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Power Dynamics and Environmental Resource Flows in the Network Society: Water Bottling and Policy Development in the Columbia Gorge

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Power Dynamics and Environmental Resource Flows in the Network Society:

Water Bottling and Policy Development in the Columbia Gorge

By Cody Shotola-Schiewe

Abstract: This research explores the sociopolitical development of resource rights policy and environmental resource flows in the network society. The specific interaction studied is centered on a disputed proposal by Nestlé Waters North America to the City of Cascade Locks, on the Oregon side of the Columbia River, which would allow Nestlé to build a water bottling plant accessing the culturally and environmentally significant Oxbow Springs. The primary question guiding this research is: In the case of the developing policy concerning water rights in the County of Hood River, what are the identifiable power dynamics between civil society actors, private interests, and state institutions within the networks involved in the making of local environmental policy and the resultant resource flows? The interactional information was collected from a variety of publicly accessible sources including documents published by government agencies and media coverage from established news organizations, and then coded to an operationalized Network Theory of Power. Further informed by scholarship from both political and environmental sociology and globalization literature, I use a form of content analysis to argue that in interactions where the state and private networks were functioning under a cooperative set of goals, a private economic basis of power motivated the state network. Conversely, when state network goals or state network structures and protocols (organizational hierarchy, legislation, etc.) were aligned or accessible to civil society networks and activists, a public political basis of power motivated the state network. This research elucidates important implications for policy making in the era of internet-fueled globalization, public and privately managed environmental resource flows, and effective strategies of citizen-based resistance.

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Introduction

This inquiry is inspired by local community concern, both in Hood River County and the broader Northwest region, about environmental policy making and the use of public and privately held natural resources (especially by global corporations). It also reflects the growth of my personal fascination with the crossroads of political, economic and environmental sociology throughout my undergraduate career and life experience in the early twenty-first century. This developing political, economic and cultural interaction can be taken as a microcosm of the broader problematic atmosphere for effective environmental governance in which local resources and public goods are increasingly used, and exploited unsustainably, by private interests with short term concerns. In this case, the disputed proposal would allow a Nestlé bottling plant to access and extract water from Oxbow Springs in the Columbia Gorge, a site that is both environmentally and culturally significant.

Certainly, the potential subordination of local, state and even national regulatory power to corporate interests, especially in policy disputes concerning natural resources and indigenous sacred sites, is not a phenomenon new to the twenty-first century. However, Manuel Castells (2000) and other social scientists argue that the development of social movements, political policies, state governance and resource flows (among other phenomena) has been revolutionized by communication and information technology, functioning in interactional networks, and we should look to understand the power dynamics emergent out of this altered context. We are encouraged to investigate how institutional and cultural networks at the local, regional, national and supra-national levels interact in an increasingly globalized society, in the interest of utilizing and designing effective policy and regulatory structures which will protect long term public interests and regulate environmental resource flows.

This isn't to presuppose we should idealize our conception of effective democratic regulation and public goods stewardship (assuming these are our aims) towards localities or minority positions within complex policy disputes which involve valid concerns at multiple levels of governmental and societal structure. Rather, it is to take up a task central to the discipline of sociology, as Castells (2016) sees it, "...to understand power relationships, the defining relationships of human existence, in ways that are specific to our world, and to do so by constructing an open-ended, grounded theory that could unveil and transform the sources of domination and, eventually, liberation." Furthermore, environmental sociologists have recently adopted and extrapolated Castells' conception of the space of flows as a key to understanding the network society and transboundary resource flows. This has led to the opportunity for the broadening of this conception into the sociology of flows, which holds promise as a burgeoning paradigm within environmental sociology (Mol and Spaargaren, 2006).

My interest in studying this particular interaction, centered on the disputed Nestlé Waters North America proposal to build a bottling plant on a local water resource for its broader international commercialization is admittedly tripartite. First, through a lens of environmental sociology, to consider the public management of freshwater, which will inevitably supplant oil as the most important and coveted liquid resource on this planet. Second, through a lens of political sociology, to understand the power dynamics underlying the development of resource rights policy and resource use, as dependent on social processes which are increasingly entangled in the technologically-enabled globalization of neoliberal capitalism and its encroachment into the political sphere at all levels of governance structures. Third, in the vein of social movement studies, in the hope of developing mechanisms, methods, and a realistic understanding of social processes and present political-economy for the sake of building effective citizen resistance to

international corporations where inherently private short term motivations for profitability run against long term interests of local civil societies and democratic governance structures.

From this basis, my research explores the question: In the case of the developing policy concerning water rights in the County of Hood River, what are the identifiable power dynamics between civil society actors, private interests, and state institutions within the networks involved in the making of local environmental policy and the resultant resource flows? Considering the historical development of this interaction using content analysis, I will argue that in interactions where the state and private networks were functioning under a cooperative set of goals, a private economic basis of power motivated the state network. Conversely, when state network goals or state network structures and protocols (organizational hierarchy, legislation, etc.) were aligned or accessible to civil society networks and activists, the public political basis of power motivated the state network.

Literature Review

Power Dynamics in Globalizing Society:

The founding of the discipline of sociology originated largely with the questioning of the implicit power dynamics of the social world, and of the nature of the forces which construct, shape and change society more generally. Indeed, Karl Marx, Max Weber and Michel Foucault made the concept of power central to their work, much of which could be posthumously classified as political sociology (Nash, 2010:3). An overwhelming amount of the sociological discourse concerning power in the 19th and 20th centuries was inspired by industrializing urban society and the political, cultural and economic conflicts that arose therein. While urban sociology emphasized culture, political sociology was focused on the interplay between society and the institution of the state, with its, “monopoly of legitimate use of physical force” (Weber, 1946:78). Though the state has not become at all irrelevant in contemporary political sociology, Kate Nash argues that, “economic, political and cultural globalization means that what the state is and does is now itself in question” (2010:3). Neither the Marxist paradigm of economic reductionism, nor the Weberian counter-position of the autonomy of the political sphere (over the economic sphere) as a function of the sovereign nation-state, satisfies the question of power in this globalizing context.

In “Class, Status, Party,” Weber acknowledged the existence of economically-based power, especially in the context of liberal society, but he departs decidedly from Marx saying that, “‘economically conditioned’ power is not, of course, identical with ‘power’ as such. On the contrary, the emergence of economic power may be the consequence of power existing on other grounds” (1946:180). Accordingly, he offers a definition of power which allows for its cultural and political complexity: “In general, we understand by ‘power’ the chance of a man or of a

number of men to realize their own will in a communal action even against the resistance of others who are participating in the action” (Weber, 1946:180).

Manuel Castells, in his recently published piece “A Sociology of Power” (2016), continues this sociological tradition of holding power dynamics as integral to society, insofar as they construct, form and reform the institutions and norms that regulate social activity. Castells defines power as “the relational capacity that enables certain social actors to asymmetrically influence the decisions of other actors in ways that favor the empowered actors’ will, interests, and values” (2016:2). Castells’ definition of power visibly relies heavily on Weber’s, expanding slightly to imply the often-unequal power differential of actors engaged in political, cultural and economic conflicts. This is a lens that is characteristic of Castell’s work, which has often been concerned with potentially and actively subordinated populations in relation to the processes and structures of society. Further building on Weber’s foundational ideas on the nature of power, Castells goes on to include the relationship between knowledge and power observing that often, “power is exercised by means of coercion (the monopoly of violence, legitimate or not, by the state) and/or by the construction of meaning in people’s minds through mechanisms of cultural production and distribution” (Castells, 2016:2). The actors who exercise power, argues Castells, do so through the establishment of institutions, laws and policies, as well as communication systems that express their interests and values and shape social conduct. However, this isn’t to suggest that power (and counterpower) operates in a process of unilateral causation or subordination, often reduced in early Marxist work to a direct function of class antagonism. While Castells was certainly inspired by the question of power as it relates to economic position, as well as the resurgent relevance of Marxian political-economy to internet-enabled globalization and patterns of inequality, he acknowledges that “Power exercisers are diverse, they operate

through alliances to find convergence points in their interests and values,” working on pre-existing institutions, or outside of them (2016:2). In a postmodern fashion, and inspired by his research in the era of internet-fueled globalization (further explored below), Manuel Castells doesn’t hold specific institutions (the state) or economic actors (capital) as permanently hegemonic sites of power. Instead, he is interested in the dynamism of power in society: “...institutionalized power, together with its rules, is always facing resistance by those actors whose interests and values are not sufficiently represented in the dominant institutions,” allowing for a sociology of power that doesn’t ignore counterpower relationships and social movements (2016:2).

Castells is explicit that in his research and work he sought to engage in “...grounded theory rather than grand theory,” and that while all empirical research relies on theoretical tools and assumptions, his theoretical work had to be built on an empirical foundation (2016:3). With this empirical scientific standard, I will pursue my research, taking as Castells does that, “at any given point in time in any given society, institutions and norms are the expression of the state of power relationships, in terms of both institutionalized norms and of the struggles and negotiations that challenge the persistence of these norms” (2016:2).

Globalization and the Network Society:

Beginning in the late 1970s there have been significant changes in the geography, composition and institutional framework of the world economy (Sassen, 2011). Of key importance to the study of the global economy has been the increased transnational mobility of capital, allowed in part by the telecommunications revolution (Sassen, 2011). Until the 1990s, globalization (especially economic liberalization policy) was welcomed, both popularly and in

some scholarship, as it was proffered as expanding liberal society and secular activity, increasing capital flows to developing countries, generally spreading knowledge and increasing social mobility as well as allowing access to broader markets (Stiglitz, 2007). After acting as Chief Economist of the World Bank in the late 1990s, Joseph Stiglitz identified several problems with neoliberal globalization in his book *Making Globalization Work* (2007), of which the challenges of “protecting the environment” and “a flawed system of global governance” are extremely relevant to my research. “In effect, economic globalization has outpaced political globalization,” Stiglitz argues, “...we have a chaotic, uncoordinated system of global governance without global government, an array of institutions and agreements dealing with a series of problems, from global warming to international trade and capital flows” (2007:21).

Manuel Castells, in *The Rise of the Network Society* (2000), posits that only in the last quarter of the twentieth century has this radically new economy and society emerged. He argues that it is fundamentally distinct from previous economic paradigms due to three key factors. First, Castells describes this new paradigm as *informational* insofar as economic productivity and competitiveness in this system depends on the capacity to generate, process and apply knowledge-based information flexibly and efficiently. Second, Castells argues that it is *global* because activities of production, consumption, and circulation, (and their components of capital, labor, raw materials, management, information, and markets) are organized on a global scale. Third, this new economic paradigm is *networked* due to the new historical conditions of productivity and competition being generated in a global network of interaction between business and political institutions (Castells, 2000). Castells writes, “new information technologies, by transforming the process of information processing, act upon all domains of human activity and make it possible to establish endless connections between different domains,

as well as between elements and agents of such activities” (2000:78). In this conception, the new economy and network society are emergent and dependent on the information technology revolution, with the internet giving the material basis for the new nature of the economy and both micro and macro social and economic interaction. Castells proposes that this global economy is distinct from previous generations of the world economy (for instance as described by Fernand Braudel and Immanuel Wallerstein). He defines the global economy as “an economy whose core components have the institutional, organizational and technological capacity to work as a unit in real time, or in chosen time, on a planetary scale” (Castells, 2000:102).

Towards a Sociology of Flows and Implications for Environmental-Political Sociology:

Using data that show the immense growth of foreign direct investment, cross-border bond and equity transactions, and foreign assets and liabilities as a percentage of domestic assets, Castells argues that “...while capitalism is characterized by its relentless expansion, always trying to overcome limits of time and space, it was only in the late twentieth century that the world economy was able to become truly global on the basis of the new infrastructure provided by information and communication technologies” (2000:101). Built upon this conception of a new global network society, Castells observes a new spatial logic which he calls the “space of flows,” which he argues is becoming “the dominant spatial manifestation of power and function in our societies” (2000:409). While Castells and Sassen see certain metropolitan centers like Tokyo, New York, and London as key nodes for this networked financial-informational activity, the spatial logic of the network society is not one of stability or centralized hierarchy, but rather flexibility and adaptability. “Accordingly, regions, under the impulse of their governments and business elites, have restructured themselves to compete in the global economy, and they have established networks of cooperation between regional institutions and between region-based

companies. Thus, regions and localities do not disappear, but become integrated in international networks that link up their most dynamic sectors” (Castells, 2000:412). Castells posits a conceptual antagonism here, between the *space of flows*, which he defines as, “the material organization of time-sharing social practices that work through flows,” and the locally-bound *space of places* in the network, so that “the space of power and wealth is projected throughout the world, while people’s life and experience is rooted in places, in their culture, in their history” (2000:442-446). In this conception of the dynamic global network, no place exists by itself, but its position is based in its role in (or exclusion from) the flows of the network society. Castells builds his conception of the space of flows in three layers. The first layer is the material support of information and communication technologies of the network society previously discussed, while the second layer is made up of nodes and hubs: “some places are exchangers, communication hubs playing a role of coordination for the smooth interaction of all the elements integrated in the network. Other places are the nodes of the network; that is, the location of strategically important functions that build a series of locally-based activities and organizations around a key function in the network” (Castells, 2000:443). The third and perhaps most important layer of the space of flows for the purposes of my research is the “spatial organization of the dominant, managerial elites (rather than classes) that exercise the directional functions around which such space is articulated” (Castells, 2000:445). Castells admits that the theory of the space of flows begins with an implicit assumption that societies are organized often asymmetrically around the dominant interests in the given social structure. While the space of flows is not the only spatial logic of our society, often more social than structural, Castells argues that it can be said to be the dominant spatial logic, “because it is the spatial logic of the dominant interests/functions in our society” (2000:445). Furthermore, the more social organization is

based upon ahistorical flows, dominating specific places, “the more the logic of global power escapes the socio-political control of historically specific local/national societies” (Castells 2000:446).

Especially from the 1990’s onward, general and environmental sociology became interested in understanding the relationship between the global and local, in the context of global environmental governance. Environmental sociologists Mol and Spaargaren have argued that general and environmental sociology have in some respects converged with the emergence of the widely accepted theoretical perspective of approaching social systems and complex systems using conceptual models of networks and flows (2006:41-42). John Urry, in *Global Complexity*, (2003) sees the human agent as intertwined and intricately connected with material and technological systems in a range of diverse networks and flows, pointing to the convergence of social and material-environmental study so that “there are no purified social networks, only ‘material worlds’ (or hybrids that involve peculiar and complex socialites with objects)” (Urry, 2003: 56). Where environmental science has analyzed environmental flows primarily in material and biological terms, unsurprisingly it pays little attention to social systems and social networks, “such as the social interactions, dynamics, and power relations governing these material flows, or the nonmaterial (money, information, etc.) flows that parallel these material and energy flows” (Mol and Spaargaren, 2006:54). Between these two investigative perspectives —that is, general sociology’s focus on the social agent and the social world amid power dynamics, and environmental science’s focus on biological and material flows— lies the important gap in theory and research where environmental-political sociology and the sociology of flows has enormous potential. It is here that I place my research.

Water Rights and Private Accumulation Strategies amid Public Opposition:

Sociologists Daniel Jaffee and Soren Newman (2013) have illuminated the commodification of water as not only an issue relating to that particular resource, but as part of a broader trend of the market's steady incursion into the public sphere, and its implications for democracy and public services. When people opt for private services, (bottled water for instance, which is often just rebottled municipal tap water) the result is often decreasing willingness to fund public goods like tap water infrastructure. As the quality of public services worsens as a result of underfunding, John Vail argues that this "[weakens] the very rationale for these goods and [creates] a vicious spiral of decline that grievously corrodes the public's trust of governmental services and damages the very possibility of cultivating a shared sense of community upon which a democratic citizenship is founded" (Vail, 2010:326).

In his book *The New Imperialism* (2003), geographer David Harvey locates the impetus of the increasing marketization of public domain within the recent overaccumulation crisis of capital in which "surpluses of capital...lie idle with no profitable outlets in sight" (2003:149). Where industrial liberalism's method of wealth accumulation derived much of its profit margin from the difference between the relatively cheap acquisition and activation of resources with labor (aided by the opening of new markets), and the market value of the goods produced (Marx 1867), Harvey argues that capital in the age of neoliberalism must increasingly turn to traditionally non-market goods and services in its necessary search for new ground where it may retain or return to profitability. Indeed, he argues that "The corporatization and privatization of hitherto public assets (such as universities), to say nothing of the wave of privatization (of water and public utilities of all kinds) that has swept the world, indicate a new wave of 'enclosing the commons.' As in the past, the power of the state is frequently used to force such processes

through even against popular will” (Harvey, 2003:148). In light of the activity of global capital amid the overaccumulation crisis that arose in the 1970’s, which is beyond the scope of our investigation, Harvey coins the term “accumulation by dispossession” to describe this neoliberal phenomenon of aggressive commodification where international financialized capital turns to even the public sector to “release a set of assets...at very low (and in some instances zero) cost. Overaccumulated capital can seize hold of such assets and immediately turn them to profitable use” (149).

Based on this, Jaffee and Newman have established that the privatization of drinking water represents an important microcosm of the broader ongoing phenomenon of the commodification of the commons within neoliberal strategies of global capital firms, to accumulate by dispossession and capture domains where they may find continued profitable arrangements for capital accumulation. While municipal tap water networks have provided significant barriers to capital accumulation in the realm of water commodification, Jaffee and Newman argue that “bottled water does not present many of the barriers to capital accumulation posed by tap water networks, in contrast with Bakker’s (2005) influential framing of water as an ‘uncooperative commodity’” (Jaffee and Newman 2013:3). While I am omitting important discussion of the environmental impacts and energy costs of bottled water as compared to municipal tap water systems, according to Barlow, almost 25 percent of all bottled water crosses national borders (2007:84). This places water commodification glaringly within the problematic of financial globalization and the management of local public resources. While there has been resistance in many localities to its water acquisition strategies, “in many of these cases, Nestlé has acquired legal rights or title to the water or land and actively courted local officials, often prior to making its plans public” (Jaffee and Newman 2013:12). Where activists and public

relations campaigns have pushed back against public water commodification, Jaffee and Newman's work demonstrates cases in which "Nestlé has changed its commercial strategies, increasingly moving away from outright acquisition of land and water rights toward extracting spring water as the customer of local public water utilities, but with long term contractual access rights" (2013:12)

Theoretical Framework of Analysis

A Network Theory of Power:

With Castells' diverse background of ethnographic work across the world, in "A Sociology of Power" (2016), he takes up the purpose of building an analytical framework that can be used in research, adapted and operationalized, "in ways that allow the gradual construction of a theory of power and counterpower in the network society" (2016:15). Instead of dissolving power relationships in an endless deployment of structural networks, or dead-ending analytical efforts with a grand theory that locates power as a single entity in the network society, Castells offers his framework to guide research on power under the hypothesis that "exercisers of power in the network society are networks of actors, exercising power in their respective networks, the networks they program to further their interests and values" (2016:15). This is a decidedly dynamic and general framework, operating under the assumption that "how different actors program the network is a process specific to each network," so that "power relationships at the network level have to be identified and understood in terms specific to each network" (2016:15). Furthermore, while the agency of power may be embodied by social actors, power operates not through isolated individuals, but is constituted by the functions and interactions of the networks themselves. From this, Castells outlines four distinct forms of power which are useful categories for analyzing specific interactions and power dynamics in light of internet-dependent globalization. After outlining these categories I will use this operational framework to analyze the historical information I have collected.

1) *Networking Power:*

Networking power refers to “the power of the actors and organizations included in the networks that constitute the core of the global network society over those human collectives or individuals not included in these global networks” (Castells, 2016:11). This power dynamic operates through inclusion/exclusion, in that once a network is constituted, core nodes may exercise gatekeeping strategies to bar access to those who may not add value to the network, or “who jeopardize the interests that are dominant in the network’s programs” (2016:11).

2) *Network Power:*

Recognizing that globalization involves social coordination among multiple networked actors, network power is due to certain communication standards, or what Castells calls “protocols of communication,” which determine “the rules to be accepted once in the network” (Castells, 2016:11). Network power is “the power of these protocols over the network’s components,” which “ultimately favors the interests of a specific set of social actors at the source of network formation” (2016:11).

3) *Networked Power*

With a network conceptualized by a cooperating set of nodes (organizations and actors) informed by a set of protocols (communication etiquette, laws, organizational structures), networked power reflects the understanding that once formed, each network defines and manages its own power relationships depending on its programmed goals. Here, Castells encourages us to acknowledge the dynamic and non-monopolistic interactions in even some of the most entrenched networks (the most established, or networked power), whether it may be the

financial elite, who have some power but are “highly dependent on both the dynamics of global markets and the decisions of governments in terms of regulations and policies,” or governments themselves, which are connected in imperfect networks of global governance and “conditioned by the pressures of interest groups, obliged to negotiate with the media that translate government actions for their citizenries, and confronted by social movements and expression of resistance from civil societies” (2016:11). Indeed, departing from traditionally formulated conceptions of power as static and unilaterally dominating, we must recognize that even the most powerful states and actors have some power, but do not wield power autonomously or exclusively.

4) Network-Making Power:

Castells contends that network-making power is the most crucial form of power in the network society, as the capacity to program and reprogram the goals of the network is decisive, “because once programmed, the network has the capability to perform efficiently and reconfigure itself to achieve its goals” (2016:12). In a society based in networks, the ability for social actors to exercise control over others depends on two mechanisms: “(a) the ability to constitute networks, and (b) the ability to connect and ensure the cooperation of different networks by sharing common goals and combining resources while fending off competition from other networks by setting up strategic cooperation” (2016:12). Castells calls holders of the first power position programmers, and of the second, switchers. While these two categories are certainly concepts based in social actors, they are not necessarily identified by one particular group or individual, and more often than not, “networks operate at the interface between various social actors, defined in terms of their positions in the social structure and in the organizational framework of society” (2016:12).

Research Methods and Historical Content Analysis

The primary goal of my research is to meaningfully describe the power dynamics between civil society actors (including those involved in social movement activities), private interests, political structures, and the relevant socially-based networks involved in the making of local environmental policy. Furthermore, I aim to investigate the resultant flows of environmental resources in the case of the potential Nestlé bottled water facility at Oxbow Springs in the Columbia Gorge. My secondary goals are to both illuminate the clarity and accessibility of the process of this particular policy dispute from the position of the general public, as well as to continue to postulate the sociology of flows literature through the lens of environmental sociology. What should be noted is that my limited selection of data reflects the ongoing nature of the policy and resource dispute which is still ongoing as of the winter of 2017, when my research was completed. Because of this, I will not arrive at an analysis of some “final state” of power relations in regards to this case of policy development and resource management, but this is arguably fitting for a study of the ongoing power dynamics in the network society. I was fully aware of this limitation when approaching this research endeavor.

In order to approach the primary goal of my research, I will direct my investigation with the following research question: What are the identifiable power dynamics between civil society actors, private interests, and state institutions within the networks involved in the making of local environmental policy and the resultant resource flows?

Data Sources:

Interested in this theoretical foundation for analyzing power relations and governance, I collected and condensed a body of historical evidence on events and interactions important to my focus on policy development and resource flows, which were drawn from a variety of publicly accessible sources. These include published meeting minutes and official documents from government agencies, media coverage from established news organizations, and published testimony and accounts concerning the policy dispute and relevant actors, as it developed.

Coding and Data Analysis:

For undertaking an analysis of this research, I first coded this data (which I would classify as historical-interactional information) using Castells' Network Theory of Power, as well as considering aspects of power dynamics and the sociology of flows raised by other political and environmental sociologists. In highlighting the power dynamics of interactional networks, I have coded all governmental organizations within the state network (including the county and municipal levels as they are core organizations of the governance network at their respective levels), so as to consider the power dynamics between state and private networks and state and civil society networks within this interaction. By analyzing the interactions between the specific organizations and more general networks in question, and the type of power they are utilizing (using Castells' theoretical framework), I hope to investigate the power dynamics between these networks and the implications of the findings both for policy development and resource management. I chose this style of data collection, coding, and analysis in order to make my inquiry feasible for the time and resources that were available to complete this research.

Additionally, I chose this methodology with the goal of elucidating the degree to which

the power dynamics active in the development of this particular policy dispute are clear and accessible to the general public, in order to enhance and acknowledge my experience as both a researcher and a concerned citizen. Last, this research methodology has permitted me significantly more time to incorporate and synthesize the theoretical work previously discussed, where other methodologies such as semi-structured interviews would have encumbered the process with substantial quantitative coding and analysis.

While this methodology for collection and analysis is decidedly qualitative, and relies both on the accuracy of sourced information and the usefulness of Castell's intentionally open-ended Network Theory of Power, one can still draw tentative conclusions regarding this particular case study, even if the findings are only conceptually, rather than statistically, generalizable. Simultaneously, by employing more abstract and open-ended theory we may emphasize the significance of this particular policy development and public interaction within the frame of globalization, as a microcosm of the broader trends discussed previously in the literature section.

After a review of the sourced historical information, I will proceed with an analysis of the data, taking as Castells does that "at any given point in time in any given society," institutions, norms, interactions, and their social results, are manifestations of the state of power relationships, and reflect both the "institutionalized norms and of the struggles and negotiations that challenge the persistence of these norms" (2016:2). In this way, I am departing from traditional content analysis, which seeks to code and analyze the latent meaning of the content, often at the individual level. Instead, as my interest in this study is the broader socio-political context and the power dynamics associated with the developing water rights policy, I will proceed on the assumption that the relevant social meaning and results of power relationships

and interactional dynamics are evidenced in real historical developments, which nonetheless often remain obscure until later reflection. While it would be impossible to collect, and consider the totality of relevant data and individual experience within this developing policy dispute, I have worked intentionally to collect and compile ample data so as to represent the real, traceable socio-historical developments, events, actors and interactions relevant to my disciplinary interests in political and environmental sociology.

Historical Content in Chronological Order

The information presented here is a collection of publicly accessible information from a combination of sources including state, county and city level official documents, news agencies, private interest groups and other third party organizations relevant to this particular policy interaction. I accessed, compiled, summarized and presented the content with the goal of illustrating thoroughly and transparently the chronological development of events relevant to water rights policy and the proposed bottling plant in the city of Cascade Locks, whatever may transpire. I have taken great care to summarize and include all relevant information from each given source, true to the original material, adding quotations where it is necessary. I have only omitted information where source information is redundant or where a more established source is sufficient (for example, official documentation of an event may be cited instead of a news source reporting on that event).

The dates and information correspond directly to the source indicated (based on the day of publication or public dissemination of the information, and not necessarily the exact date the historical events took place, unless noted) and kept as simple as possible for ease of accessibility, while still giving proper attribution. The exception to this is the first and most comprehensive source, the “Final Order in Contested Case Approving Additional Points of Diversion,” published in 2016 by the Oregon Department of Fish and Wildlife, from which I have included information in the order of the chronological development of the historical content. If there is more than one source relevant to a specific date, I added it and indicated a separate source using indentation.

It should be noted for clarity that there is an important distinction between the water right transfer applications (T-11108 and T-11249) and the water right exchange application (T-

11109) submitted by ODFW to OWRD. The former applications extended and amended the existing ODFW water right, while the latter would give ODFW the right to exchange some of the water they have right to access.

Abbreviations:

CFS: Cubic feet per second (water flow rate)

ODFW: Oregon Department of Fish and Wildlife

OWRD: Oregon Water Resources Department

POD: Point of (water) diversion

Historical Content:

1951 - Oregon Department of Fish and Wildlife (ODFW) granted Certificate no. 24625: giving water rights to the city of Cascade Locks, authorized to divert up to 10 cubic feet per second (cfs) of surface water from Little Herman Creek for its Oxbow Springs fish hatchery. Little Herman Creek is fed by the East, Middle and West springs. (As of 2008, ODFW has diverted water directly from Middle and East Springs “for at least 10 years,” after the water emerges from the ground).¹

November 19, 2008 – Initial presentation by Nestlé Waters North America to Cascade Locks City Council and Port of Cascade Locks Commission on Nestlé’s “Pacific Northwest Project” (seeking a spring water bottling facility site in either Washington or Oregon). Prior to this meeting Nestlé contracted a hydrologist to inspect the spring water capacity of the area on two different occasions. The presentation proposed an approximately 250,000 square foot bottling facility along with a dedicated facility to produce the bottles, in total representing a \$50 million-dollar investment, which Nestlé initially claimed would support 53 family wage jobs with benefits. “Council and Commission thanked them for coming to the meeting and making the presentation, stating that Cascade Locks would welcome them to the community.”²

November 5, 2009 – Food and Water Watch, a national environmental advocacy group, circulated a petition in Oregon to pressure the State to refuse the proposed water exchange with

¹ French, Dwight. 2016. *Final Order in Contested Case Approving Additional Points of Diversion*. Salem, Oregon: Oregon Department of Fish and Wildlife.

² Bengston, Kristi. 2008. “Joint City of Cascade Locks Council and Port of Cascade Locks Commission Meeting Notes.” Retrieved January 20, 2017 (<http://portofcascadelocks.org/home-2/port-commission/>).

the City. City Administrator Bernard Seeger sent notification to the Governor's office and discussed the petition with General Manager Chuck Daughtry and Carolyn Meece of Business Oregon.³

August 27, 2010 – ODFW submitted two application to the Oregon Water Resources Department (OWRD). 1) Water Right Transfer application T-11108 would maintain the originally authorized point of diversion (POD) on Little Herman Creek, as well as officially adding the Middle and East Springs as additional PODs for the originally certified quantity of water allowed for diversion (10 cfs). 2) Water Right Exchange application T-11109 would trade 0.5 cfs of the spring water allotted to ODFW to the City of Cascade Locks, in exchange for 0.5 cfs of well water.¹

“As part of the proposal, the City would have access to up to 0.5 cfs...from the Oxbow Springs to sell to its potential customer, Nestlé Waters, for bottling purposes...If the exchange goes through, and [the] project moves forward, [Nestlé] would purchase water from the City like any other business, and be subject to the same rules and regulations.”⁴

September 02, 2010 – While waiting for a study paid for by Nestlé on the effects of the proposed well water exchange on fish at the hatchery, to be completed by March 2011, OWRD opened up public comment (to close on Sept. 30th 2010) concerning the transfer application

³ Kristi, Bengston. 2009. “Port of Cascade Locks Commission Meeting Notes.”
(<http://portofcascadelocks.org/home-2/port-commission>).

⁴ Nestlé Waters North America. n.d. “Nestlé Waters North America Evaluates Potential Spring Bottled Water Plant in Pacific Northwest.”
(<https://www.nestlewaterscommunities.com/pnw/sites/default/files/NWNA%20Cascade%20Locks%20Fact%20Sheet-1.pdf>).

proposed by ODFW. The proposed plant would nearly double property tax collections in the city of Cascade Locks (pop. 1,050), garnering support from Cascade Locks leaders and Gov. Ted Kulongoski. The coalition of environmental groups led by Food and Water Watch have pointed to other Nestlé plants which have not provided the economic benefits promised by Nestlé, and that Nestlé and the State haven't thoroughly studied the long-term impacts of a bottling plant on Cascade Locks' municipal water supply and Herman Creek itself. Dwight French, Water Rights Administrator for the Oregon Water Resources Department (OWRD), said the agency will scrutinize whether the water exchange is truly equal, but that Nestlé is not a party to the exchange in question, and the agency will not consider environmental issues around bottled water plants. "We may get comments about whether the plants are a good idea or not," French said, "but this exchange application is not for a bottling plant."⁵

April 12, 2011 – ODFW modified its T-11108 rights transfer application from 10 cfs to 0.5 cfs, after the public comment period had ended. Complaints issued by protesters about the last-minute modification to the transfer application were later disregarded in the joint ODFW and OWRD legal proceedings based on the technicality of the term "amended," with ODFW's change to the application taken as an acceptable clerical edit rather than a fundamental amendment of the transfer application which would call for an extension of the public comment period.¹

May 23, 2011 – ODFW filed a third application to OWRD, Water Rights Transfer Application

⁵ Learn, Scott. 2010. "Bid by Nestlé to Tap into Cascade Locks Spring Water Open for Public Comment." *The Oregonian*, September 2.

T-11249, proposing to add the aforementioned additional sites for diversion (Middle and East Spring) to the remaining 9.5 of ODFW's Water right. ¹

February 27, 2012 – OWRD issued a preliminary determination to approve the water rights transfer applications, T-11108 and T-11249 which replaced the original 1951 certification (no. 24625). ¹

March 29, 2012 – Protesting organizations “Bark” and “Food and Water Watch” challenged OWRD determination with counsel Crag Law Center, on account of questionable amendment procedures (application revised after the public comment period had ended) as well as challenging that the new points of diversion are groundwater sources rather than surface water and therefore aren't permitted under the statutory scheme, among other concerns. ¹

April 2013 – Food and Water Watch released a fact sheet highlighting the water right exchange (T-1109) which would “pave the way” for Nestlé to buy spring water from Cascade Locks at the standard municipal water rate, while the Oxbow Springs fish hatchery would in turn offset the exchanged 0.5 cfs of spring water with a potential 0.5 cfs of well water from Cascade locks for the state-owned hatchery. While Nestlé plans to bottle approximately 100 million gallons of spring water per year under the Arrowhead Brand, approximately an additional 57 million gallons per year of Cascade Locks' municipal tap water (sourced from groundwater/wells) would also be bottled under Nestlé's Pure Life brand. Pointing to the 2010 USGS study of the region evaluating changes in groundwater levels from 1984 to 2009, and a preliminary analysis of the

economic issues concerning the question of the proposed bottling plant, the activist coalition is adamant about the long-term issues of both declining groundwater reserves and economic externalities of the project.⁶

January 23, 2015 – Instead of obtaining the water through the original avenue of a gallon-for-gallon trade between the state of Oregon (ODFW) and Cascade Locks city government, which would then sell the water to Nestlé, the company wants the state to change its legal right to some of the Oxbow water and transfer the rights directly to Cascade Locks. This tactic would eliminate a sticking point in the permitting process for: where a gallon for gallon trade between ODFW and the City of Cascade Locks officially requires the consideration of how a trade of resources might negatively impact the public (transfer application T-11109). Instead, transferring the rights would require that ODFW renege a promise it made to not forfeit its water right. “Under Nestlé’s direction the Cascade Locks City Council voted last week to seek the Oregon Water Resources Department’s permission to swap a portion of its well water right for 0.5 cubic feet per second of the Oregon Department of Fish and Wildlife’s right to draw 10 cubic feet per second from Oxbow Springs...Under the so-called [water rights] cross transfer, ODFW would supply its hatchery with city well water during times when Oxbow’s flow is low, and the city would sell its spring water to Nestlé for a couple bucks per 1,000 gallons...Nestlé in turn would sell the water to consumers for hundreds to thousands of times that amount.” Also, the city council voted to offer negotiated pricing for water customers who use more than 250,000 gallons per month, a level only Nestlé would reach, paying less per unit volume than Cascade

⁶ Food and Water Watch. 2013. “Keep Nestlé Water Bottling Plant Out of the Columbia River Gorge.”

Locks residents.⁷

April 10, 2015 – ODFW Agrees to transfer part of its water right at Oxbow Springs to Cascade Locks. “Cascade Locks City Administrator Gordon Zimmerman said the city and state wildlife agency jointly submitted paperwork Friday morning to initiate a water rights cross transfer, with the state trading spring water for the city’s well water.”⁸

September 21, 2015 – Activists in Hood River County filed a ballot initiative, the “Hood River Water Protection Measure” (14-55) aimed at preventing the Nestlé Corporation from bottling in the Columbia River Gorge. The initiative would effectively ban commercial bottled water operations in the county. While the Cascade Locks City Council has approved the bottling plan, the deal still requires the state’s consent (OWRD). Along with the activist group “Local Water Alliance”, leaders of the Confederated Tribes of the Warm Springs questioned the deal in a letter to Governor Kate Brown and tribal members staged rallies and a hunger strike in protest of Nestlé. “Because the water resources department cannot consider public interests when deciding whether to allow Nestlé’s plan to move forward, it’s unlikely the company’s opponents could stop the plan through state-level action.”⁹

⁷ House, Kelly. 2015. “Bottled Water Wars: Nestlé’s Latest Move in Cascade Locks Sparks Outcry from Opponents.” *The Oregonian (OregonLive)*, January 23. (http://www.oregonlive.com/environment/index.ssf/2015/01/bottled_water_wars_nestles_lat.html).

⁸ House, Kelly. 2015. “ODFW Agrees to New Approach for Nestlé Bottled Water Plant in Cascade Locks.” *The Oregonian (OregonLive)*, April 10. (http://www.oregonlive.com/environment/index.ssf/2015/04/odfw_agress_to_new_approach_fo.html).

⁹ House, Kelly. 2015. “Hood River County Ballot Initiative Seeks to Block Nestlé Water Bottling Plant.” *The Oregonian (OregonLive)*, September 21. (http://oregonlive.com/environment/index.ssf/2015/09/hood_river_ballot_measure_seek.html).

November 06, 2015 – After a letter from Oregon Gov. Kate Brown to ODFW director Curt Melcher asking ODFW to withdraw the agency’s application to transfer part of its water right at Oxbow Springs, citing concerns of regional drought and limited public recourse within water rights swaps, ODFW “will scrap its latest strategy to free up water for a Nestlé bottled water plant in Cascade Locks, in favor of an approach that lets regulators consider the public impacts of relinquishing water in the midst of a drought.”¹⁰

December 23, 2015 – OWRD referred the matter of the rights transfer applications (in conjunction with ODFW, seeking approval of T-11108 and T-11249) to the Office of Administrative Hearings (OAH) for a consolidated contested case hearing.¹

December 30, 2015 – The “Hood River Water Protection Measure” is approved for the ballot after activists turned in more than three times the number of signatures required. Set to appear on the primary ballot in May 2016, measure 14-55 would ban commercial operations bottling more than 1,000 gallons a day in Hood River County.¹¹

April 12, 2016 – Cascade Locks City Council passed a resolution (6-1 in favor) officially opposing Hood River County ballot measure 14-55 as a “direct threat to the city’s home rule,”

¹⁰ House, Kelly. 2015. “Gov. Kate Brown Asks for New Approach to Nestlé Water Deal.” *The Oregonian (OregonLive)*, November 6. Retrieved February 5, 2017 (http://www.oregonlive.com/environment/index.ssf/2015/11/gov_kate_brown_asks_wildlife_d.html#incart_river_home).

¹¹ Kullgren, Ian. 2015. “Measure to Block Nestlé Bottling Plant Headed to May 2016 Ballot.” *The Oregonian (OregonLive)*, December 30. Retrieved February 5, 2017 (http://oregonlive.com/politics/index/ssf/2015/12/ballot_measure_to_ban_nestle_b.html).

and out of concern for its economic future.¹²

May 17, 2016 – Hood River County voters passed ballot measure 14-55 with 69% in favor, the nation’s first-ever successful initiative to prevent water bottling plants bottling more than 1,000 gallons of day.¹³

May 24, 2016 – Despite the overwhelming support for the Hood River County ballot measure, the majority of the Cascade Locks City Council voted to direct attorneys to consider new strategies to close the deal. Campaign finance records show Nestlé poured more than \$100,000 into fighting the ballot measure through a political action committee and an industry group. While 69% voted in favor of 14-55 in Hood River County, only 42% of voters supported it in the Cascade Locks precinct.¹⁴

June 10, 2016 – Senior Administrative Law Judge Allen (on behalf of the Oregon Office of Administrative Hearings) issued his ruling on the OWRD and ODFW Joint Motion for Summary Determination and Proposed Order, approving the OWRD preliminary determination approving right transfer applications T-11108 and T-11249, while water right exchange application T-11109 remains unapproved.¹

¹² Mulvihill, Patrick. 2016. “Cascade Locks Council Votes against 14-55.” *Hood River News*, April 12. Retrieved February 6, 2017 (<http://www.hoodrivernews.com/news/2016/apr/13/cascade-locks-council-votes-against-14-55/>).

¹³ Loew, Tracy. 2016. “Hood River Voters Block Nettle Bottling Plant.” *Statesman Journal*, May 18. Retrieved February 5, 2017 (<http://www.statesmanjournal.com/story/tech/science/environment/2016/05/17/hood-river-voters-block-nestle-bottling-plant/84340262/>).

¹⁴ Brousseau, Carli. 2016. “Election Doesn’t Persuade Cascade Locks to Abandon Proposed Nestlé Deal.” *The Oregonian (OregonLive)*, May 24. Retrieved February 5, 2017 (http://www.oregonlive.com/pacific-northwest-news/index.ssf/2016/05/election_doesnt_persuade_casca.html).

July 7, 2016 – Bark and Food and Water Watch filed their Exceptions to the Proposed Order.

No responses were filed to Protestants' Exceptions.¹

August 4, 2016 – In Waitsburg, Washington (pop. 1,230) the mayor stepped down amid accusations of backroom deals with Nestlé and protests over a preliminary plan for a bottling plant similar to the one proposed in Cascade Locks (roughly 150 million gallons of water each year to be extracted from local springs and groundwater wells). Some residents had called for the mayor's resignation after the Waitsburg City Council learned in July that he and other city staff had met privately with Nestlé, and that the company planned to help repair leaky pipes near the town's springs without a contract. An online petition opposing the deal had received 1,261 signatures as of Thursday, that week.¹⁵

September 21, 2016 – Representatives from regional tribes, local activists and supporters rallied in front of the Oregon State Capitol building in Salem as the city manager of Cascade Locks has "directed staff to review the legal ramifications and remedies available to the city to continue the relationship with Nestlé Waters North America." The protesters were concerned that despite the county vote on measure 14-55, the governor and ODFW would not honor the ballot measure results, and would seek alternative avenues for continuing with the Nestlé proposed plan.¹⁶

¹⁵ Flatt, Courtney. 2017. "Nestlé Stirs Controversy With New Plan for Northwest Water Bottling Plant." August 4. Retrieved February 5, 2017 (<http://www.opb.org/news/article/nestle-controversy-plan-northwest-water-bottling-plant/>).

¹⁶ The Associated Press. 2016. "Protesters: It's Time to Put Nestlé Bottling Plant Ambitions to Rest." *The Oregonian (OregonLive)*, September 21. Retrieved February 7, 2017 (http://www.oregonlive.com/pacific-northwest-news/index.ssf/2016/09/protesters_its_time_to_put_nes.html).

October 29, 2016 – Two of the three of ODFW’s water right transfer requests were granted by OWRD after the legal proceedings of the Oregon Office of Administrative Hearings (approving water right transfer applications T-11108 and T-11249). T-11108 added the two points of diversion (Middle and East Springs) to clarify where ODFW may pull water from. T-11249 split the ODFW water right from one right to 10 cubic feet per second (cfs) into two rights, one for 9.5 cfs and one for 0.5 cfs, the latter of which could be involved in the Nestlé bottling plant. Before it would be possible to sell the water to Nestlé, the city of Cascade Locks and the ODFW need to officially agree to exchange water from the springs for municipal tap (well) water, and the exchange must be approved by the Oregon Water Resources Department. Cascade Locks City Administrator Gordon Zimmerman said that the city actually selling water to Nestlé is still “four or five steps down the road,” and that, “it could be two, three, four years.” The county level ballot measure that passed is the main thing standing in the way of the plan for the plant going forward. A 60-day appeal period was opened after the transfer request was approved.¹⁷

¹⁷ Roth, Sarah and Pat Dooris. 2016. “State Approves Next Step for Nestlé Water Bottling Plant in Gorge, despite County Vote.” *KGW*, November 3. Retrieved February 5, 2017 (<http://www.kgw.com/news/local/state-paves-way-for-nestle-water-bottling-plans-despite-county-vote/347240019>).

Analysis of Historical Content (Tables)

Modes of Power Interaction:

- 1) **Networking Power:** The gatekeeping power of actors and organizations within core networks to include or exclude other actors and organizations from networks.
- 2) **Network Power:** The power of the communication protocols in a given network over the components of the network.
- 3) **Networked Power:** The power of programmed goals and structural hierarchy of actors and organizations, established during the formation of a given network.
- 4) **Network-Making Power:** The ability of social actors and organizations to: a) establish and “program” the goals of a network, and b) the ability to “switch”, align, connect and ensure strategic cooperation between actors and networks by sharing common goals.

State and Municipal Organizations:

(OWRD): Oregon Water Resources Department
 (ODFW): Oregon Department of Fish and Wildlife
 (OAH): Oregon Office of Administrative Hearings
 (CCL): City Council of Cascade Locks

Civil Society Actors:

(LWA): Local Water Alliance
 (FWW): Food and Water Watch

Date	Actor Interface	Mode of Power Interaction	Rights/Policy Development
1951	State Org (State of Oregon, OWRD) → State Org (ODFW)	4) Network-Making Power (Programming: establishing a state resource rights network)	ODFW awarded cert. 24625, giving right to 10 cubic feet per second (cfs) spring water for use at the Oxbow Springs Fish Hatchery.
Nov. 19, 2008	Private Interest Org (Nestlé) → State/Municipal Org (CCL)	4) Network-Making Power (Switching: aligning networks)	Beginning of cooperation of private and state networks (aligning of common goal: economic growth).
Nov. 5, 2009	Civil Soc./Collective (FWW, others) → State Org (State of Oregon, Hood River County)	1) Networking Power (Excluding the CCL from state resource rights network)	FWW circulating a petition in Oregon to pressure the state to refuse the proposed water rights exchange with the City.

Date	Actor Interface	Mode of Power Interaction	Rights/Policy Development
Aug. 27, 2010	State Org (ODFW) → State Org (OWRD)	3) Networked Power (Aligned programming/goals of established resource rights network)	Two rights applications submitted to OWRD by ODFW. T-11108: Adding sources to original 10 (cfs) right. T-11109: Exchanging 0.5 (cfs) of spring water allotted to ODFW to CCL, for 0.5 (cfs) of well water.
Sep. 02, 2010	Civil Soc. Actors/Collective (FWW, others) → State Org (OWRD)	2) Network Power (Legal/communication protocols exempted public comments concerning proposed bottling plant)	Public contestation limited to the content of transfer applications due to legal protocols.
Apr. 12, 2011	State Org (ODFW) → State Org (OWRD)	2) Network Power (Legal/communication protocols allowed modified transfer application without contestation)	ODFW modified rights transfer application T-11108 from 10 (cfs) to 0.5 (cfs). This modification was accepted by OWRD as a clerical edit rather than a fundamental amendment (which would require reopening the public comment period).
May 23, 2011	State Org (ODFW) → State Org (OWRD)	3) Networked Power (Established resource rights/governance network)	ODFW filed a third rights transfer application. T-11249: Effectively splitting the original 10 cfs ODFW water right into two spring water rights (T-11108's 0.5 cfs and T-11249's 9.5 cfs)
Feb. 27, 2012	State Org (OWRD) → State Org (ODFW)	3) Networked Power (Established resource rights/ governance network)	OWRD issued preliminary determination to approve rights transfer applications T-11108 and T-11249, replacing original 1951 rights certificate no. 24625.

Date	Actor Interface	Mode of Power Interaction	Rights/Policy Development
Mar. 29, 2012	Civil Soc. Actors/Collective (FWW, Bark) → State Org (OWRD)	2) Network Power (Legal/communication protocols)	Protestant organizations challenged OWRD determination on account of questionable amendment procedures and that newly approved points of diversion were outside of ODFW permit. Contestation did not reverse the determination.
April 2013	Civil Soc. Actors/Collective (FWW) → Civil Soc. Actors/Collective (General Public)	4) Network-Making Power (Building civil society/public opposition network)	Growing network of public actors, framing policy dispute within broader environmental/drought context, seeking goals alignment with other groups.
Jan. 23, 2015	Private Interest Org (Nestlé) → State/Municipal Org (CCL)	3) Networked Power (Aligned State and Private networks, CCL and Nestlé)	With Nestlé’s encouragement, CCL voted in favor of seeking ODFW permission to swap a portion of CCL’s well water right for a portion of ODFW’s 10 (cfs) spring water right (0.5 cfs for 0.5 cfs). This would eliminate a sticking point in the permitting process, requiring OWRD to consider how the effect of a trade might negatively affect the public. Instead of CCL and ODFW keeping their previously determined rights and trading water, this would go back on a public promise ODFW made to not forfeit its water right in any form. CCL also voted to offer a negotiated pricing for water for customers who use more than 250,000 gallons per month (a level only Nestlé would reach), paying less per unit volume than Cascade Locks residents.

Date	Actor Interface	Mode of Power Interaction	Rights/Policy Development
Apr. 10, 2015	State/Municipal Org (CCL) → State Org (OWRD)	3) Networked Power (Established resource rights network)	ODFW agreed to swap its water right to 0.5 (cfs) of spring water (of original 10 cfs allotted) for CCL's water right to 0.5 (cfs) well water. The city and state agencies jointly submitted paperwork to OWRD to initiate the water rights cross transfer.
Sep. 21, 2015	Civil Soc. Actors/Collective (LWA, others) → County Org (Hood River County)	1) Networking Power (Excluding commercial water bottlers from Hood River County)	Activists filed ballot initiative 14-55, that would effectively ban commercial water bottling in Hood River County. While the CCL has approved the plan for the plant, the deal requires OWRD (state network) consent.
Sep. 21, 2015	Civil Soc. Actors/Collective (Activists and Leaders of Confederated Tribes of Warm Springs) → State Org (State of Oregon, Gov. Brown)	4) Network-Making Power (Switching: seeking alignment of civil society and state networks)	As OWRD cannot consider public interests in their decision to allow or prevent Nestlé's plan and the transfer applications submitted by ODFW, activists sent a letter and staged rallies in hopes that Oregon Governor Kate Brown would prevent the plan from moving forward.
Nov. 06, 2015	State Org (State of Oregon, Gov. Brown) → State Org (ODFW, Dir. Melcher)	3) Networked Power (Hierarchy of state organizations)	ODFW scraps plan to swap water rights after a letter from Gov. Brown asked the agency to withdraw its rights cross-transfer application citing concerns of regional drought and limited public recourse within water rights swaps.
Dec. 23, 2015	State Org (OWRD) → State Org (OAH)	2) Network Power (Appeal through state network protocols to proceed regardless of network's components)	OWRD referred the matter of the rights transfer to the OAH for a consolidated (OWRD and ODFW) case hearing.

Date	Actor Interface	Mode of Power Interaction	Rights/Policy Development
Dec. 30, 2015	Civil Soc. Actors/Collective (various activists) → State/County Org (Hood River County)	2) Network Power (Appeal through State network protocols to proceed regardless of network's components)	Ballot measure 14-55, that would ban commercial bottling of more than 1,000 gallons a day in Hood River County, is approved for the ballot after activists turn in three times the number of required signatures.
Apr. 12, 2016	State/Municipal Org (CCL) → State/County Org (Hood River County)	2) Network Power (Appeal through State network protocols to proceed regardless of network's components)	Cascade Locks City Council voted to pass a resolution officially opposing Hood River County Ballot Measure 14-55.
May 17, 2016	Civil Soc. Actors/Collective (Voters) → County Org (Hood River County)	2) Network Power (Appeal to state network protocols to proceed regardless of network's components)	Ballot measure 14-55 passes in Hood River County with 69% of participants voting in favor. This is the nation's first-ever successful initiative to prevent water bottling plants from bottling more than 1,000 gallons per day.
May 24, 2016	Private Interest Org (Nestlé) → State/County and Municipal Orgs (CCL and Hood River County)	4) Networking-Making Power (Switching: connecting state and private networks, aligning common goals and cooperating)	Campaign records show Nestlé poured more than 100,000 into fighting ballot measure 14-55 through a political action committee and an industry group. CCL voted to direct attorneys to consider new strategies to take Nestlé's goal to fruition.
Jun. 10, 2016	State Org (OAH, Judge Allen) → State Orgs (OWRD and ODFW)	3) Networked Power (Common governance goals of state networks)	Oregon Office of Administrative Hearings ruled in the OWRD and ODFW joint case, approving the OWRD preliminary determination approving transfer applications T-11108 and T-11249.

Date	Actor Interface	Mode of Power Interaction	Rights/Policy Development
Jul. 7, 2016	Civil Soc. Actors/Collective (Bark and FWW) → State Org (OAH)	2) Network Power (Power of protocols over components of the network)	Exceptions to the transfer approval were filed by activist groups after the approval. No response or recourse was filed relating the protestant's exceptions.
Aug. 4, 2016	Private Interest Org (Nestlé) → State/Municipal Org (City of Waitsburg, Washington)	4) Network-Making Power (Programming: creating network of state and private organizations)	The Mayor of Waitsburg, Washington stepped down after accusations of backroom deals with Nestlé and protestation of a preliminary plan for a water bottling plant similar to the one proposed in Cascade Locks.
Sep. 21, 2016	Civil Soc. Actors/Collective (Local Tribal Reps, general public and activists) → State Org (State of Oregon)	3) Networked Power (Appeal to powered organizations within State network)	Rally staged at Oregon State Capitol where protesters were concerned that despite the county vote on 14-55, that the governor and ODFW wouldn't honor the measure, and seek alternative avenues for continuing Nestlé's proposed plan.
Oct. 29, 2016	State Org (OWRD) → State Org (ODFW)	3) Networked Power (Common goals of state network organizations)	OWRD approved ODFW's requested water rights transfers T-1108 and T-11249. T-11108: Adding additional diversion sources middle and east springs to ODFW's 10 (cfs) water right. T-11249: Splitting ODFW's water right into two rights, one for 9.5 (cfs) and one for 0.5 (cfs). Rights exchange application T-11109 remains unapproved.

Analysis and Observations

Through my research on this resource rights dispute, and encouraged by the scholarship I touched on in the literature review, I came to observe two main intersections of the relevant networks which are involved in this power interaction. The first significant network intersection I observed was between the private sector (in this case, Nestlé Waters North America) and the state sector (the municipal government of Cascade Locks, the Oregon Department of Fish and Wildlife and the Oregon Water Resources Department, to only name some of the key players), which I go so far as to consider as an integrated private-state network insofar as the private and state networks appear to operate under aligned goals, which I will first consider in the following analysis section. The second significant network intersection I observed was between the public network (often the most amorphous due to less formal organization) and the state network. In order to avoid confusion between the “public” (citizens, voters, activists, and grassroots organizations) and the “public sector” which would include the state organizations, I will refer to the general public as much as possible as “civil society”, but when the term “public” is used it is not in reference to or including the public sector/governmental institutions.

This distinction highlights an important overarching conclusion of this particular research, which confirms assertions by globalization (CITS) scholars, that the role of the state has moved away from a role as the “governor” and increasingly is forced to play as the “gamekeeper” at the sites of struggle between large corporations and public bodies. Here we see David Harvey’s geopolitical climate reviewed in the literature section, where civil society and public bodies the world over are increasingly at odds with the private sector at the nexus that the state represents, holding the rules of the game (rights, laws, protocols, etc.) in terms of socioeconomic and environmental resource activities.

Private-State Networking and Policy Developments

Extrapolating from the information presented in the historical content section, it is clear that from 2008 onward, Nestlé’s networking activity with the City Council of Cascade Locks (as well as the Port Commission of Cascade Locks) was central to the development of water rights policy. Supporting Castell’s theoretical framework—that *network-making* power is often the most crucial aspect of power in the network society—the initial presentation by Nestlé Waters North America to the City Council and Port Commission demonstrates the early network construction that proved to be crucial for the continual progress towards the bottling plant and necessary transfer of water rights to either Nestlé or Cascade Locks. That is, the proposal presentation documented in the source from 2008 exhibits Nestlé’s network-making power, which in this case was an aligning of private network and state network goals (at the municipal level), on an economic basis. By *switching* or linking the traditionally-separate state and private networks, Nestlé would operate through this alliance, from the convergence point in their interests, to work on pre-existing state institutions.

While the state organizations (be it ODFW, the City Council of Cascade locks, or even the Governor’s office) may have been organizationally undisturbed in the making of this particular private-state network, broader public interest in a return to a healthy local economy (which saw its heyday before the evaporation of timber activity in the region), increased property tax revenues, and job growth, were easily alignable to Nestlé Waters North America’s goals of resource accumulation and a location for profitable capital investment. The creation of what we will call the private-state network was of chief importance in this interaction, and as it was programmed to the aligned goals of the City Council, Port Commission and Nestlé, was clearly oriented towards the building of the bottling plant and the integration of local resources into the

global economy.

The dominant economically-based power of Nestlé Waters North America is further evidenced by the vote by the City of Cascade Locks (documented by the January 23 2015 source) to seek ODFW permission to swap of portion of the city's well water right, as well as the developments of transfer applications submitted by ODFW. With the private-state network cooperating under the goal of moving towards building Nestlé's planned bottling plant, the city council's vote in favor of seeking ODFW permission to swap a portion of the Cascade Locks municipal well water right for a portion of ODFW's spring water right, demonstrates the *networked power* active in this alliance once it was formed. In order to eliminate an obstacle to the bottling plant permitting process, which had become the ultimate program goal of this private-state network, the city now sought to swap a portion of its water right, forgoing and subordinating other publicly-oriented or environmentally-oriented goals. This point is further supported by the January 23 2015 source documenting the Cascade Locks City Council vote, as we can see that during the same meeting the city council also voted in favor of offering a negotiated pricing for water for customers using more than 250,000 gallons per month, a level of use that no public interest or citizen would come close to. The vote in the January 23 2015 source demonstrates a change in the tactic of the private-state network, as ODFW's transfer application T-11109 had become stalled on the technicality of OWRD's necessity of considering how a gallon for gallon resource trade (instead of a rights transfer) might negatively affect the public.

From the earlier source, documenting on February, 27 2012 of OWRD's preliminary determination to approve ODFW applications T-11249 and T-11108, we can see the necessary change of tactic by the private-state network to fulfil the dominant programming of the network

(building the bottling plant). The preliminary determination by the Oregon Water Resources Department to approve ODFW's water transfer applications T-11108 (approving two additional diversion sources for the original 10 cfs ODFW water right) and T-11249 (splitting the original 10 cfs water right into two ODFW rights, one for 9.5 cfs and one for 0.5 cfs) but not T-11109 (trading 0.5 cfs of ODFW spring water for 0.5 cfs of Cascade Locks well water, without transferring rights to Cascade Locks), shows the necessity of switching resource acquisition tactics, as T-11109 has not been approved to date. While the state agencies, ODFW and OWRD were (from the information that I was able to gather) not as directly influenced by communications with Nestlé as was the municipal government of Cascade Locks, these state-level organizations were effectively within the power dynamic of the private-state network.

I argue that ODFW, OWRD and other state-level agencies were functioning as part of the private-state network insofar as their relevant interests were in common with the city's: namely, the necessary management of local resources and rights/access that had been aligned to the goal (introduced to the newly formed private-state network in 2008) of integrating local resources into the global economy for both state revenue and private profit. While the networked power dynamics within the state institutional structure didn't totally yield to Nestlé (manifest in T-11109 stalling due to the state network's public concerns), we can see that once the private-state network was programmed, "the network has the capability to perform efficiently and reconfigure itself to achieve its goals" (Castells, 2016:12). This is evidenced by the information from May 23 2011, with ODFW filing the third transfer application T-11249 in order to circumvent the issue of considering the public effects of a resources trade.

Between the actions of the Cascade Locks City Council and the Oregon Department of Fish and Wildlife, we can see that different levels of the state network were actively working

towards the goals of the private-state network. With ODFW modifying and creating new resource-rights transfer applications, the legal groundwork was being laid so that the city could attain right or access to the spring water that was coveted by a multinational firm. The end result, in terms of policy and resource flows, of this private-state network cooperation has yet to materialize and appears to be years from either canning or approving the bottling plant plan. However, what is clear is that as early as 2008, a private-state network had been formed toward a particular project. Although the planned bottling plant has yet to get the green light from the state-network (as the Hood River County ballot measure 14-55 has currently superseded the power of the any of the government agencies or offices, to legally bar the access desired by Nestlé), state network activities including the rights transfer applications and their resulting changes in resource management had clearly been motivated under the aligned goal of the private-state network. This motivation was based in economic power (the potential investment provided by Nestlé Waters North America), to commodify and integrate the local water resource into the global economy.

Public/Civil Society-State Networking and Policy Developments

However, one should not adopt a unilateral conception of the power dynamics in this policy and resource-rights dispute. Civil society (public) activists, environmental collective groups and local political organizations employed several counter-power strategies in combatting the Nestlé-proposed program. Of these, the network-making power of public activist groups and civil society actors should not be overlooked, as the efforts of the Local Water Alliance, Food and Water Watch, Bark, and the Confederated Tribes of Warm Springs, among others, represent the backbone of the counter-power efforts with strategic cooperation toward a common goal of

preventing the construction of the bottling plant.

Network-making power was even escalated to the Governor's office when activists staged a protest and rally hoping to convince the Governor (and in turn the rest of the state network) that its goals should be aligned with the public/civil-society network more than the private network. This was after the City of Cascade Locks had officially approved the plan for the bottling plant and necessary changes in resource management, as documented in the information from the September 21 2015 source. This counter-power network-making strategy of goals alignment appears to have been temporarily effective because ODFW officially scrapped its plan to swap the water rights after receiving a letter from the Governor's office that cited concerns of regional drought and limited public recourse after a rights transfer, following the hierarchal dynamic of the networked power in the state network (documented by the November 6 2015 source).

Despite this official desistence by ODFW claiming that it would scrap its plan and pursue avenues that would allow for public recourse in times of drought, it appears that the private-state network and public (civil society) networks both continued to seek avenues to achieve their goals, evidenced in the December 23 2015 and December 30 2015 sources, as both networks appealed to the legal protocols built into the state network. While OWRD appealed to the higher authority of the Oregon Office of Administrative Hearings in a consolidated case with ODFW concerning the preliminary determination by OWRD (approving the transfer applications T-11108 and T-11249), civil society activists went to work to collect and submit enough signatures to qualify a measure for the Hood River County ballot (14-55) that would ban commercial bottling operations of more than 1,000 gallons per day in the county (which includes the city of Cascade Locks). I classified both of these activities as part of the dynamic of *network*

power because here, both the private-state network and public (civil society) network are attempting to harness the existing power of the legislative protocols and power of legislation built into the state structure, over its particular components, in order to fulfil their respective goals. The goals of the state network had been aligned towards moving forward on building a bottling plant, and despite the disapproval of Governor Kate Brown, pursued potential legal protocols that would override the Governor's position. At almost the same time, the public network of activists and civil society organizations (in a counter-power pursuit of the opposite result) were seeking to use the network power of the legal protocols of the state network that would assert county level legislation over municipal level activity. Both of these counter-power activities appear to have been effective for their network's respective goals, if only in that without them, their respective avenues to successful policy change would have significantly withered.

This dynamic of network power had been recurrently important for public civil society actors and groups trying to access the state network throughout the dispute. Several legal proceedings, one of which the September 2 2010 source documents, were the site for these power-dependent interactions where public contestation of the activities of ODFW and OWRD were confined to the content of the transfer applications, due to the communication protocols of the legal proceedings. In this particular instance, public contestation voiced by civil society members and activist organizations about the proposed bottling plant and the potential sale of municipal public resources to a private international corporation were completely dismissed from legal proceedings, as legitimate protest was limited by legal protocols, to the content of the rights transfer applications in question. As Nestlé was not an official party to these proceedings between ODFW and OWRD (applying for a rights transfer), public comments either

disapproving or approving the bottling plant were legally irrelevant.

While there were some instances where the public activist network (relatively noncentralized) and state network had aligned goals, public actors ended up using what *networking power* they had in trying to first exclude the City of Cascade Locks from the state resource rights network and then to exclude large water bottling operations from Hood River County. Food and Water Watch and other civil society activists began circulating a petition in Oregon to try to pressure the State of Oregon to refuse the proposed water rights exchange with the City of Cascade Locks (referenced in the November 5 2009 source). Without the network power of legal protocols over the components of the state network, however, the power of this action couldn't go beyond public pressure. In what is likely the most important counter-power interaction to date, the first September 21 2015 source documents how the Local Water Alliance and other activists operationalized the network power of county legislation (ballot measure 14-55) to assert public networking power and ban commercial water bottling in Hood River County. While the private and state networks appear to be considerably more aligned by their shared goal of constructing the bottling plant thus far, the ballot measure represents an important counter-power action as public civil society activists hope it will assert the power of publicly-interested legislation over the privately-designed plan within the state network.

Discussion and Conclusion

My interest in this issue relates to the connection between social processes and environmental/resource processes, and the dynamics of power that become evident through sociopolitical activity surrounding the use of resources. Reflecting back on the literature I reviewed, I assert that we can place this local policy dispute squarely within the larger context of economic globalization and the powered and counter-powered interference of private and public social networks in an atmosphere where governance structures have not caught up to the financial, operational, and politically influential activities made possible by the technological revolution as identified by Stiglitz, Castells, and others. In this context, we should acknowledge the way the state network's goals were aligned to Nestlé's plan (especially the City of Cascade Locks) via its concerns about property tax income and government revenues, job growth, and increased economic activity in the City of Cascade Locks. Cascade Locks had grown in the past through timber export and processing activities, and when approached by a potential sum of investment money and economic activity in the region, the best interest of the government of Cascade Locks (and in turn, the cooperative structures of the rest of the state network) was to support the plan. This is just one local example of a pattern emergent all over the globe, as "regions, under the impulse of their governments and business elites, have restructured themselves to compete in the global economy, and they have established networks of cooperation between regional institutions and region-based companies" (Castells, 2000:412). Especially in places that are not key nodes of financial activity, the impetus of economic activity and capital investment is all the more powerful and harder to resist.

Although not discussed in the analytical section, the August 4 2016 source documents how, after the successful May 2016 ballot measure in Hood River County, Nestlé had also

approached the Mayor and government of the small town of Waitsburg, Washington with a proposal and plan for a bottling plant that was very similar to the one proposed for the City of Cascade Locks. Here it is useful to reference Castells conception of the spatial logic of the network society, in which Nestlé's financial operations in the space of flows were simply interested in locating a suitable place for capital investment and access to spring water for commodification, regardless of the specific location the plant might be built at. This meant that the governmental structures in at least these two locations (and perhaps more) were effectively put into competition for the investment and economic activity that might accompany the bottling plant. While the economically-based power of the private network gave the potential material support for the planned plant, the state network was the gatekeeper of the social/legal support for the green-lighting of the plan. In this way, while both financial organizations and governmental organizations are undoubtedly the core of the network society, in places with established state governance (be it municipal, county, state or federal), international economic actors must also appeal to and work within local state network structures.

This may mean that local politically-based power still has some sovereignty over global economically-based power (in reference to the Marxian-Weberian conceptual dichotomy of power), but in cases where our larger governance systems are uncoordinated, capital investment may flow to less established state structures with weaker regulations, or with less public contestation, to find the path of least resistance for often-exploitative investment. This has the effect of putting place-bounded localities (and state structures) in a disempowered position and into competition for spatially unbounded investment flows. So then, while private networks must appeal to state networks in order to achieve their goals, state networks that are inherently interested in their economic stability are easily alignable to the shared goal of economic growth,

even if economic growth in a case like the proposed bottling plant in Cascade Locks heavily favors private networks over those of state and public civil society networks.

As noted in the literature section, while Nestlé is known for achieving water commodification in a variety of ways, including outright acquisition of water rights, increasingly it extracts spring water as the, "...customer of local public water utilities, but with long term contractual access rights" (Jaffee and Newman, 2013:12). Where public networks and actors approached the state network at the municipal, county and state level with concerns regarding the sale of traditionally the non-market good of water, and the long term social and environmental impacts this might have, their goals and interests were often subordinated or excluded through the networking power of the state network structure and the network power of legal protocols. While the method of Nestlé's capital accumulation fluctuated from rights acquisition to becoming a water customer of the City, I argue that this is still accurately described by David Harvey's concept of accumulation by dispossession, the process of releasing public assets at a very low price which private networks can then turn to profitable use. In this local interaction, we can see that, "...the power of the state is frequently used to force such processes through even against popular will" (Harvey, 2003:148).

Recognizing that this political dispute has yet to come to a final resolution, and that I have only scratched the surface of this issue and the depth and arrangement of the networks discussed; nevertheless, we may still draw some important conclusions. Firstly, Castells' theoretical framework of power was useful both in guiding my research and identifying the potential and active power dynamics between actors, organizations and networks relevant to this policy dispute. In coding my research data so as to evaluate the interactions between private,

state and public networks, I have painted at a picture of power dynamics within the network society as non-static and open to popular resistance.

Based in this framework, I was able to conclude that in interactions where the state and private networks were functioning under a cooperative set of goals, the private economic basis of power motivated the state network. Conversely, when state network goals, or structures and protocols (organizational hierarchy, legislation, etc.) were aligned with public networks and activists, the public political basis of power motivated the state network. Reflecting on this, we are able to see that the power dynamics of both domination and resistance to domination are based in the formations of human networks and networking strategies that may create or reprogram existing networks (whether governmental, private, or public). This leads us to acknowledge both economic and political sources of power as fundamentally rooted in the context of the social landscape, so that sources of power are rarely hegemonic, and operate through social networks and through the interactions of these networks.

From this conception of socially-based network power, we may tie together socio-political activity and socio-environmental activity. That is, we can understand social networks (state, private and civil society) as the underlying regulators of resource flows, in aggregate, directing resources parallel to human systems and socially-based economic networks. In this way, an environmentally focused sociology of flows is able to accurately portray environmental resource flows as inseparable from their associated social processes and human networks. This is not to ignore larger climatological or geological trends, but only to focus on anthropogenic environmental flows use and changes; which I assert as the most important problematic of our time in our known universe. By demystifying environmental flows (non-human natural processes aside) as connected to social networks, we are able to consider what power public civil

society actors do have. Encouragingly, one important aspect of this power is the ability to affect state governance through forming networks of resistance, which if aligned, may assert publicly-interested goals through the political power of the state and its management of public and environmentally delicate resources. This in many cases will mean resisting the privately-interested goals supported by economic power and proffered to the state and its public as a common interest. Though this policy dispute has yet to reach a conclusion, either in water rights policy or changing flows of resource allocation, what is encouraging is that the significant resistance efforts of civil society networks, despite the alignable goals of the private and state networks, has yet to allow the bottling plant near Oxbow Springs to be built, and for now, that is where the water has stayed.

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