tourism industries (see CA+ online supplement A, fig. A2).

These forms of commodification have contributed to rapid population growth, expansion in the number of visitors to the area, increasing levels of water pollution, and degraded riparian environments (Wagner 2008; Wagner and White 2009). The Okanagan is home to more threatened or endangered species than any other region in British Columbia (British Columbia Ministry of the Environment 1998a; Central Okanagan Regional District 2002), 85% of our valley-bottom wetlands and riparian environment has been destroyed (British Columbia Ministry of the Environment 1998b), and the



Okanagan River has itself been classified as endangered (Rae 2005:1). Scientists have predicted that, if more conservative water use practices are not implemented, the combination of climate change and rapid population growth will lead to significant water shortages within a few decades or sooner in the case of a prolonged drought (Cohen, Neilsen, and Welbourn 2004; Okanagan Water Stewardship Council 2008). The cumulative and intensifying effects of recreational, agricultural, and industrial impacts on riparian zones in both the valley-bottom and the upper-watershed areas also represent a growing threat to water quality throughout the region. As a consequence of combined water scarcity and water quality issues, water governance institutions are now under review at local, provincial, and federal levels of government, and significant revisions to governance practices are contemplated (British Columbia Ministry of the Environment 2010).

#### *Who Owns Okanagan Water?*

In British Columbia, as throughout Canada, bodies of freshwater are considered the property of the provincial crown—that is, in conventional terms they constitute a form of public property. The province's authority is constrained in a few instances by federal authority over fisheries habitat and the fact that the lakes in the valley bottom are officially classified as "navigable waters," which are also under federal jurisdiction. But the province is the sole regulatory body holding the power to grant water licenses to individuals, corporations, municipalities, and other user groups for irrigation, domestic, or industrial uses. These licenses, which constitute a form of private property for their owners, stipulate how much water can be withdrawn from a given water source and what infrastructure can be built to store and deliver water to its ultimate destination. More than 200 water purveyors are currently licensed to operate in the Okanagan; many of them are municipal water utilities, several are farmer-operated irrigation districts, and a few are private corporations. Individuals and small, neighborhood-based water associations also hold water licenses for both irrigation and domestic use (Cohen, Neilsen, and Welbourn 2004). In addition to water purveyors and individual licensees, there are also a large number of other institutions that play a role in water management, most notably the Interior Health Authority, the regional arm of the provincial Ministry of Health. The Interior Health Authority regulates drinking water standards in the valley, and recent changes in drinking water standards have created their own crises. And as I will describe below, several other provincial ministries also have authority to make decisions about activities within the watershed that have a direct bearing on riparian environments and water supplies.

Syilx communities hold underlying indigenous rights to water in the region, but these rights have been consistently ignored by federal and provincial governments. Indian agents acquired one or more provincial water licenses for most Syilx communities at some point in the past, but those licenses are

rarely sufficient for their needs, and as a result at least two Syilx communities are currently using lake or river water, for which they hold no license. At least one community, at Penticton, has experienced significant water shortages for several decades, and the river and creek water flowing through its reserve is not safe to drink (Sam 2006:67–72).

Groundwater, unlike surface water, is an almost entirely unregulated resource in the Okanagan and throughout British Columbia. Ongoing studies of Okanagan groundwater supplies, including the deeper aquifers, indicate that surface and groundwater supplies constitute a single integrated system, but since water is under provincial jurisdiction and the province still has no definite plan in place for licensing or regulation, groundwater could continue to be an unregulated resource for many years to come (British Columbia Ministry of the Environment 2010).

It is clear, then, that water in the Okanagan cannot be considered a commons if one applies the conventional definitions used by common-property theorists. With the exception of groundwater, which is best understood as an open access resource, water can most accurately be described as a form of public property controlled by the provincial government, although at other times, because of the way the licensing system operates, it constitutes a form of private property, held in perpetuity, by individuals and corporations. Water might legitimately be considered a commons in the case of farmer-operated irrigation districts, but those institutions today operate as water utilities that also provide water, as a commodity, to urban and semiurban clients, most of whom do not exercise their rights to participate in district decisions or board elections. And despite the commodified nature of water supply systems throughout the valley, one could also argue that irrigation districts and municipal water utilities behave as if water were a public good, since for decades—and still today in many cases—they have been providing water to their clients at a flat rate without consideration for the amount used, treating water, in effect, as an unlimited, nonsubtractive public good. Ironically, perhaps, it is the water conservation agenda that is now driving the process of commodification in this region, as water utilities begin to move away from flat rates to charges based on the volume used.

Common-property theorists often sidestep the issues raised above by treating freshwater as a common-pool resource whether or not it is managed by common-property institutions. Ostrom (1990), for instance, in her analysis of water basin management in Southern California refers to the entire network of institutions as "CPR institutions" without distinguishing among their public, private, and common-property components. Unlike Bromley, she does not emphasize the fact that CPRs are as likely to be managed by public or private property regimes as by common-property regimes (Bromley 1992:11) but instead generates theory about the "origins of appropriator organizations" (Ostrom 1992:300) that other authors subsequently apply to commons but not to public or private regimes. This confusion arises partly as a result of an

overemphasis on common-pool resources as a “natural” category defined by their physical characteristics. As noted previously, the physical characteristics of a common-pool resource are such that it is “costly (but not impossible) to exclude potential beneficiaries from obtaining benefits from its use” (Ostrom 1990:30). Costs of exclusion for drinking water vary tremendously, however, depending on its position within a given hydrological system, its level of purity or contamination, its legal status as defined by legislation, and the extractive technologies and distribution systems that deliver it to homes and orchards. Since the average person in the Okanagan lives far away from the closest accessible source of potable water, it is very easy to exclude new residents—their access depends entirely on decisions made by provincial and local government agencies, not on their ability to independently access the resource. In the case of irrigation water, the costs of exclusion are also very low, since the cost of the extractive technology necessary for withdrawal and distribution is prohibitively expensive for an individual, and water cannot be legally withdrawn from any surface water source without a provincial license.

Although the depiction of water governance networks as uniformly comprised of CPR institutions in settings like California or British Columbia therefore appears inconsistent with other aspects of common-property theory, much of the collective action theory developed by Ostrom for Southern California and other settings nevertheless appears sound—a fact that leads back once again to the recognition that commons theory finds very strong applicability in settings where common-property institutions, conventionally defined, are absent or constitute only one component of a complex system.

### *Institutional Innovation and Conflict Resolution*

I was initially struck in my analysis of institutional networks in the Okanagan by what appeared, from a watershed perspective, to be a highly fragmented system. A more thorough examination of the patterns of communication among key institutions led me to the conclusion, however, that the system did display effective integration in some instances and that significant efforts toward achieving greater integration were under way. One of the most significant of these initiatives concerns the Okanagan Basin Water Board (OBWB), a basinwide institution created in 1969 by an act of the British Columbia legislature. Although the original recommendation that went forward to the province was for the creation of a strong, centralized regional water authority, the board was instead given a much more limited mandate and placed under the joint control of three regional districts, a level of government similar to counties in other jurisdictions. But the OBWB has become increasingly proactive and influential since 2003, following a 3-year period of below-average precipitation, water scarcity, and devastating wildfires. Since then, the board has set out to develop a comprehensive basinwide water management plan, and in order to accomplish that goal it has

forged a number of research partnerships with provincial and federal ministries, local university and college researchers, environmental NGOs, and other management agencies. The board also created a Water Stewardship Council in 2006, which is composed of representatives from a broad range of economic sectors and subregions and from all levels of government, including indigenous Okanagan communities (Okanagan Water Stewardship Council 2008). As it turned out, a few of the individuals I had previously interviewed became members of the council, and my occasional attendance at council meetings afforded me the opportunity to deepen my understanding of their position within the governance network.

After an intensive series of discussions that took more than a year to complete and a process of consultation that involved a wide range of community groups and water experts, including myself as a university researcher, the Water Stewardship Council created a “sustainable water strategy,” which included a set of 12 guiding principles for management of water within the OBWB jurisdiction. Principle 1 states that “water is a common good that is essential to the survival of people and ecosystems” (Okanagan Water Stewardship Council 2008:18). The document then goes on to state,

Water should be managed as a collective resource in Canada, shared by people and the environment, supporting food production, and underpinning the economy. Under current legislation water is often owned collectively as either public or common property but it can also be owned privately. Management policy needs to accommodate these various property regimes while giving primacy to the idea of collective ownership. (Okanagan Water Stewardship Council 2008:18)

To the best of my knowledge, no detailed analysis of academic commons theory was ever undertaken to inform the council’s principles, and water was never described as either a “commons” or a “common-pool resource” in the final or in earlier drafts of the document. The similar term “collective resource” did gain broad appeal, however, and the final document made it clear that the principle of water as a collective resource held “primacy” over all other formally and informally defined rights to water. Both the philosophical language developed by the council and many of its actions over the past few years demonstrate that it has embraced the idea of water as a commons in the sense that the term has been deployed in popular discourse in settings like Cochabamba, Bolivia, and by writers and activists like Vandana Shiva and Maude Barlow. The advantage of this “popular” approach to understanding water as a commons is that it bypasses the contradictions and inconsistencies that inhibit the application of much existing academic theory.

A conflict arose in 2008 that highlighted the difference between an emergent, collaborative watershed governance approach that is consistent with the principle of water as a collective resource and the command-and-control approach that

continues to dominate the behavior of provincial ministries. In 2008, the British Columbia Ministry of Agriculture and Lands<sup>12</sup> announced that individuals holding leases to crown lots on the foreshores of upland reservoir lakes, mainly as cottage properties, would be given the opportunity to purchase their lots. These sales were adamantly opposed, however, by the OBWB and virtually every local-level government in the region, several of which were already putting plans in place to improve source water protection. Most subbasin watersheds within the Okanagan are subject to multiple uses, including logging, mining, ranching, hunting, fishing, skiing, biking, snowmobiling, and other recreational uses. Local governments were justifiably concerned that the conversion of lease lots to private property would intensify resort development in sensitive watershed areas and make it difficult, if not impossible, to implement effective source water protection. Only after several months of intense lobbying by local politicians and a series of very visible public protests and petitions did the ministry finally agree to suspend the proposed sales and revisit the issue. Eventually, in 2011, the ministry agreed to permanently reverse its decision to privatize the leased lots.

The OBWB did not play the lead role in the public protests, but as an advisory agency acting under the authority of three regional districts it was able to play a pivotal role in facilitating communication among regional districts, municipalities, and water utilities and in gathering much of the scientific information used to support arguments in favor of reversing the government's decision to privatize the lease lots. The personal political networks of OBWB staff and a few council members also came into play as part of an effort to gain the support of local members of the provincial legislative assembly. While source water protection measures have been successfully applied in many other regions in North America, their application in the Okanagan Valley represents a dramatic reversal of historic land use practices, which have favored multiple use of watersheds for logging, mining, and recreational purposes with very few safeguards for riparian environments or drinking water supplies.

The OBWB has thus become a critical "bridging institution" (de Loë et al. 2009; Folke et al. 2005) within the Okanagan governance system. It creates the opportunity for broad and free-ranging debate, collaborative research, and coordinated policy development and is contributing to a process whereby a centralized command-and-control system is beginning to behave, in practice, like a distributed, multilevel system (Wagner and White 2009).

## Public Anthropology and Water Governance

My attempt to apply common-property theory to the study of water management in the Okanagan Valley produced un-

even results and led me to dispense with some of the key distinctions and definitions that dominate commons theory. Conventional distinctions among common, public, and private property regimes were not helpful in understanding how governance in the Okanagan actually works. Treating water as a common-pool resource, on the basis of its physical properties, obscured the ways in which social, economic, political, and technological processes contributed to the emergence of the varied set of management institutions that now collectively manage water in this setting. Conventional academic distinctions also made it difficult at times to communicate with community members, water users, and water managers, whose ideas about water commons are shaped by nonacademic discourses. As I gravitated away from commons theory and toward actor-network theory, I acquired the tools to map the full set of material, semiotic, and institutional relations at play within this particular governance network. This helped me recognize, for instance, the connection between the "idea" of water as a collective resource, as articulated by the Water Stewardship Council and approved by the OBWB Board of Directors, and the actions later taken by the board and council to protect source water in the upland regions of the watershed.

I do not wish to argue that commons theory should be abandoned altogether since, as argued previously, it has broad applicability to complex governance regimes whether or not they include *de jure* common-property rights. A good deal of commons theory shares its origins and conceptual base with theories of polycentric governance (Andersson and Ostrom 2008; Blomquist 1992; Ostrom, Tiebout, and Warren 1961), and commons theorists have recently made strong contributions to studies of distributed, multilevel governance systems (Armitage 2008; Berkes 2008; de Loe et al. 2009). The research approach I am proposing here builds on this body of work while departing from it in one significant way. Whereas Ostrom (2007) has proposed that the many factors at play within complex governance systems can be accounted for through multivariate analysis methodology, I propose an alternative approach that incorporates the distinction made by Bruno Latour (2005:105–106) between "factors" and "actors." In actor-network theory, actors include things (such as water) as well as human beings, and they include the semiotic as well as material characteristics of humans and nonhumans. Whereas factors are presumed to be measurable and predictable, a detailed mapping of governance networks from the perspective of actor-network theory reveals a messy universe in which many outcomes occur through the agency and interplay of less predictable actors.

I am not proposing that all aspects of actor-network theory as developed by Latour (2005) or other actor-network theorists be embraced as gospel, and neither can I claim that the case study materials described here have arisen out of a full and complete application of actor-network theory methodology. But I believe this particular approach does have much to offer public anthropologists who seek to partner with water governance institutions to improve their ability to manage

12. The Ministry of Agriculture and Lands was subsequently reorganized, and the Lands Department now falls under the jurisdiction of the Ministry of Forests, Lands, and Natural Resource Operations.

water resources sustainably and equitably in the face of growing water scarcities and environmental degradation. If polycentric or distributed, multilevel governance systems are preferable to the centralized command-and-control systems that have long dominated government thinking around the world (Bache and Flinders 2004; de Loë et al. 2009; Hooghe and Marks 2003; Wagner and White 2009), then support for the emergence and strengthening of such systems should be an important research goal. This model of governance is being championed by scholars working in many fields, notably by those interested in socioecological resilience and the behavior of complex adaptive systems (Folke et al. 2005; Holling 1973; Pahl-Wostl et al. 2007; Schlüter and Pahl-Wostl 2007), environmental governance (de Loë et al. 2009; Duit and Galaz 2008; Lemos and Agrawal 2006), and common-property theory, as noted above (Armitage 2008; Berkes 2008; Kerr 2007; Lebel et al. 2008).

Mapping the actor networks that populate these governance systems can provide an effective starting point for identifying the problem-solving potential of existing systems in contexts where the most important improvement might involve the creation of more inclusive local institutions, bridging institutions at the regional level, strategies for more effective social learning among actors at different levels, and recognition by all actors of the critical necessity of a coordinated approach.

### Conclusion: Understanding Agency in a Fractal Universe

Water governance everywhere tends to encompass a messy clustering of institutions, economic interests, histories, cultures, and ethnicities. Innovation, both planned and unplanned, occurs daily within these governance networks. Designing research projects that can help us map these processes of innovation, which include acts of imagination, could contribute to the building of a powerful public anthropology research agenda.

Water management in the Okanagan Valley has historically been bound up with the economic development of the region, first as an orchard oasis surrounding valley-bottom lakes and more recently as a site for recreational and resort tourism, a construction intimately linked to global flows of capital, people, and imagination. These global flows and the fractal nature of the world they engender (Appadurai 1996:46) seriously limit the likelihood that we can account for the full range of factors at play here or use multivariate factor analysis to guide institutional innovation. A more selective analysis of "actors," however, as defined by actor-network theory, offers some promising opportunities for anthropologists who seek to work in collaboration with water management institutions.

Appadurai (1996) has argued that "the imagination is now central to all forms of agency" (31), and as a corollary I would argue that it has always played a central role in our relation to water. Water managers in the Okanagan today, whether they draw their water from a single upland creek, a lake in

the valley bottom, or a groundwater source, are increasingly imagining their work as part of a watershed-wide management effort and are busy constructing the network of relationships that will be necessary to realize that goal. Returning once more to Taylor's (2004) definition of a social imaginary as "that common understanding that makes possible common practices and a widely shared sense of legitimacy" (23), I propose that "imagining" water as a commons can help us build the types of institutional networks we need to manage water wisely, equitably, and sustainably.

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## Comments

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Wagner raises several interesting points in his article. A key point is the growth in the commons imaginary. It became impressed upon me at a meeting in Berlin in the fall of 2010. There were few traditional commons scholars. Listening to both public presentations and small-group conversations gave pause for thought. The impression I took home was that for the majority of participants the commons represented a new ideology with some of the important desirable features of socialism and few of the negative consequences associated with it. The president of the International Association for the Study of the Commons was one of the keynote speakers and tried to introduce conceptual distinctions like those Wagner discusses. But the academic approach seemed rather uninteresting.

Reading Wagner's article with this in mind, the question becomes, should the academic study of commons embrace an all-encompassing ideological or even political concept of the commons? My initial attitude was scepticism, and Wagner did not persuade me otherwise.

We should of course study the phenomenon "commons-as-social-imaginary." Understanding how people think and why they think the way they do is fundamental to designing resource governance systems. But the ideology I listened to in Berlin and the commons-as-social-imaginary that Wagner reports on do not have the conceptual tools to understand the dynamics of institutional systems larger than a village community. There are such phenomena as "the tragedy of the open access resource," and there are predatory actors that



will look for ways of exploiting an institutional structure and thereby create social traps. If one organizes exploitation of “resources that are (or could be) held or used in common” without considering whether it, for example, is mainly a renewable common-pool good or a nonrenewable public good, the results are unpredictable, and the beneficiaries of the resource may have to reinvent the commons theory all over. Without understanding that resources have different characteristics (degree of excludability in access, degree of rivalry in consumption) that interact with rights and duties of the commoners and likewise that technology used in appropriation will interact both with resource characteristics and with rights and duties, the next generation of commoners will struggle with what to do when resources become scarce, when external agencies intervene to “assist” in the protection of a dwindling resource, or when market forces reach into the community and create new dynamic processes.

The lack of conceptual clarity in current theory is not a good reason to go to an even more embracing concept of commons-as-social-imaginary. It may well be that the “traditional” idea of a commons as an institution for exploiting a common-pool resource falls apart as we go deeper into the exercise of conceptual clarification and broadens the scope to cover more types of resources. The reasonable response to this is to say that it is no longer commons as such we study but property-rights institutions. Our research problem still is to understand the interplay between belief in rights and duties among beneficiaries and the dynamic this creates in specific resource complexes as defined by the characteristics of the resource and the characteristics of the appropriation technology. And the interplay between resource characteristics, appropriation technology, and beliefs about reasonable and just distribution of benefits are well illustrated by the water of the Okanagan Valley.

When water is abundant, it usually is open access resource. But in most cases communities will have to create waterworks to transport the needed quantities from its abundant source to the single consumer. Thus, a community may charge a flat fee or a general tax on each consumer no matter how much water is used. The water is abundant. It is enough for all. But the waterwork costs. The payment is for the technology used, not for the water.

But waterworks like this are also known as a natural monopoly. This raises particular problems of governance. Handling monopolies to private profit-making companies seldom works well. Decentralized local governance is what one usually finds. Even where water is abundant, it is a key resource for people’s livelihoods; people worry about its supply and will not easily accept unfair restrictions on its supply. From Wagner’s description of the Okanagan Valley, there seems to be a situation where water goes from abundant to scarce. What happens in such cases? From what Wagner reports, it seems that the people of the Okanagan Valley, by trial and error, find ways of organizing the water supply, both taking care of their beliefs in just supply and avoiding the pitfalls that natural

monopolies and scarcities may present. With a large number of actors thinking about the same problems, trial and error may be a viable way of solving them. But with a few guidelines from what we like to call commons theory, it might have been done much faster.

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The author puts across the view that water is believed to be a “common good” and a “collective resource” among the inhabitants of Okanagan now, even though how water is owned, distributed, and administered there does not accord with academic conceptions of “common-property” or “common-pool” resources. And so he settles on the concept of the “social imaginary” in order to apprehend the residents’ emergent concern with water as an eminently collective thing.

Before making the concept of the social imaginary serviceable for this context, Wagner adapts it by bringing in specifying terms and dropping other facets from view. The social imaginary is altered to become the “commons” imaginary of the article’s title. What is gained through this substitution is a spotlight on the commons as the object of the imaginary. This emphasis allows for a consideration, for instance, of the symbols and enactments of commonage, etched in the guiding principles of the Okanagan Water Stewardship Council. The imaginary is certainly a dimension of agency, as Wagner (and Appadurai [1996]) reminds us. What is lost in this accent, on the other hand, is the focus on the “social.” The author returns to the notion of water as a social imaginary in the course of the text but concentrates on its “imaginary” component.

Ironically, as imaginaries both the social and the commons are capable of appearing as many or one. Since the conception of water either as a commons or as a social imaginary can express unitary and divided existence, the construction may valuably be furnished with social frames at each level of its appearance. The author suggests that the current allusion to water as a collective resource among residents of European descent has surfaced precisely when local concerns about anticipated water scarcity and deteriorating quality are being reported from this arid region. Perhaps we need a clearer idea of the social groups, publics, or collectives that are being gathered and eclipsed by concatenating imaginaries.

The emergent imaginary of water as a commons, the author notes, contrasts with the modernist Euro-American imaginaries that emphasize individualism (Taylor 2004). The concern for water as commons departs from the state licensing of individual and private leases to European settlers. The less heard and proclaimed water imaginaries of the indigenous Syilx in this enclave are not the focus of this article, although it is likely that these harbor a mix of common and uncommon features.

Yet how the Syilx conceive of the commons might well be

overshadowed when water is viewed through the lens of the dominant local residents' social imaginary contemporarily as in the past. The water needs of the Sylx, we are told, tend to be marginalized in the institutional arrangements within the region. The author notes that their water rights are ignored, and they now use river water without a license and drink unsafe water. Powerful imaginaries, then, do create blueprints for institutional arrangements, as the author forcefully recognizes here (and that Ostrom [1990] depicts in a different idiom).

The sharp dichotomy that Wagner locates between the social imaginaries of water and institutional arrangements for provisioning water is evidently not watertight but varies with the social context even within a region. The divergence of social imaginaries (and ensuing institutional arrangements) compel the attention upon all groups that have a stake in the shared making, unmaking, and remaking of water as a commons.

Because imaginaries are not always shared, each imaginary may come to represent a "partial public" or a "partial social" at local, provincial, or federal levels in multilevel water provisioning systems. Since the public that creates local commons' imaginaries is also the public at regional and national levels, an overlapping and contested sense of the commons is created simultaneously (Brara 2006). If one tries to follow Latour (2005) here, the "social" or the "common" dwells precisely in the interpublic relations and the network as well. Any contribution to a public anthropology, then, would do well to assess—and reassess—the contexts in which claims are made upon the terms "social," "commons," and "collective" in good faith or disingenuously, especially in situations of flux and power differentials.

The author has done well by the commons as imagined in the here and now of a contemporary water milieu. That an inclusive imagination and shared rights to water can exist cheek by jowl with and as a superimposition upon private and state ownership attests to the resilience of the commons as an idea and a project. Although the commons are always at risk, these are reimagined, reenacted, and generated at multiple social loci that invoke the spaces of sharing and dialogue. The social imaginaries of the water commons, precisely through their divergence and interrelatedness, are enabled to speak of fluidity and oneness . . . and of a story that is apposite for postcolonial and environmental thinking.

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### Crafting Quasi Commons

Regardless of formal ownership as public or private property, people often act like shared spaces such as public parks and shopping malls are commons, thinking about them in ways

that differ from the narrow legalities of formal property rights and treating them as what can be called "quasi commons" (Bruns 2000). By pointing out how ideas and actions frequently fail to fit common-property scholarship's distinctions of public, private, and common property or open access, this article helps reframe our understanding of the meaning of commons to social actors. The idea of commons as a social imaginary need not refute other concepts used to study commons but can enrich a broader field of study, encompassing networks of actors within diverse property regimes and forms of environmental governance.

Irrigation systems usually incorporate not only a subtractable common pool of shared water but also lumpy infrastructure assets of diversion dams, canals, and control structures—toll goods that are nonrival until reaching some limited, congestible capacity. As irrigation water flows from river to canal to farmers' fields and then into drains and aquifers, it often flows through multiple property regimes—public, common, private—and back to open or public access (Meinzen-Dick 2000). Externalities may be dealt with through government regulation, common-property institutions, the civil law of nuisances from private property, or combinations of those and other institutions (Rose 1994). Formal property rights are usually incomplete, leaving space within which new claims and conflicts arise (Nicita, Rizzolli, and Rossi 2007). As analysts of legal pluralism have explored, disputants often assert various claims—justified in terms of local customs, religious values, state laws, and other sources of social order—and shop among multiple forums. Within such institutional complexity, people's ideas about commons, collective resources, and rights and duties in relation to whatever is shared can play a major role in shaping understanding and behavior.

The idea of commons as a social imaginary aids understanding how people seek to construct their realities. Understanding of commons as a social imaginary does not escape classic questions about collective action and institutional design. However, thinking about commons as a social imaginary may offer new insights into dynamics, including the development and deployment of the values and preferences often taken for granted in more conventional economic or rational-choice analysis.

Accepting that an imaginary such as a water commons may be "incoherent" provides a useful precaution against assuming the necessity of a particular underlying rationality, consistency, or commensurability but says less about the processes of institutional bricolage (Cleaver 2003, 2012) within which people craft and contest such ideas. Wagner offers a fresh recommendation about what to look at—commons as a social imaginary—and suggests social actor-network theory as a method, but he does not go far beyond that. Two things that particularly seem to be missing from this discussion and that deserve more attention in further work are thick, interpretive description and politics.

His main example describes opposition to the provincial government's proposal to convert lakefront leases into private property. One can guess that the full story is more complex

than just a case of successful resistance by local interests to the threat of a reform imposed by state power. And there may well be much more to it than the construction of a counternarrative or even a new hegemonic discourse by an elite coalition, an epistemic community formed through a stakeholder participation process favoring currently fashionable ideas of localism and watersheds. However, the author's presentation offers little discussion of how ideas evolved, the multiple ways in which they may have been understood by different actors, how the ideas were contested and adapted, or even why participants ended up preferring to frame water as a "collective resource" rather than as a "commons."

Little is also said about the politics through which the concept was formed and maintained, what kinds of discussions, coalitions, compromises, and other dynamics led the actors to coalesce around conceiving of particular waters as a "collective resource." Furthermore, in the moral economy of commons as a social imaginary, there may well be losers as well as winners, those excluded as well as included, those disregarded as well as those privileged. Understanding the commons as a social imaginary should include not only studying particular triumphs by those engaged in creating or recreating commons but also the tensions, ambiguities, trade-offs, and tragedies of solutions that serve some but not necessarily all of the interests involved. For a public anthropology that seeks to inform and work with those trying to protect and create commons, the need is not just for aspirational values of commons but also a practical understanding of the multiple tools of discourse, norms, laws, rules, contracts, and other means relevant to institutional artisanship in crafting commons and quasi commons.

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I am not sufficiently conversant with the theoretical literature on the commons to say whether I agree with John Wagner's assertion that it "displays a bewildering level of inconsistency in terminology." Let me simply accept the premise and work from there. I focus instead on his argument that "understanding [the] commons as a social imaginary . . . could allow researchers to bridge these inconsistencies and thus bring greater clarity to their analytical approaches." He goes on to claim that it is especially with regard to water management that the commons as social imaginary (rather than a set of institutions or standardized practices) is a notion that is not only useful but powerful in shaping policy. He makes further arguments about governance, public anthropology, and the commons, but my comment will not address these.

The idea of the commons as a social imaginary is an interesting and original one. Wagner develops the idea from a

reading of Benedict Anderson on the nation as an imagined community and of Arjun Appadurai on modernity in a transnational world. One can see why, insofar as Wagner is concerned with emergent imaginaries embedded in concrete technobureaucratic practices. But other anthropologists have developed ideas of the social imaginary—from Clifford Geertz's interpretation of a Balinese cockfight to the general literature on anthropology of the "future"—and a discussion of these theorists might have enriched the idea of the imaginary he is trying to develop. For in the end I am not sure I know what Wagner means by it: A vision of the social commons? A socially shared vision of the commons? And what is the difference between a plan with its anticipations and a social imaginary?

Consider a key example from his case study, water management in British Columbia's Okanagan Valley; its Water Stewardship Council produced a sustainable water strategy, the initial principle of which states that "water is a common good that is essential to the survival of people and ecosystems." This is a rhetorical use of a powerful trope, and occurring as it does at the beginning of the document reminds one of Malinowski's idea of a "mythic charter." It would seem that a rhetoric of persuasion is a more precise notion than social imaginary to understand how language is mobilized to get people behind various programs and policies in this particular instance. Would not mythic charter be more helpful than social imaginary?

Even if one were to sharpen the idea of the social imaginary for it to be useful in the analysis of water management, what is also interesting are its limits. That is, when do people fail to imagine other possibilities than the ones they have accepted as essential "truths"? Like many other watershed management schemes in the world, this one begins from the perspective of the watershed or water basin (which is partially why practices seem incoherent in the first place). There are good hydrological reasons why this space is the privileged unit of analysis, but lately it has had its critics, including from among the ranks of water engineers.<sup>13</sup> Reconfiguring the space of nature and culture in which water management is to be analyzed may be more crucial than imagining the commons. Such reimagining of space might be on a par with "thought experiments" in which water managers are asked to think outside the box of conventional engineering thinking and get feedback on it from stakeholders.

Finally, there is the question of whose imagination is to be included or excluded. No doubt the Syilex, who have long occupied the region in question, have their own social imaginary around a water commons; nothing is said about it in the paper. I bring this up not as a political critique but to point out that even if various stakeholders in a common water resource area imagine various possibilities for its use, these are likely to be inconsistent and even at direct odds with each other. There is no assurance, of course, that participatory governance in terms of water basin associations will lead to

13. For an example, see Venot (2011).

coherent visions of the future. The very incoherence the author lamented on the academic level and in public discourse at the beginning of the paper will appear on this level as well, begging the question of what problems the notion of the social imaginary is supposed to solve.

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Wagner's reflections on common-property theory and water management in the Okanagan Valley in British Columbia resonate with my study of conflicts and cooperation over pumping from the Edwards, a large rechargeable aquifer in central Texas. Under threat of a federal takeover of its groundwater management (what Wagner calls "command-and-control management"), the Texas legislature created the Edwards Aquifer Authority (EAA) in 1993 ("multilevel approach") to manage groundwater pumping in such a way as to insure the viability of endangered species in two aquifer-fed springs (Donahue 1998). An elected body, the EAA was successful in issuing pumping permits on the basis of historical usage. We have characterized this policy as the creation of "public property"—the exercise of private property pumping rights within a regulatory framework (Klaver and Donahue 2005). Left unresolved was how much groundwater could be pumped without endangering the species and curtailing freshwater flows in the San Antonio and Guadalupe Rivers downstream and into the bays and estuaries. Stepping into that contentious debate in 2007, a regional administrator of the U.S. Fish and Wildlife Service brought stakeholders together in an open meeting to address strategies for addressing the issue. The response among the 80 participants was so positive that the Texas legislature created a committee of 28 institutional representatives (the Edwards Aquifer Recovery Implementation Program [EARIP]) to craft a habitat conservation plan (HCP), which was completed by the deadline of December 2011.

The "incoherence" that characterized that debate for nearly 20 years was ultimately resolved through what Wagner, following Taylor (2004:23), calls the "social imaginary." The "common understanding" that emerged after 4 years of monthly meetings and numerous subcommittee meetings of the 80 stakeholders was an HCP with which all but one (with one abstention) of the 28 committee members could agree. That shared "legitimacy" was the fruit of much discussion and consensus building over a 4-year period.

Wagner suggests that a focus on social actors rather than solely on social factors might better help understand water management decision making and governance in the Okanagan Valley. This is true of the EARIP as well. While the Texas legislature had commissioned a stakeholder committee of 28, some 60 to 80 persons attended the monthly meetings. Representing quite different interests in aquifer management, they never-

theless developed broader social networks over time, greater degrees of trust, and a broader "imagining" of a governance strategy greater than that of any one institutional interest. Wagner quotes Appadurai (1986) that "the imagination is now central to all forms of agency" and adds "it has always played a central role in our relation to water." The stakeholder group in the Okanagan Valley envisioned their water as a "collective resource." The EARIP eventually envisioned a water management regime that was codified in the HCP. The EARIP acted as a "bridging institution" in the region, much as did the Okanagan Basin Water Board. How both institutions were effective in creating a "social imaginary" for management of a "collective resource" is revealed in the "mapping of the actor networks" that developed over time.

I would add one other dimension to Wagner's use of social imaginary, and that is the creation of a common language among the social actors. Stakeholders in the EARIP realized that any strategy to optimize aquifer pumping so as to maintain the species viable involved risks. To minimize such risks, stakeholders agreed to a process under the linguistic rubric of "adaptive management process" (AMP). The AMP proactively addressed the level of uncertainty that often exists in the management of natural resources through a process of experimentation and verification. Specifically, the AMP envisioned in the HCP is a process for examining alternative strategies to meet the biological goals and objectives and then, if necessary, adjusting the agreed-to minimization and mitigation measures according to what has been learned during the AMP. "Adaptive management" is a cover term that includes a series of language items pertaining to the endangered species and changes in their habitat.

AMP suggests that the optimization of the aquifer while protecting the endangered species is an ongoing process involving biologists, hydrologists, policy makers, and stakeholders working together on a regular basis. Stakeholders ultimately agreed to a process of adaptive management in great part because of the success of the 4-year effort in creating the HCP. More inclusive language terms were adopted that allowed participants to place particular interests in a more global cultural framework and move forward. Language may not determine reality, as Sapir and Whorf suggested, but language certainty informs our perception of reality. The lesson of the EARIP is that new language items may be necessary for social actors to arrive at a more collegial approach to water management.

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Recent writings have convincingly argued that water cannot be neatly abstracted from political cultures or social power. To contemplate water, in other words, is to inevitably find



our reflections upon liquid surfaces. We, in looking at water, stare at ourselves. But the hydrological, nevertheless, is more than the mere expression or extension of sociological determination. Gaston Bachelard (1999 [1942]) and Ivan Illich (1985), to cite two remarkable voices on the subject, in sagacious meditations alluringly remind us that flows run rife with meanings and symbolic excesses and intensely shape unconscious worlds. Water saturates the very sediment of the human psyche and thereby can roil and inspire other realities and actions.

John Wagner, in this essay, correctly captures this compelling mood in which he unravels ideas about water not only as constituents of political economy/ecology but, more profoundly, as elements critical to fabricating political possibility. That is, the discussion seeks to go beyond the conventional documenting of the (mis)use or management of water by attempting to recover, instead, ingredients for an alternative hydraulic vision, an effort that the essay endeavours by leaning on the notion of the social imagination. It is, arguably, a notion first given direction by Cornelius Castoriadis (1998), who suggested that social or political arrangements could be disrupted by the world-making capacities of imaginations, symbolic excesses, and meanings, in effect implying that a social-historical rupture need not be reduced to the outcome determined by its preexisting conditions. Rather, a “radical otherness” could be created by the burst of an “imaginative praxis,” almost *ex nihilo* as it were.

By the 1990s, the social imaginary acquired new impetus through the coruscating scholarship of the likes of Charles Taylor, Arjun Appadurai, Dilip Gaonkar, Michael Warner, and Craig Calhoun (to name a few). The conceptualization here—and I once again offer a rough-and-ready view—was the optimistic belief that civil society and the public sphere could generate radical alternatives beyond the exhausted claims of the market and the state, in a sense that the inchoateness and slippery conceptual terrain of the everyday world could structure a social imagination to invoke unprecedented and democratic possibilities.<sup>14</sup>

It is against this ambitious backdrop that the author walks us through the tangled thicket of property regimes and the lack of fit between their terminological elegance and disorderly appropriation on the ground. Strict definitions about public property, private good, open access, communal property, and the idea of the commons, as is strikingly pointed out, are easily unsettled when grappling with water management in the Okanagan Valley of British Columbia, Canada. This disorientation between the institution of property and operations for harnessing water—or theory and practice—the author suggests, draws not only from the region’s complicated environmental history and its political ecology of

unequal access but also, critically as well, from the very nature of the hydraulic endowment. The Okanagan Valley, comprising a series of large lakes and drained by the Okanagan River, in fact “belie” its aridity. With barely 30 cm of rainfall a year and significantly less in its southern reaches, the valley, according to the author, appears more environmentally contiguous with the Great Basin Desert of the American Southwest. In effect, potential scarcity shapes technological choice and overhangs many of the distribution conflicts.

It is amidst this peculiar hydraulic context that John Wagner discusses the strange life of the Okanagan Basin Water Board (OBWB), a basinwide institution created in 1969 by an act of legislature. Intended to originally function as a centralizing command-and-control water regulatory authority, the OBWB has since 2003 (following below-average precipitation) turned course to forge instead “a number of research partnerships with provincial and federal ministries, local university and college researchers, environmental NGOs, and other management agencies.” By 2006 there is even a stewardship council that draws “representatives from a broad range of economic sectors and subregions and from all levels of government, including indigenous Okanagan communities.” This dense collection of voices and ideas then goes on to successfully trump attempts in 2008 at creating private holdings in the foreshores of the upland areas of the reservoir lakes. And at the heart of this resistance and eventual triumph that was spearheaded by the OBWB lies, according to the author, the imaginary of water as a shared common. A belief that water can be harnessed not as a private good nor as command-and-control property but through a multilevel governance design, capable of accommodating noisy partnerships. Compelling as the argument is, one nevertheless wonders if the details of the case suggest otherwise. Did the multiple water users of the Okanagan Valley—logging, mining, ranching, hunting, fishing, skiing, biking, snowmobiling, and other recreational uses—bring about a political stalemate against privatization rather than shape an imagination about the commons? Political pragmatism rather than social-historical rupture?

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The article opens with a useful overview of the burgeoning literature on the commons. It is shown how the notion spans diverse domains, ranging from common property and land use to open access systems on the Internet and even “shopping commons” being malls of private commercial enterprise. In the course of his extensive review of the commons literature, Wagner points to massive terminological inconsistencies and suggests that the term is even overapplied to customary prop-

14. For an excellent discussion on the origins and the different turns in the evolution and deployment of social imagination as a concept, see the edited collection in *Public Culture*, in particular the introduction by Dilip Parameshwar Gaonkar (2002).

erty systems because these are not at all isolated or even sufficiently distinct from other property regimes. The multiplicity of meanings adhering to the commons makes a strong case for revisiting the concept, leading Wagner to suggest that the commons be seen as a “social imaginary.” This might free it from direct association with actual distribution of resources, particular property regimes, or principles of governance. The case for this suggestion is made through an analysis of a particular water management system in British Columbia.

Before I discuss this case, I shall briefly discuss the notion of a social imaginary as introduced to better understand the nature of the commons. Surprisingly, Wagner lists Benedict Anderson’s notion of the imagined community first among his inspirations, all while acknowledging that commons constitute a very different kind of imagined community from the nation-state. They are alike, apparently, in their exercising a significant degree of political power despite their actual “incoherence.” This takes Wagner toward Charles Taylor’s definition of a social imaginary as “that common understanding that makes possible common practices and a widely shared sense of legitimacy.” The common practices tend to silence the incoherence that underlies the community, and we are led to believe that this also goes for the commons—which (I believe) is not a “community” in any comparable sense.

We also learn that the commons “is an emergent rather than a fully actualized imaginary.” Surely there can be no one commons imaginary, given the vast variety of ground covered by the term, as set out in the first part of the paper. When Appadurai’s work is subsequently invoked to account for the incoherence and disjuncture embedded in the idea of the commons, the imagined community of the commons becomes even more elusive in my view.

Moving toward the empirical study of water governance, Wagner convincingly argues that the opposition between commons and commodities should not be overstated, since they are often interwoven in actual water management systems. The broad analysis of the Okanagan Water Governance Network certainly testifies to an inherent complexity, and it was actually meeting with people in the Okanagan Valley and seeing the ways in which they thought about water that made the limitations of common-property theory become obvious. Gradually adopting an actor-network approach, Wagner was able to identify the multiplicity of agents—people, institutions, histories, and images—at play in local water management. It became clear “that water in the Okanagan cannot be considered a commons if one applies the conventional definitions used by common-property theorists.” Only in the case of farmer-operated irrigation systems may water “legitimately be considered a commons.” Here a clear-cut notion of commons is implied, which is not sustained by the initial discussion of the inherent complexity of the term.

The strategy created by the Okanagan Water Stewardship Council stresses that water is a “common good,” which may be “owned collectively as either public or common property but it can also be owned privately. Management policy needs

to accommodate these various property regimes while giving primacy to the idea of collective ownership.” This statement, according to Wagner, demonstrates that the council has “embraced the idea of water as a commons,” as understood in popular discourse. I fail to see how this suggestion adds anything to the pragmatic intelligence of the council, the less so because we are here faced with yet another popular version of “commons.”

Toward the conclusion, Wagner says that while in the course of his analysis he gravitated away from commons theory and toward actor-network theory (are they mutually exclusive?), he does not wish to argue that commons theory should be abandoned altogether. By now, the reader is relatively confused about the meaning of “commons theory,” which is not improved by the suggestion “that ‘imagining’ water as a commons can help us build the types of institutional networks we need to manage water wisely, equitably, and sustainably.”

My main argument with the article lies with the incongruence between the theoretical exposé and the empirical case. The manifest complexity of the concept (in the literature) seems to be merely glossed over by resorting to the notion of the social imaginary, which in the Okanagan case is simply presented as an empirical fact embedded in public discourse and facilitating particular policies. Is that all there is to the commons as a social imaginary?

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### Martha Kaplan

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John Wagner began, he tells us, trying to use scholarly theories of common property to understand water management in the Okanagan Basin, Canada. He found that distinctions between common, public, and private property or treating water as a common-pool resource on the basis of its physical properties rather than as a multiply socially managed resource obscured how water is actually managed. Instead, people he worked with have a sense of water as collective resource. This sense, he finds, is similar to the disjunctive, incoherent, but fruitful understanding of “water as a commons” proposed by many water activists, which he calls a water imaginary. He narrates his turn from, for example, insights of polemicist Peter France (1969), who detailed inaccuracies by which colonizers “invented” Fijian communal landholding, to a Latourian ethnography, seeking a way to make anthropological observation relevant to polycentric governance and wise water policy.

As an anthropologist coming to conduct research on bottled water consumption from the standpoint of political and historical anthropology of colonialism and postcoloniality, I agree that Latour’s work on the agency and power of things and the bringing into being of new realities pushes scholars focused on people to think in new ways about things, publics,

and politics. “Each object gathers around itself a different assembly of relevant parties. Each object triggers new occasions to passionately differ and dispute. Each object may also offer new ways of achieving closure without having to agree on much else. [O]bjects—taken as so many issues—bind all of us in ways that map out a public space profoundly different from what is usually recognized under the label of ‘the political’” (Latour and Weibel 2005:15). But most importantly, an ethnographically open method inquiring into water can also lead to surprises. Sometimes, in some places, the waterscape mingles with other very powerful ideascapes. Also beginning with questions about public and private, common and commodity, in the U.S. setting I studied, I found that drinking water is permeated with ideas of health, agency, and unexpected forms of community and care under capitalist conditions.

Surprisingly, it is not individual bottles of water that supplant drinking fountains in the workplace communities I studied. It is water coolers. Drinking fountains dispense “free” public water, directly into people’s mouths or vessels. Vending machines dispense sealed individual cans or bottles in return for payment. Coolers dispense spring water into cups or bottles. Drinking fountains in public hallways can be used by anyone who passes by. Coolers in lounges and offices are paid for by office budgets, and the water is therefore owned, private, and “privatized.” But it is not individualized; the spring water cooler sits visibly in a big, generous jug and flows freely, unlike the vending machine single-serve portions. Technically and economically, coolers fall between drinking fountains and vending machines. Moreover, communities constituted by coolers fall interestingly between the drinking fountain’s inclusive public—“anyone who walks by,” legally open to all drinkers—and the individual purchaser and likely nonsharing drinker of a vending machine’s single-serve bottle. Asking ethnographically about “users” of coolers, I found people describing themselves as “owners” and learned about complex, local understandings of publics and privates, collectivities and individuals. I found that spring water coolers are water forms by which people address workplace contradictions, desires for health and vitality in the face of fear of pollution, and (in the context of local New Deal history) a collective political desire for health and care (Kaplan 2011).

Wagner’s Latourian inquiry in Okanagan, Canada, led him through a “messy” (his word) but governance-focused universe of actors, human and aqueous. It seems that they, like him, were focused on active management of water and on water itself—for drinking, for agriculture, for recreation—as a valued collective resource. My Latourian inquiry in upper New York State led me through a universe where drinking water desires are not only about water but are constantly also about desires for health. Since my work focused on drinking water, the relationship to the body may have been foregrounded. Perhaps the cultural politics of two different national systems (the United States has only recently come close to implementing a national system of health insurance) also

orient differences. Wagner’s study seems—or hopes—to see in Okanagan an instance of the coming into being of a new and powerful discourse of care for collective resources (“commons”) that in its global though disjunctive scope can span popular, academic, and governmental realms. In contrast, my research is not about agents whose technical assemblages change the whole social field with new general truths (e.g., on Pasteur and the constitution of biology, see Latour [1988] and Kaplan and Kelly [1999]). Rather, in a U.S. workplace, at an uncertain moment on the cusp of health-care change, a quieter agency of drinking water choice, on the borderline of public and private, embodies truths about communities, their possibilities, and value.

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### Elinor Ostrom

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John R. Wagner identifies some puzzling problems with current social science literature related to common-pool resources and common-property regimes. Many of these problems are the result of a relatively deep commitment by many social scientists to keeping the theoretical language we use extremely simple. Complex explanations of social-ecological structures and outcomes have been strongly discouraged.

During the era after World War II, the predominant view was that there were two types of goods and services (public and private) that then needed to be provided by two types of property regimes (government and private ownership). When Garrett Hardin wrote his dramatic article in *Science* in 1968, he based his prediction of the inevitability of tragic results if government or private ownership was not imposed on the users of a pasture, fishery, or other type of commons (Hardin 1968). When Vincent Ostrom and I introduced the concept of common-pool resources and toll goods (Ostrom and Ostrom 1977), we doubled the types of goods that we urged social scientists to include in their analysis of environmental questions. We recognized that many institutional arrangements in addition to markets or governments were important ways of providing, producing, and managing valued goods and services that did not fit the traditional dichotomy. Unfortunately, as many other scholars began to recognize the limits of the classic dichotomy, they used the initials “CPR” to refer to common-pool resources as well as to common-property regimes (see the critique of this practice by Bromley et al. [1992]). Considerable other confusion has been generated in the struggle to move beyond the simple dichotomy of the market and the state.

Many of the criticisms that Wagner makes of the work of commons scholars are justified. We should also recognize, however, the difficulty of breaking out of the substantial limits that the overly simplified social science approaches to the

analysis of environmental processes and outcomes have placed on theoretical developments. His description and analysis of the complex water systems that have developed in the Okanagan Valley of British Columbia are very useful and insightful.

As many interdisciplinary scholars began to recognize that we needed to develop a more complex method for analyzing the wide diversity of factors that affect how actors at multiple scales interact to affect the sustainability of resources, they have now joined in an effort to move beyond panaceas and develop a broader framework for the analysis of social-ecological systems (see the special feature of *Proceedings of the National Academy of Sciences of the USA* edited by E. Ostrom, Janssen, and Anderies [2007]; E. Ostrom 2007, 2009; McGinnis and Ostrom, forthcoming). Scholars at the Potsdam Institute for Climate Impact Research in Germany, the Stockholm Environment Institute in Sweden, the EU NeWATER project located at the University of Osnabrück, the International Institute for Applied Systems Analysis in Austria, Delft University of Technology in the Netherlands, the University of Zurich in Switzerland, Humboldt University in Berlin, Marburg University, and the Nordland Research Institute of Bodø University College in Norway have had several meetings in Europe with me to begin plans for using a common framework (initially developed by E. Ostrom [2007]) to study a variety of resource systems. Scholars at the Workshop in Bloomington and the Center for the Study of Institutional Diversity at Arizona State University will also participate in this effort. A core problem identified by these scholars is the lack of cumulation across studies on diverse natural resource systems as well as humanly engineered resources. A special issue of *Ecology and Society* to be published early in 2013 will present an overview of current developments. The framework has already been applied by Gutiérrez, Hilborn, and Defeo (2011) and Cinner et al. (2012) to complex fishery systems and is proving useful for the analysis of a wide variety of resource systems that will be reported next year in *Ecology and Society*.

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John Wagner's paper attests to the resurgence of interest in (as well as political contestation over) the commons, what it is, how it can be thought, how it is governed, how it is imagined. While the late-nineteenth and early-twentieth-century discussions on the commons operated very much under the signifiers of anarchism, socialism, or communism as radically alternative (to the dominant individual-liberal) ideas of producing, using, and governing collective resources, these political names are largely disavowed by, or censored from, today's scholarly vocabulary; yet I would contend that this is

precisely what is at stake—that is, imagining and symbolizing (naming) different ways of “commoning” (Swyngedouw 2010). The specter of the idea of commoning as an emancipatory and democratic-egalitarian mode of organizing being-in-common nonetheless hovers over academic debate, public imaginaries, and political contestations of the commons. I shall focus here on these political meanings.

It is clear from the paper that the notion of the commons is a “chaotic concept.” Both in theoretical conceptualizations and public imaginaries, heterogeneous, often plainly contradictory, and thoroughly confusing understandings are proffered. I would argue that the cacophony of ways of imagining and/or theorizing as well as institutionally configuring the commons, in both scholarly and public imaginaries, posits precisely the (disavowed) political nature of “the commons.” The contradictory perspectives on the commons reveal the “truth” of the commons, what is truly at stake—that is, the contested and often antagonistic struggle over the particular mode of inserting collective resources, qualities, and affects within a social and political order of being-in-common. Was that not precisely the point of Anderson's analysis of imagined communities? The nation as a performative imaginary inaugurated the construction of a particular kind of commons. The nation-state as idealized commons was mobilized by a particular set of political actors and social classes (the newly emerging bourgeoisie and their allies) in a political struggle to carve out a new spatiality amenable to the free circulation of commodities within a unified linguistic, cultural, legal, and institutional framework (while fending off competing outsiders). This imaginary was squarely inserted into clear class politics and sociopolitical strategies, and at stake was the desire to materially and institutionally organize the commons in ways that reflected and fostered particular class interests.

Scholarly conceptualizations are also as much inserted in an imaginary/phantasmagorical constellation as public ones. For example, the debate over private versus public property of common amenities, affects, or resources is embedded in an imaginary in which commodification, market exchange, and capital circulation are deemed to be the dominant game in town. This stands of course in contrast to perspectives on the commons that make a fundamental distinction between things that can be owned (and thus alienated) and those that are an integral part of life itself and should therefore never be subject to property rules (Hardt and Negri 2011). The latter perspective then focuses on the political and institutional mechanisms through which the commons is collectively and democratically produced, access regulated, and the bads or goods deriving from their presence or transformation distributed (indeed, the commons are not necessarily benign for all; consider, for example, atmospheric CO<sub>2</sub>, urban decay, garbage and other forms of pollution, congestion, and the like).

What is really at stake here is not solely the nature of the property regime but the mobilization and enrolling (to use a Latourian term) of the commons as collective produced con-



stellations within a logic of market profitability and capital accumulation. However, while neoliberalization is indeed about the commodification of (or, more precisely, assigning an exchange value or price) to everything, including collective constellations (like knowledge, socionaturally constituted and produced resources, affective relations, software codes, urban space, and ecosystems services), a fundamental distinction has to be made between value on the one hand and price (or exchange value) on the other. The enrollment of the commons within neoliberal capitalism has become an exquisite rent-extracting device. In *The Economic and Philosophical Manuscripts*, Marx already alluded to the tensions and struggle between two forms of capital—that is, between immobile and mobile capital (Marx 1967). The former is land and resource based, and surplus was accumulated primarily through various forms of rent extraction; the latter is based on surplus value production. While the latter is productive of value through the mobilization of labor, the former is purely extractive and redistributes value (to the property owners) in the form of rent through the medium of assigning exchange value. This is precisely the process that Harvey (2003) described as “accumulation by dispossession” and designates an extraordinary reassertion and appropriation of rent-yielding “stuff,” such as land-based speculation; the privatization of environmental commons like water, gene pools, CO<sub>2</sub>, minerals, and the like; intellectual property regimes; urban space; biogenetic code; affective and cognitive labor; and so on. Democratic-egalitarian political struggles—both symbolic and material, public and scholarly—are today revolving precisely around the transformation of the modalities through which access to, control over, and distribution of collective produced amenities (and the appropriation of rent) is organized.

Therefore, the key issue of the commons therefore centers on working through the politically and relationally constituted symbolic and material processes and relations through which the process of commoning unfolds, one that invariably operates under the specter of the political idea of commo(u)nism.

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## Reply

I very much appreciate this opportunity to engage in public discussion of the issues raised in my paper and to benefit from the constructive feedback of my peers. My sense of appreciation is very much diminished, however, by the fact that Elinor Ostrom, one of the most important of all possible respondents to this paper, passed away shortly after providing her comments. She has made an extraordinary contribution to the field of commons theory and more than any other scholar has been responsible for the rapid growth of interest in this field over the past several decades. I would also like to pay tribute here to the extraordinary sense of commitment and collegiality that informed her work and that is evident

in her response to my paper. It is in that spirit of collegiality that I now add my own comments to those of my colleagues.

Most respondents to my paper, even those best known for their work as commons theorists, appear to accept several of my main arguments concerning the inconsistency of academic commons terminology and the fact that this terminology fails to capture the full complexity of real-life situations. Ostrom, for instance, in the generous spirit that characterized her life and work, agrees that many of my criticisms “are justified,” although she understands the inadequacy of commons terminology in a very different way than I do, as being due to a “deep commitment by many social scientists to keeping the theoretical language we use extremely simple.” Bryan Bruns has long recognized the lack of fit between theoretical terminology and the “lumpy” complexity of real-life property regimes and uses the concept of “institutional bricolage” to accommodate these inconsistencies. Erling Berge writes that a “reasonable response” to a “lack of conceptual clarity” may be to accept “that it is no longer commons as such we study but property-rights institutions,” a point that is in full agreement with my own argument. Berge also acknowledges the existence of the sharp disjuncture I describe between academic, resource-based conceptualizations of the commons and those embraced by popular culture and by a growing number of academics, such as those who attended the Berlin conference he describes.

Most respondents, though certainly not all, also agree with me that commons can legitimately be understood as a kind of social imaginary. Rohan D’Souza expands upon the list of authors who I might have credited with informing my own use of this concept, most notably Castoriadis, who I mention only in a footnote. Rita Brara accepts my basic argument but emphasizes the multiplicity of social imaginaries that inform water commons. Erik Swyngedouw extends my use of Benedict Anderson and the concept of “imagined community” to draw attention to the nature of the political and economic conflicts that underlie divergent conceptualizations of contemporary commons as well as the nineteenth-century conflicts that resulted in the enclosure of European commons. John Donahue describes a situation in which the emergence of what he calls a “social imaginary” helped to resolve a long-standing and complex conflict over management of water levels in the Edwards Aquifer in Texas. However, he seems to be equating the idea of a social imaginary with the “common understanding” that emerged among 80 stakeholders after years of meetings and legal rulings. This is a slightly different application of the concept than the one I propose. The common understanding he describes for Texas stakeholders bears some resemblance to the common understanding I describe for the Okanagan Water Stewardship Council, but it was not my intention to equate the common understandings of local water boards or advisory councils with the commons imaginary. The commons imaginary I describe is rooted in a particular historical discourse that romanticizes the historical European commons and represents commons and commodities

as polar opposites. The emotional appeal of this imaginary is such that even shopping malls, which are entirely devoted to the sale of commodities, attempt to incorporate it into their advertising campaigns by describing malls as shopping commons. The commons imaginary, as I define it, and more specifically the idea of water as a commons finds expression in the local understandings of water boards but cannot be equated with those understandings. It is a broader cultural phenomenon, which, like the imaginaries that inform nation building, obscures and suppresses paradox and conflict among its members, even while it provides the basis for their unity within an “imagined community.”

Steven Caton and Kirsten Hastrup are much less positive than the eight other respondents about the commons as an imaginary, however, and offer substantive criticisms. Caton begins by stating that the idea “is an interesting and original one,” but he decides in the end that he is “not sure” what I mean by it and wonders whether Malinowski’s concept of a “mythic charter” might not do just as well. He also suggests that my presentation would have benefitted by discussion of “other anthropologists [who] have developed ideas of the social imaginary—from Clifford Geertz’s interpretation of a Balinese cockfight to the general literature on anthropology of the ‘future.’” These suggestions confirm for me that Caton indeed has not entirely understood my meaning, since the concepts to which he refers bear only a limited relationship to my own. Geertz’s reading of Balinese cockfights is an exemplary example of “thick description” and the interpretive approach in anthropology, but Geertz never uses the term “imaginary” in that paper or in any other of which I am aware. The Balinese cockfight, according to Geertz (1973), “is a Balinese reading of Balinese experience; a story they tell themselves about themselves” (448), but this hardly equates with the idea of a social imaginary as developed by Castoriadis, Anderson, Taylor, and Appadurai. Castoriadis treats social imaginaries as similar in function to creation myths; I agree that the two bear a family resemblance, but the idea of a “mythic charter,” as we trace that concept to Malinowski, has some very different characteristics. Myth, according to Malinowski, functions as a straightforward behavioral code operating in a timeless ethnographic present. A social imaginary, on the other hand, may inform a political agenda, but it provides no straightforward guide to action and is constructed through complex historical processes, such as those that gave rise to modern nation-states.

Despite the general support I have received for the concept of a commons imaginary, I agree that it is an elusive concept that has been used quite differently by different theorists. Caton is on much stronger ground, then, when he suggests that as much terminological “incoherence” may ultimately accompany the idea of a social imaginary as informs the idea of a commons. While this is a danger that I fully recognize and one I might have addressed in more detail in my paper, I would like to emphasize that the concept of a social imaginary presupposes—even requires—a certain degree of par-

adox, self-contradiction, and even philosophical incoherence, as Benedict Anderson has argued with regard to the imaginaries that have supported the coming into being of nation-states.

Hastrup is more negative than Caton in her response to the commons imaginary concept but provides incomplete arguments that tend to block rather than facilitate debate. After noting my reliance on Anderson and his concept of the “imagined community,” for instance, she states her “belief” that a commons “is not a ‘community’ in any comparable sense,” but she never explains the basis for her “belief.” And in the next paragraph she writes that “surely there can be no one commons imaginary, given the vast variety of ground covered by the term.” Perhaps she would find the concept more to her liking if I were to identify multiple, distinct commons imaginaries? Unfortunately, she abandons this line of argument without making her position clear. Brara raises this same issue, arguing in favor of multiple commons imaginaries, and Caton also touches on this when he suggests, quite correctly, that Syilx (indigenous Okanagan) culture is most likely informed by a different social imaginary with respect to water than Okanagan settler culture. Although I see some utility in the idea of multiple commons imaginaries, the imaginary I am describing is global in distribution and not specific to any one place, is emergent rather than fully realized as a political ideology, and finds strong support among indigenous as well as nonindigenous peoples, as the Cochabamba “water wars” illustrate. My goal in this paper was not to describe all the commons imaginaries that exist in a particular setting but to describe a single commons imaginary that has application in multiple settings.

Hastrup’s most important criticism lies elsewhere, however, and is focused on what she refers to as the “incongruence” between my theoretical argument and my Okanagan case study. She presents no evidence of incongruence but does indicate, as do other respondents, that the Okanagan material does not support or represent the commons imaginary concept as well as it might have. Brara makes a different but comparable argument when she points out that I do not account for the full social complexity of the Okanagan, a point I readily concede. Bruns, in reference to my description of the proposed sale and privatization of upland waterfront lease lots, correctly suggests that “the full story is more complex” than my account of it. Addressing the same issue, D’Souza goes further, challenging my interpretation of events and suggesting that multiple users of the watershed may have brought about “a political stalemate against privatization” but not a reshaping of the public imagination. In my defense, I need to remind commentators and other readers of my reasons for including Okanagan material in the paper. The idea of a commons imaginary did not emerge from my Okanagan research, and I was not using the Okanagan material to convince readers of its existence. The idea of commons-as-social-imaginary emerged from a different research project in which the term “commons” was subjected to discourse analysis to resolve the

sharp disjunctures that I had been noting for many years between academic, natural-resource-based ideas about commons and the ideas that inform popular use and studies of “new commons.” The discourse analysis study was global in focus and did not include Okanagan material, although it was carried out during the same time period as the Okanagan research. The Okanagan material was then used to illustrate the relationship of the commons imaginary to policy development and its relevance to future research projects in this setting and elsewhere. Should I have waited until I had gathered more compelling research data before attempting to define the general characteristics of this particular commons imaginary? That hardly seemed necessary given the goal of this paper, which was to bring forward for discussion a proposal about how more effective policy-oriented research on water management might be conducted. The paper proposes remedies for impediments encountered in the field, remedies that include the use of actor-network theory to map the interplay of material and semiotic characteristics of water governance systems, including the presence and influence of a commons imaginary in the minds of human actors. Full application of the proposed methodology is now under way in a new research project focused on the Columbia Basin as a whole, and documentation of that project will occur once it has been completed.

With regard to the specific criticisms offered by Bruns and D’Souza concerning my description of the lease lot controversy, I should also point out that public debate on that issue was still in its early stages when my Okanagan research drew to a close. Since I live in the Okanagan, I continued to track the issue as best I could through conversations with those actively involved in the debate, including the staff of the Okanagan Basin Water Board. These conversations revealed widely divergent opinions about why the provincial government eventually decided to cancel the program. The final government decision (to the extent that any such decision is ever final) was certainly based on “political pragmatism,” as D’Souza suggests. The public debate, which I followed in local media as well as through conversations with leading participants, was also based on pragmatic concerns in addition to the notion of defending water as a collective resource. A whole paper could have been devoted to this Rashomon-like tale, but my goal in this paper was to provide a glimpse of the commons imaginary in action and indicate how I planned to study the phenomenon in future research. More dramatic accounts could have been gleaned from the literature that describes water wars in which lives are lost and governments overthrown, but I chose this more modest example because of its wider applicability.

Although I provided less detail than I might have about the commons imaginary in the Okanagan, I believe I did provide sufficient “local” support for my argument about the general lack of utility of conventional, natural-resource-based commons theory. A few commentators appear to have reached the mistaken conclusion that my disillusion with conventional

theory is entirely based on my Okanagan research, but as I note in the paper and have described in previous publications, conventional theory maps poorly onto Pacific Island customary property-rights systems as well. Conventional theory fails in both settings, first of all, because it does not accurately represent facts on the ground as they pertain to property-rights and institutional structures, and it fails again because it does not pay enough attention to the symbolic and semiotic aspects of governance systems.

My arguments concerning the applicability of actor-network theory to water governance research received surprisingly few critical responses. Hastrup suggests that commons theory and actor-network theory are not mutually exclusive, a point that is consistent with Bruns’s recommendations for inclusive approaches that incorporate multiple theoretical orientations. Martha Kaplan addresses this issue more fully when she describes her research in upper New York State as “Latourian inquiry” and notes in addition that “an ethnographically open method” has led to surprising insights into the relationship between “waterscape” and “ideoscape” and into the ways in which new “publics” are brought into being through the agency of things and ideas as well as individuals and institutions. However, Latourian ethnography is by no means the only choice—or even the most likely choice—of research methodology for those who agree that conventional commons approaches are both limited and limiting and that a commons imaginary informs many of the important debates we are having over water today. We need more debate about the types of research methodologies that could be used to accommodate the broader understanding of commons I am proposing here while serving the interests of an applied public anthropology. Eclectic approaches based on multiple theoretical orientations may not be appropriate if those approaches presume too much about the situation under study. Inductive approaches that leave room for surprise and for the uniqueness of each individual situation are more likely to provide fresh insights.

In conclusion, I would like to restate and reaffirm the particular relevance I feel my proposals have for an applied public anthropology. A severe disjuncture currently exists between conventional academic and popular uses of the term “commons,” and new commons scholars are using the concept within academia in ways that make it unrecognizable from the perspective of natural resource studies. Natural resource theorists involved in policy development thus find themselves in the untenable position of having to “instruct” water managers and the general public in the “correct” use of the term “commons” when those individuals are already committed to alternative and, to them, more meaningful definitions. This task of “conversion” is all the more hopeless given the terminological inconsistencies of conventional commons theory. The best course of action, it seems to me, is to embrace the legitimacy of popular usage and deploy the methodological tools necessary to understand its effects as a social imaginary that informs actions and outcomes. Populist notions of the

commons should not be discounted because they lack academic rigor; they should be attended to carefully because they indicate where ideology, affect, and politics come together to influence public policy.

The notion that water is or should be a commons is, of course, part of a highly charged political debate, and the social imaginary that informs that point of view is entirely opposed to the one that informs the policies of those institutions and governments around the world that are implementing water privatization schemes and public-private partnerships. When commons theory emerged as a distinct interdisciplinary field of study in the 1980s, it was very clear that the field had mobilized in opposition to the political agenda encapsulated in Hardin's tragedy of the commons theory—a theory that privatization advocates continue to find compelling. Arguments about commons are not just about what type of property regime works best under given conditions; they are arguments about human rights, democracy, community, and how we want to live our lives. Despite this fact, the political content of the commons imaginary has been, as Swyngedouw argues in his comments, “largely disavowed by, or censored from, today's scholarly vocabulary.” I am not suggesting that all commons theorists should become commons advocates but that our vocabularies need to at least engage with the political realities of the day. Those realities include a massive mobilization against commons and their “enrollment,” as Swyngedouw puts it, following Latour, as a “rent-extracting device” within a system of “capital accumulation.”

To be taken seriously in the world of policy development, especially at local and regional levels, we need to develop a vocabulary that allows us to speak clearly to the political ideologies and cultural values and conflicts involved as well as to the technical, institutional, environmental, and economic factors that shape water governance policy and practices. Recognizing the existence of commons-as-social-imaginary will facilitate that goal.

—John R. Wagner

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