

**TRANSFORMING COMMODIFICATION: SUSTAINABILITY AND THE
REGULATION OF PRODUCTION AND CONSUMPTION NETWORKS**

by

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Abstract

This thesis analyzes the emergence in the 1990s and 2000s of novel forms of ‘green goods’ or ‘sustainable commodities’. Particular goods come in many forms and include fair trade coffee, certified wood, ethical investment funds, or higher density housing. They represent examples of how sustainability has emerged as a paradigm for the regulation of production and consumption networks. The thesis provides a survey of geographical and interdisciplinary work in commodity studies and suggests sustainable commodities challenges traditional geographical theories of commodification and commodity regulation. The thesis offers a survey of theories of regulation that can apply to global and local production and consumption networks and suggests the use of Strategic Relational Cultural Political Economy as a theory of regulation. The thesis includes four case studies that vary as to type of commodity and type of regulation. The first considers one of the first global certification systems -- the dolphin-safe label for tuna and which linked Thailand to California. The second concerns corporate social responsibility in foreign direct investment in bauxite (a core component in aluminum), linking a Montreal based aluminum company to mine sites in Orissa, India. The third case study concerns a domestic commodity under traditional state regulation -- that of inner city housing under urban sustainability and Smart Growth zoning initiatives in Vancouver, Canada. The fourth case study also considers housing in Vancouver but concerns the relationship between housing, neighbourhood change and rezoning initiatives outside of the urban core. The thesis concludes by showing how the case studies show the applicability of Strategic Relational Cultural Political Economy: Each study indicates a way in which environmental policies and sustainability contribute to a spatio-temporal and institutional fix for a production and consumption network. In each of the case studies, the expansion of capitalist processes involved a contradictory and conflict laden relationship with extra-economic, non-capitalist social and environmental processes. While this created societal pushback, the result was a process of negotiation and compromise which modestly incorporated civil society concern but was also protective of existing economic processes and firm market position.

Preface

This thesis consists of the development of theories and methodologies for understanding production and consumption networks at different scales --urban and global -- and their transformations through environmental policy frameworks such as sustainability. The identification of relevant theory and case studies was done by the author.

The thesis comprises 8 chapters. All but two chapters are solely researched and written by the author.

Four of the chapters have previously been published. They are included without alteration, save for a few explanatory footnotes that are self-evident. They comprise chapters 4 through 7 in the following order. The titles of the publications have been retained.

Chapter 4. (2011) Dolphin-Safe from California to Thailand: Localisms in the Environmental Certification of Commodity Networks, *Annals of the Association of American Geographers*. 101(2)337-355 (with Ian G. Baird). It appears pursuant to Taylor & Francis Group copyright policy. It is an Author's Original Manuscript of an article published by Taylor & Francis Group in the *Annals of the Association of American Geographers*, published online February 15, 2011 and available online at www.tandfonline.com/10.1080/00045608.2010.544965

Chapter 5 (2011). 'This is a Montreal Issue': Negotiating Responsibility in Global Production and Investment Networks. *Geoforum* 42 (2011) 451–461. It appears pursuant Elsevier policy that accepted author manuscripts and final publications may be used in a thesis.

Chapter 6. (2009) Political Ecologies of Gentrification. *Urban Geography* 30 (7) 694-725. It appears pursuant to Taylor & Francis Group copyright policy. It is an Author's Original Manuscript of an article published by Taylor & Francis Group in *Urban Geography* published online May 16, 2013 and available online at www.tandfonline.com/10.2747/0272-3638.30.7.694

Chapter 7 (2012). Sustainability as Density and the Return of the Social: Case Study of Vancouver, Canada. *Urban Geography* 33 (7), 1055-1084 (with Markus Moos and Nicholas Lynch). It appears pursuant to Taylor & Francis Group copyright policy. It is an Author's Original Manuscript of an article published by Taylor & Francis Group in *Urban Geography* published online May 16, 2013, and available online at www.tandfonline.com/10.2747/0272-3638.33.7.1055

Chapter 4 (“Dolphin-Safe Tuna”) was the result of extensive dialogue with Ian G. Baird who provides a first person account of the dolphin-safe certification system. I provided the theoretical framing and contextualization in broader geographic literature, legal research, and updating on the political and legal events around the dolphin-safe label in the United States context. Ian G. Baird provided personal recollection based on his participation as an employee and knowledge of the tuna fisheries and Thai context.

Chapter 5 was began as a legal research program for Amnesty International Canada’s Business and Human Rights subsection, in conjunction with the Quebec based religious ethical fund Regroupement pour la responsabilité sociale des entreprises. All empirical research was based on secondary sources and no confidentialities were breached.

Chapter 6, figure 6.4 appears courtesy of Pion, publisher of *Environment and Planning A* where the figure was first published. Figure 6. 7 (Density map of the City of Vancouver) was prepared by Eric Leinberger for the author on the recommendation and with financial aid supplied by the editors of *Urban Geography*. Figure 6. 8. False Creek squatter’s boat is used with an attribution as required by attribution only copyright.

Chapter 7 (“Sustainability as Density”) is structured as a mixed method investigation. This initial idea arose through dialogue with Markus Moos concerning the potential to use quantitative statistics in urban political ecology research. I provided the theoretical framing and contextualization for the piece, the history and context of urban sustainability policy, Vancouver’s planning context and history, interviews, and the case study of Norquay Village. As such, Markus Moos’s contribution was that of providing the statistical analysis and accompanying graphs and maps (pp. 1061 to 1066). That includes Figures 7.1 to 7.4 and Tables

7.1 and 7.2 Nicholas Lynch's contribution was that of the cultural analysis of walkability (pp. 1066 to 1069). Markus Moos also helped with edited, although the final edits were my own.

Research for Chapter 7 included interviews. These were covered by UBC Ethics Certificate H10-03371.

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1. Introduction

1. 1. Introduction to the Thesis

This thesis analyzes the emergence in the 1990s and 2000s of novel forms of ‘green goods’ or ‘sustainable commodities’. Particular goods come in many forms and include fair trade coffee, certified wood, ethical investment funds, or higher density housing. They reflect efforts to consider environmental and social effects of how goods are made and to change producer and consumer behaviour while still enabling these good to continue to be produced for sale in markets. These initiatives point to large-scale unease and problematization concerning the underlying resource flows and exploitive environmental and social conditions underlying the world of goods and the restrictive thematic and geographic scope of existing social and environmental regulation. Through the 2000s the idea of environmentally transformed consumer goods and production took on a charismatic appeal and motivated many consumers, civil society organization and entrepreneurs, resulting in technological innovations (such as in wind turbine and solar panel technologies), new activist networks (such as solidarity organizations creating fair trading networks), architectural and design aesthetics (such as in ecological modernist architecture), small scale entrepreneurship (such as with bamboo frame bicycles) and considerable celebration in the press and on specialized websites (such as treehugger.com or worldchanging.com).

These goods can be viewed as involving the confluence of three trends. They involve a shift in the composition, and processes behind the production and consumption of *commodities*, broad shifts in *environmental thought and policy* embodied in different articulations of sustainability as a paradigm, and shifts in the nature of *regulation* of commodities. As the thesis will explain, sustainable commodities involve transformations in consumption practices, methods of production, the geographic reach of regulation (often across borders), the adoption of new instruments of regulation, and the (often strategic) tailoring of sustainability doctrine to fit into new contexts. Sustainable commodities can be studied as experiments in how markets

and commodities can be transformed, and possible (even if, not ultimately fully satisfactory) routes towards eco-social transformation.

At the outset it will help to define some terms. Here, ‘commodities’ refers to objects created for sale in markets. This usage includes, but is broader than, a common usage of the term to refer to fungible raw materials such as wheat or lumber. ‘Commodification’ refers to the ongoing processes whereby commodities are made and reproduced. This usage of ‘commodification’ includes, but goes beyond, common uses of the term to the conversion of niche goods into easily fungible low price ones, the process whereby nature is converted into resources for sale (such as when trees are cut down for lumber) or when markets are first introduced (such as a shift from feudal to capitalist land management, or, more contemporarily when a public service becomes privatized) (Prudham, 2009). The broader usage is meant to capture the way daily decisions by firms, consumers and state regulatory agencies operate to continuously reproduce commodity systems. This includes setting law, regulation and social norms around how nature is extracted, the conditions for workers and other processes that stand behind and work to constitute the ‘things’ of daily provisioning. It thus covers not only questions of whether to commodify but also how to commodify. In some cases it makes sense to ask ‘whether questions’ -- there are good public policy reasons to restrict the scope of commodification through banning trades in endangered species or body organs (Radin, 1996). However, ‘how questions’ are often more pressing, and touch on a vast array of practices in our market economies, such as how fish are caught, new sites found and developed for mines or cities zoned to provide for private home ownership.

‘Regulation’ is used here in a broad sense. While it does include state laws and administration action it also extends to non-state codes of conduct or industry standards that often operate as explicit rules that guide conduct. As the thesis will explore, there are a broader range of social norms and paradigms for action (such as consumption practices) that shape goods. Uses of the term ‘regulation’ overlaps with ‘governance’. Governance, too, can be interpreted broadly to cover state and non-state action to steer and direct environmental and economic behaviour. It also has a narrower meaning to refer to a specific form of steering using

cooperation and agreement between the state and non-state actors (Bridge and Perrault, 2009). In many cases environmental regulation has shifted towards this narrower meaning of governance. The result was often a range of modest state interventions, a shift to non-state authority, voluntary codes and standards and consumer buy-in.

Central to this thesis is a seldom recognized, but important, distinction between ‘horizontal’ and ‘vertical’ regulation (Doern and Gattinger, 2003, p. 61). Horizontal regulations include health, safety, anti-pollution or employment law and apply across an economy. Vertical or sectoral regimes follow particular commodities such as water, electricity, wheat, oil and gas (Doern and Gattinger, 2003, p. 61). The former incidentally shape commodity systems, acting in the background to shift management decisions, engineers’ plans and by extension final consumer products but rarely with explicit attention to how this changes goods. Alternatively, vertical regulations intentionally follow production and consumption systems, foreground knowledge concerning how they operate, create specific regulatory institutions (such as Water Boards, utility commissions, or grain marketing boards) and lead to the emergence of specialized legal and policy experts. As this thesis explores, vertical regulation may create a reflexive process in which production and consumption (and commodification) is remade as a result of social and political debates. However, vertical regulation may also face significant problems because it ‘follows the thing’ (Cook, 2004) rather than pre-existing borders or divisions of powers (such as federal state constitutions).

Creating vertical regulation in a global and ecologically challenged economy requires finding ways to overcome traditional ideas of state, firm and citizen responsibility, settle inter-jurisdictional disputes and conflicts of laws, and sidestep or overturn traditional institutional structures set up under older paradigms. *Spatially*, vertical regulation may need to work outside the territorial containers of traditional states, and *thematically*, it may need to coordinate issues of global and local environments, human basic needs or public participation in ways contrary to, or not contemplated in, traditional regulatory institutions. Sustainable commodities involve new forms of vertical regulation, and create a new politics as they seek to resolve these multiple challenges.

‘Sustainability’ has come to have many meanings, often dividing between ‘weak’ forms which render it compatible with neoclassical economics’ prescriptions for capitalist growth and modest interventions to tax externalities, and ‘strong’ forms that recognize the inherent value of biodiversity and ecosystems. As the thesis explores, sustainability has become a very malleable term and despite the earnest efforts of proponents to mold it into a force for significant change (as in Robinson, 2004; Boyd, 2004; Gibson et. al., 2005) common usage often reflects ‘weak’ interpretations. Diverse as these uses are, they do share the idea that environmental policy and action are not only about drawing geographic boundaries around the extent of economic activity (such as traditional wilderness conservation activism stressed) but creating qualitative change in economic systems as well. That is, sustainability forces questions concerning how to commodify, and by extension, analysis of the complex linkages of consumption and production practices, regulatory institutions and organizations, shifting policy paradigms and material flows that make up economies.

Understanding the transformation of commodification needs to start with rethinking the nature of commodities/networks. This involves adopting new geographical theories of networks, rethinking how we understand commodification, and case study analysis of shifting regulatory processes concerning commodities/networks. Commodities/networks are at the core of the economy as a system of resource flows and social relationships. Geographers have sought to trace the biographies of commodities as systems of production and consumption, adopting the language of commodity chains, value chains, commodity networks and global production networks to capture the broad array of social and ecological relations and diverse geographies that commodities embody (I use ‘commodities/networks’ and ‘production and consumption networks’ as neutral terms). Rather than being seen only as ‘things’, commodities are understood as involving social processes, narratives and systems of knowledge that connect people, technologies, money, knowledge and ecosystems, often over vast geographies and involving complex interdependencies and with feedback between stages of production, distribution, retail, consumption and waste.

Sustainable commodities foreground these often hidden processes, create forms of vertical regulation that did not previously exist, and expand the range of regulatory intervention to include areas of consumption and treatment of nature. The *network* becomes the object of regulation, leading to changes to production processes and consumption patterns. In this process, the way commodities are regulated changes. As the thesis will discuss, traditional ideas of the ‘commodity form’ can be equated to the background legal and regulatory structures that frame commodity processes. Attention to the actual frameworks that shape commodities shows that there is not unitary commodity form but instead a constant process of alteration and adjustment. Production and consumption networks may be changed through social contestation and struggle that reflects strategic action based on diverse environmental and economic discourses, ideologies and policies. Through cases studies in diverse types of networks -- in bauxite (the key ingredient in aluminum), tuna, and urban housing -- I suggest the need to revise and rethink traditional theories of the commodity and commodification. Commodities should be thought of not only as a complex assemblage of metabolic relationships between people and nature, but also as *structured relationships* that involve social institutions, regularized practices, imaginaries and shifting roles of the state, law, consumers, firms, civil society and other actors. This helps show how sustainable commodities do not so much decommodify as *re-commodify* but do so through transforming whole networks using codes of conduct, certification and more formal legal tools.

This short introductory chapter introduces the themes and case studies. It is followed by two theoretical chapters that discuss and seek to make novel contributions to an evolving interdisciplinary project in “commodity studies” (Raynolds, 2002; Bernstein and Campling, 2006a,b). This project seeks to understand and trace the biographies and social effects of the things that make up objects for trade in markets.

The second chapter provides the background context of the diverse methodologies and theories that are selectively used in the individual case studies. Addressing the issue of ‘what is a commodity’ and how to understand commodities, this chapter suggests production and consumption networks as complex socio-technical and natural systems that are material,

discursive, social and economic processes and sets out and compares different theories (and associated methodologies) for understanding them. Many of these approaches have been grouped under the umbrella of Global Production Networks (GPNs). The case studies (written before the introduction and two theory chapters) drew on the GPN framework. However, in the time the case studies were conducted the GPN framework came under theoretical scrutiny, and alternative research programs emerged such as “sustainable production and consumption systems” . The chapter suggests that geographers such as David Harvey, Doreen Massey and Erik Swyngedouw have developed a unique tradition -- that of geographical political economy (Sheppard, 2011) -- which can offer a helpful perspective for understanding commodities/networks that can incorporate the best of, but also go beyond, the GPN framework. Geographical political economy gives a central role of capital accumulation and uneven global development, but can also recognize the role of consumers, civil society, new ideas, political visions and so the possibilities for change and transformation in networks. Sustainable commodities suggest the need to rethink many traditional political economy concepts of commodities/networks, and the chapter directly discusses the need to update ideas of commodification. It points towards research focused on the regulatory systems that shape commodification processes.

Chapter 3 canvasses theories of regulation that can track the changing configurations of relationships in commodities/networks and societal contestation over the make up of commodities/networks. It pays particular attention to theoretical frameworks that have been developed to understand non-state regulation such as certification systems. The chapter discusses prominent geographical political economy approaches, such as those that follow the Regulation Approach pioneered by Michel Aglietta and others that have been applied to diverse sustainable commodities such as theories of ‘governance’, ‘governmentality’ and approaches that follow Antonio Gramsci’s work. The case studies were conducted with neo-Gramscian approaches in mind but do not particularly foreground them. However, the second chapter deepens the analysis of neo-Gramscian approaches, and suggests Bob Jessop’s and Ngai-Ling Sum’s Cultural Political Economy provides a sophisticated neo-Gramscian position that can be extended to theorize regulation in production and consumption networks.

The four case studies seek to understand the dynamics of production and consumption networks across different areas, and with different forms of coordination that give different roles to state, civil society and private sector actors. The case studies thus differ according to types of certification and regulation (following, Schroeder (2010) and more fully set out below at sec. 1.3). They thus range from third party certification with independent inspectors, forms of voluntary and unilateral affirmation of adherence to standards by a firm, and more traditional state (municipal) law. The case studies highlight debates amongst participants over how to regulate and what the predominant principles and regulatory instruments should be. They include the role of firms and civil society actors in contributing to debates and actively working to shape network regulation. The first case study considers an environmental organization and industry alliance in the early 1990s to create one of the first global eco-labels, dolphin-safe tuna. The second considers corporate sustainability policy, focusing on Alcan Inc. of Canada (now part of Rio Tinto), its investments in Indian bauxite mines and pressure in Canada in the mid 2000s for it to withdraw. These explore forms of civil regulation by non-state authorities which extend beyond traditional borders. The third case study considers the connection between sustainability policy, inner city redevelopment and gentrification processes in Vancouver, Canada in the late 2000s. It particularly focuses on the effects of housing as an emerging type of sustainable commodity. It traces the development of sustainability planning in Vancouver and suggests efforts to make housing more sustainable contributed to processes of ‘ecological’ gentrification in the city. The fourth case study also focuses on Vancouver. It traces more recent developments in Vancouver as the city moved from policies of ‘EcoDensity’ to the “Green Economy” and expanded densification initiatives outside of the urban core to change established residential neighbourhoods. Moving beyond a focus on gentrification per se, it considers the wider problematic of the relationships between urban environmental policy, house price dynamics, and neighbourhood change. I chose these case studies to emphasize that housing is an object for sale in markets with dynamics of production, consumption, relationships to nature, discursive narratives and forms of public private involvement in regulation. Not only was housing comparable to other environmental and socially contentious commodities/networks but a focus on housing would trouble the assumption that global and local networks can be treated

independently, or that there are necessarily clean lines separating traditional state regulation from emergent soft law alternatives.

The conclusion returns to Jessop and Sum's neo-Gramscian approach and argues that each of the case studies shows what I call a 'network fix' as well as the ways sustainability as a policy paradigm can inform such fixes. This builds on Jessop and Sum's interpretation of spatio-temporal and institutional fixes and their attention to strategic societal and economic projects and argues these ideas can be applied to commodities/networks. Jessop and Sum suggest a fix as a broad economy wide shift in political economy and regulatory policy that provides a way for profit-oriented, market-mediated accumulation to continue, while simultaneously involving a compromise of diverse forces. Fixes thus selectively incorporate civil society concern and state responsibilities (such as securing social cohesion and order). They operate for circumscribed periods and specific spatial domains, may prioritize certain spaces (such as the national state as the primary vehicle for economic regulation) and involve shifts in regulatory institutions. They are guided by discourses and imaginaries and may involve changes to the roles and identities of market participations.. In special cases, of which the case studies are examples, sustainability can operate as a policy paradigm that informs network fixes.

The language of fix helps establish the central conclusions of the thesis. In each of the case studies, the expansion of capitalist processes involved a contradictory and conflict laden relationship with extra-economic, non-capitalist social and environmental processes. Networks can operate as political communities or 'polis' in which participants disagree, debate and struggle to transform how they are organized. In the case studies, societal pushback was in turn met by a process of negotiation and compromise which modestly incorporated civil society concern but was also protective of existing economic processes, and firm position. The results were thus often patently unjust and offered only minimal environmental reforms. This suggests that while commodification can be transformed, the results often serve to protect power and legitimacy in markets rather than incorporate social and environmental justice concerns. Sustainability as a discourse has been increasingly enlisted for this purpose. However, this is not a sealed process, and the case studies also show further resistance as diverse groups seek to both advance more

just forms of regulating commodities/networks and emphasize the social aspects of sustainability. There remain many potential avenues for transforming commodification in more progressive directions and redirecting sustainability discourses.

In the following I introduce the core themes of the thesis through exploring the confluence of commodities/networks, regulation and sustainability. I then introduce the case studies and the reasons why they were selected.

1.2. Why Study Sustainable Commodities

The terms ‘sustainable commodities’ and ‘sustainability networks’ have been used in a number of interlinked ways. The term ‘commodity’ has long been used to denote undistinguishable and easily fungible goods such as grains, and ‘commoditization’ connotes the process whereby formerly novel products such as computers become standardized, mass produced and lose the novelty that allows high profit margins for early innovators. Alternatively, many social scientists have introduced the term ‘networks’ to stress overall coordination and interlinkages between stages of resource extraction, processing, transportation, consumption and waste. Others emphasize production to include advanced manufacturing and complex goods such as automobiles (Henderson et. al., 2002) and consumption to underline the causal role of consumer culture and practices (Hughes and Reimer, 2004). I thus use the terms ‘commodities/networks’ and ‘production and consumption networks’ as a theory neutral vocabulary which also reflect that there are these different perspectives. Sustainability has emerged since the 1980s as the dominant framework for expressing environmental concern, and documents such as Agenda 21 have stressed the need to translate that into transforming systems of production and consumption (Agenda 21, chapter 4). Many state, firm and non-governmental organization initiatives have adopted sustainability language to portray social and environmental concern, or to help strengthen the legitimacy or gain broader institutional support for their projects.

The focus on commodities/networks and concern with environmental transformation of the economy have been combined in a wide diversity of initiatives to reshape goods, whether explicitly following sustainability discourse or more generally seeking specific forms of

environmental improvement. The ‘Sustainable Commodities Initiative’ involved a number of actors in development non-government organizations and the United Nations that proposed new forms of commodity agreements in coffee and other agricultural products to help alleviate rural poverty in the developing world (Clay, 2005; IISD, 2010). Advocates called for “strategic thinking about redesign of commodity systems” (Sawin et. al., 2003, p. 51). “Sustainable biofuels” names ENGO-industry negotiations to create baseline rules over palm oil or other biofuels (Bailis and Baka, 2011). The term “sustainability networks” has also been proposed to cover any number of cases where “assemblage of actors, objects, procedures and relations coalescing around addressing or managing social and/or environmental aspects of commodity production, processing, exchange and consumption” (Ponte and Cheyns, 2013, p. 2, also see IISD, 2010, ISEAL, 2013). One of the central innovations driving and enabling these changes has been product labelling and certification, and the successes of fair trade coffee and organic foods often serve as a template. Initiatives such as the Forest Stewardship Council certification system for wood products, or the Marine Stewardship Council certification system for fisheries actively invoke sustainability in the design of their standards (Tollefson et. al., 2008; Bentley and Smith, 2013). Following this broad definition there are many examples where sustainability or certification is used to change goods by the efforts of firms, cities, national states, and civil society. This area has also spawned its own forms of research. As the many references to secondary literature through this thesis will show, there are many researchers studying these systems from different theoretical approaches. However a unique approach, ‘sustainable consumption and production systems’ seeks to compare different initiatives and provide policy guidance for how to advance the agenda of eco-social transformation of commodities/networks (Lebel and Lorek, 2008). As Mansfield (2009) has noted, despite often being depoliticized or flexibly interpreted to fit within existing political and institutional orders, sustainability carries with it a notion of problematization -- that there is still much wrong with, and so need to make changes to, current nature-society relationships.

These efforts share not only the invocation and application of concepts of sustainability but also imply that commodities/networks are open to *change*. Commodities/networks can become the object of societal debate, issuing in new imaginaries for how they could look, new

forms of regulation and material transformations through the network. Sustainable commodities are examples of a much broader trend in the 1990s and 2000s towards combining market regulation with environmental improvement. Such regulation both redefines state action and seeks alternatives to state action (e.g. combining new theories and approaches to regulation, forms of market making and flexible use of non-state actors). In some certification systems it introduces a broad range of parameters for intervention -- combining social and environmental concerns -- and follows networks even as they extend beyond state borders. These initiatives force questions of *what is a commodity*, and *what is commodity regulation* and what it means for sustainability to operate as a paradigm that changes commodities/networks.

Many social scientists also give the term 'commodity' a broader sense, following Karl Marx's famous insight that under capitalism factory work involves the commodification of labour. A commodity can thus also signify not only generic goods such as grains but any 'object' (or a person or process treated as an object) for purposes of exchange or sale in markets (Prudham, 2009). Marxian analysis also emphasizes that despite its 'thing'-like nature a commodity embodies complex social and ecological relationships, suggesting such analysis may be compatible with the language of networks. However, sustainable commodities/networks open up a complex set of questions concerning how markets operate, their variation and potential for change, the role of the state in remaking capitalist processes and the institutions and organizations that can be leveraged to drive transformations. There is a need to develop theoretical orientations that can work reciprocally with empirical research to help explore the dynamic and evolving relationship between capitalist processes and social values, how these are expressed in different forms of environmental and economic regulation, and the effects such initiatives have on changing economy, society and nature.

Proponents of sustainable commodities treat sustainability as a normative concept that points towards creative ways to incorporate environmental, economic and social objectives. As a central paradigm shaping policy since the 1990s it has been very thoroughly studied, at least at the level of the development of international norms and diverse underlying philosophies. Critical geographers such as Becky Mansfield have found that sustainability as a concept is highly

political (Mansfield, 2009). This suggests that it be treated, like other dominant policy discourses, as a social process that changes as it moves, mutating and hybridizing as it touches down and changes practical systems (Brenner et. al., 2010). This thesis follows an approach begun in urban studies to consider ‘actually existing sustainabilities’ (Krueger and Agyeman, 2005). Sustainability remains an ambiguous and contested concept, and it is given very different interpretations in specific contexts. As such, this thesis does not seek to replicate existing work that maps all the different traditions and interpretations of sustainability and sustainable development. Instead, more focused discussion is provided in individual case studies.

The need for sustainability to be applied in context means that, despite efforts to render technical (Ferguson, 1990; Li, 2007) or to support current systems, it still brings forth political disagreement (Mansfield, 2009). While often very modest or incremental in ambition sustainable commodities invite the larger question of how current economic systems can be changed through diverse *political* visions for eco-social transformation. Part of the discourse around such transformations now extends to diverse pathways, from reformist to radical, which question who owns production, seek to transform lifestyles away from Keynesian mass consumption norms, and seek to localize the production and consumption goods to increase public participation and decrease corporate control and energy intensive transportation (Milani, 2001; Hess, 2007). This thesis seeks to retain a sense of this contested nature of sustainability and production and consumption networks. It does this through attention in the case studies to alternative proposals and how they come into conflict. It also seeks to cast light on the many institutions, from state law to social conventions that shape networks. I seeks to theorize regulation in ways that can empower civil society actors to transform networks.

More broadly, the confluence of sustainability and the language of commodities suggests larger discussion about the survival or transformations of capitalism in the face of ecological crisis. Individual initiatives can serve as both attempts by states and firms to suggest their current institutions and structures can be incrementally reformed -- that they are moving towards sustainability. A focused analysis on individual cases can be a way to test these implicit claims. More broadly it invites speculation concerning whether capitalism as a social and economic

system can ever be sustainable and even if it could if that would be a desirable outcome (O'Connor, 1994). Some have theorized that the gradual incorporation of sustainability into policy is a sign of a deeper process of ecological modernization, a general shift towards greater reflexivity and incorporation of environmental concern (Hajer, 1995): Others identify ecological modernization with a form of sustainable capitalism (Bridge, 2000). I have doubts this has already happened at a large scale or that it is in any way inevitable, triggered as it were by underlying drives in the system to become more reflexive or protect its resource base (for critiques of ecological modernization see Murphy and Gouldson, 2000; Eckersley, 2004; Elling, 2008). Working off of the assumption that there is space for collective, political choice concerning the future direction of our economy and ecology I have sought to interrogate the details of specific commodities/networks that might shed light on current trajectories towards eco-social change. As the thesis should make clear, there are many ways of shaping specific economic processes (such as commodities/networks) and, by extension many possible future economies that can be more or less capitalistic. Facilitating such change requires, in part, understanding the workings of commodities, environmental discourses, economic and environmental regulation and political contestation around those efforts.

1.3 Situating the Case Studies and Chapters of the Thesis

The theoretical orientation and thematic concerns of the thesis were developed in concert with the selection of case studies. The case studies in dolphin-safe tuna, Canadian-Indian bauxite investment and Vancouver's Smart Growth-inspired housing reflected examples of sustainable commodities for which there was room for innovative research. They each fit into overlapped concerns with how commodities/networks were being problematized and made an object of politics, market-oriented environmental policy, and conflicting imaginaries over how to address significant underlying social and environmental problems. Each case study involves forms of vertical regulation in which efforts were directed at working around, supplementing or overcoming the limits of traditional horizontal regulation.

The case study research was exploratory. The case studies provide entry points into complex economic, social, technological, and ecological systems. As the following chapter will

describe there are now many available methodologies to ‘follow the thing’ and there is by necessity a need to limit the repertoire of techniques. The approach used in the case studies is predominantly narrative and textually based, accompanied by attention to the regulatory process, associated institutions, organizations and underlying philosophies, and the conflicting perspectives or ‘imaginaries’ of diverse participants.

Three distinct case studies were selected as a way to balance depth with comparison. Because a central concern was uncovering diverse issues and different dynamics in network regulation I emphasized the exploration of variation. The cases studies thus reflect examples of types of regulatory form. They differ concerning the spatial reach of commodities/networks, the mode of coordination and the authorities that guide the regulatory process. Schroeder (2010) sets out a four fold classificatory system applicable for commodities/networks which is helpful here. First party certification involves a voluntary and unilateral affirmation of adherence to standards by a firm but without any independent auditing or enforcement. Second party certification involves oversight by an industry body, which can include auditing of sustainability reports. Third party certification system is more robust and involves published, public norms and standards, inspection processes carried out by third-party inspectors, a label that alerts consumers to certification and a network of institutions that governs use of the label. State and international hard law can be considered as fourth party certification. In the case studies this also corresponds to a difference between global commodities/networks and ones that are wholly domestic (See Table 1.1). I wanted to include local as opposed to global commodities/networks to investigate similarities between state and non-state modes of regulation and differences between entirely voluntary systems and those which involve ‘hard’ law. In what follows I give some background for each case study.

Table 1.1: Variation in the Case Studies

case study	mode of coordination or intervention	type of certification	local or global
Tuna Dolphin	certification standards (alliance)	3rd party	global
Alcan CSR	code of conduct (firm)	1st and 2nd party certification	global
Vancouver inner city densification	shifts in market construction by state	4th party	urban
Vancouver residential neighbourhood densification	shifts in market construction by state	4th party	urban

1.3.1 Certification and Tuna

From the 1970s on there has been an entrepreneurial tradition of creating niche markets in health food such as organics, and ‘green’ products ranging from washing detergent to green cemeteries. Organic food had become big business by the early 1990s and the associated model of labels and certification became the precedent for various certification systems such as Forest Stewardship Council wood or the Marine Stewardship Council (Tollefson et. al., 2008; Bentley and Smith, 2010). By the 1990s there was widespread experimentation with expanding certification systems into areas such as forest products, carbon offsets, renewable energy, or coffee. Certification systems have been labelled as ‘sustainable commodities’, ‘sustainability initiatives’, and ‘sustainability networks’ (Ponte and Cheyins, 2013, p.461, also see IISD, 2010, ISEAL, 2013). These systems directly link production and consumption because the presumed driver of these systems is the conscientious consumer. States often retain a presence through labeling laws that protect (and define) the use of terms. As examples of third party certification, they create a layer of regulatory authority that extends beyond firms and states. They are thus at the centre of debates about the merits of voluntary arrangements.

Earth Island Institute was an animal rights based California ENGO which found itself in the unlikely position of running one of the first global certification systems in the early 1990s. In

2008 I was able to collaborate with Ian Baird (then a PhD candidate at UBC Geography) who had worked as a certifier with Earth Island in Thailand. This provided a rare opportunity to interrogate the inner workings of a certification system and analyze the internal differences in the organization over how the label would be defined. I was able to analyze how the adoption of standards reshaped power relations in the network, and how the location of actors affect both power and preferred principles for how to regulate the network. I could interrogate how imaginaries of production and consumption would work reciprocally in negotiations over the terms of certification.

1.3.2 Business Sustainability and Bauxite

The second case study, on Alcan's investments in India, concern how business sustainability works to regulate long distance commodities/networks. Business sustainability involves many threads. The World Business Council on Sustainable Development was present at Rio in 1992 and would contribute through the 1990s to forging a business oriented approach to sustainability (Mebratu, 1998). Through the 1990s there was a tremendous outpouring of business literature (and associated management consultants) claiming the economic benefits of efficiency measures and the possibilities for firms to tap into growing markets for green products (Vogel, 2005). This also coalesced with concerns over the role of stakeholders and the social role of firms -- there is thus often a commingling of sustainability and corporate social responsibility discourses. In the words of the business scholar Andrew Hoffman, what emerged was 'strategic environmentalism' (Hoffman, 2001). The result is a hybrid of the search for profitable forms of technological change, codes of conduct that create some ethical and social constraints over supply chains, internal management systems to comply with the complexity of state laws, accounting and reporting standards (such as the Greenhouse Gas Protocol for counting carbon emissions, or the Global Reporting Initiative's sustainability metrics), access to information and transparency rules (such as to comply with anti-corruption laws), and guidelines and management systems for project assessment, development, and ongoing performance (IFC, 2013).

This case study analyzes struggles in Canada over the interpretation and compliance with Alcan's sustainability policies. Alcan's use of sustainability was not atypical for business interpretations of the term. Alcan was at the time of the events and case study one of the largest Canadian companies and had widely promoted its adoption of sustainability policies (Girard, 2005). The fact that there had been massacres at the site of its proposed bauxite mine and smelter in Orissa (now renamed as Odisha) creating a lightning rod for a growing movements in Canada on business and human rights, shareholder activism and international solidarity. Alcan's reach into Orissa in the 2000s was based on investment and partnership, and so the methodological frameworks around commodities/networks is extended to cover not only physical networks but the networks of capital and social interaction that precede or accompany physical networks. Alcan's response would be a litmus test of how seriously it took a suite of policies that were largely 'first party' certification. While its sustainability reports were audited (second party certification), Alcan was ostensibly legislator, prosecutor, judge and enforcer of its newly adopted regulatory standards (first party). I was able to conduct this research in 2007 and 2008 as part of collaborating with Amnesty International Canada and a Quebec based religious investment fund. While Alcan had only that year pulled out there was widespread interest in whether remedies were available to victims. As the final chapter discusses, my initial investigations were directed towards this question but through that research I also gained insight into the strategies and tactics rights advocates could employ. In writing the chapter I could rely wholly on public documents (and so not betray any confidentialities).

1.3.3 Sustainability Planning and Urban Housing

The third case study concerns urban sustainability, which has emerged as very visible and contentious in a number of cities, including Vancouver, Canada. Urban land use planning involves the state, but in a mode of intervention that is largely unseen by most people: It shifts the background conditions whereby housing development and consumer choice in housing is made. From the 1930s urban planning had a "physicalist" dimension -- Patrick Geddes, Lewis Mumford and Patrick Abercrombie had focused on channeling growth and sprawl to ensure clean urban environments. While planning in the 1960s and 1970s planning came increasingly to focus

on issues of social inclusion and participation, the combined retrenchment of the welfare state and the rise of environmental concern has meant a return to such physicalism (Hall, 1996; Batty and Marshall, 2009; Hutton, 2011). In Vancouver, Canada this process was accompanied by a shift from a Keynesian model of robust social housing provision to a shift towards markets. As housing in Vancouver increasingly turned to apartments, the traditional legal distinction between real property and personal property could easily be seen to obscure the role of capital and markets: “A ‘condo’ was self-contained and simple, could be owned from a distance, occupied or left vacant, and transferred in a market of highly fungible commodities” (Harris, 2011, p. 714): Urban sustainability was largely focused on shifting the nature of housing as a commodified good. In Canada, housing was traditionally regulated by the federal government through mortgage support and social housing transfers for reasons of social equality and economic stimulus, and by provinces in areas of building codes and consumer protection. Urban sustainability planning creates new forms of environmental regulation of housing, representing a thematic shift in, and transfer of responsibilities for, vertical regulatory frameworks.

Here extant research in gentrification proved a very helpful framework, having already analyzed links between production and consumption, inequality and urban landscape change (Lees et. al., 2007). This case study considers how central city housing takes on the form of a sustainable commodity, the ways this requires the coordination of diverse actors, from urban planners to developers, consumers and lifestyle oriented businesses and the effect this has on access to housing. It was conducted in 2008 and revised in 2009 and drew on personal observations and photographs, site visits, newspaper articles, reports and secondary literature. The final case study is presented as a political ecological analysis of gentrification, however this is simply one way of describing shifts in housing markets, the composition of individual homes and transformations of neighbourhoods.

The fourth case study, conducted in 2010 and 2011 continues the story following the planning process as it was updated and shifted to outlying residential areas. Discourses of sustainability, through ideas of quality of life and walkability, increasingly focused on ‘neighbourhood’ characteristics. I was also able to supplement methodologies used in the first

case study with interviews with three past and present city planners, one sitting city councillor and one outside consultant who worked on the city's new policies. I was also able to work with two other (then) UBC Geography PhD candidates. With Markus Moos' abilities with regression analysis and quantitative traditions in urban geography I could expand political ecologies' quantitative side to include statistics on shifting neighbourhood demographics. Nicholas Lynch expanded a cultural studies analysis of how densification was leading to neighbourhood landscape change.

1.4 Conclusion

Commodities and the networks that create them are central to our daily lives and the workings of our economic systems. This extends to internationally traded raw materials and agricultural products such as oil, natural gas, coffee, wheat and cotton, and to industrial goods such as computers and automobiles. It also includes many commodities/networks that states have taken a central role in organizing and regulating, such as electricity systems. Yet commodities/networks also mediate our metabolic relations with people and nature, entangling us and so making us complicit with distant harms and ecological crises. There are many diverse imaginaries for how to restructure commodities/networks to better incorporate the growing corpus of ecological knowledge and citizen demands for economic democracy, human rights and social justice. These include broad societal visions (which imply changes to commodities/networks) as well as more specific interventions that specifically target networks. This thesis concerns one sub-set of the latter approach, that is, where sustainability has emerged as a paradigm that makes an object of specific networks.

In writing this thesis I do want to explore the possibilities for ecological and social transformations of the economy. At the same time, I argue that it is important to not simply accept dominant interpretations of sustainability but to understand these as only a subset of the many conceptual frameworks that can guide eco-social change. However, distinguishing the many different models for change is not enough: We also need to understand the economic, social and environmental dimensions of the processes whereby sustainability becomes institutionalized and creates changes. My concern with commodities/networks in part reflects

the fact that these represent one area where discourses of sustainability have made real inroads. This reflects in some ways the pragmatics of the situation. States are often slow to act, compromised as they are by the conflict of ideologies and political parties or preferring not to touch issues concerning market place freedoms. However, some consumers and firms have often shown a willingness to make some changes. The pragmatic and incremental nature of civil society interventions has often meant that specific networks are made the object of attention. My concern with commodities/networks also stems from a deeply felt concern with our relations with nature. The 'environment' is not a problem 'out there', one that only concerns distant resource peripheries or international diplomats: It touches our daily practices of earning a living and supplying our basic needs such as food, housing and transport. While commodities embody metabolic relationships with nature, these are also structured relationalities, shaped by myriad institutions, organizations, norms, economic theories and practices often quite outside of the powers of individual choice to change. It is thus vital to understand social processes of change including what strategies emerge as likely to have influence over the policy process or hold narrative appeal that can drive collective mobilization. A final reason for interest in sustainable commodities is that they change the economy and economic regulation and how we think about it. By foregrounding the process behind products, the roles of firms and consumers as political agents and entire networks as the object of regulation they shift practices and our thinking about those practices. Sustainability as a paradigm may have many problems and weaknesses, but exploring its movement into policy and practice also helps show what is at stake, and the many changes that we will have to make, if we are to create not only an economy and society that can respond to significant ecological and social crisis, but do so in just ways.

2. Putting Commodities and Networks in Their Place(s)

2.1 Introduction

A simple definition of a commodity is that of an object for sale on markets (Prudham, 2009). However, this leaves open myriad questions about where goods come from, the people, places, technologies, ecosystems and other elements that go into commodities, how they are used, and the many institutions, organizations and social groups with an interest in them. If we begin with the premise that commodities are not simply objects but situate ‘things’ as the product of myriad social relations and geographical dispersed material processes, analysis shifts to consider processes of production, consumption, and waste: Commodities can be seen as multi-dimensional processes, combining physical materials, economic processes (such as capital flows), different places that are participants in often long-distance transportation and communication systems, organizations (such as corporations and their governance structures), knowledge systems (such as patents or managers’ expertise), built infrastructure (such as factories or transmission lines), and institutions (such as health, safety and environmental laws and management systems). Because there are so many different commodities/networks and each is a complex process, different theories by necessity provide different entry points.

Sustainable commodities create challenges for traditional theories of ‘the commodity’ and for economic regulation. Since David Harvey’s call to “penetrate the veil of fetishisms with which we are necessarily surrounded by virtue of the system of commodity production and exchange” (Harvey, 1990, p. 423) considerable work has shown that “what lies behind it” (Harvey, 1990, p. 423) are a myriad of complex socio-technical apparatuses that stretch across the globe and commingle people, things, nature, cultural representations, technologies and institutions. Sustainable commodities add further to this complexity because they foreground, creatively re-imagine and regulate the processes behind products, the links between consumption and production, and the long-distance ecological relationships embodied in simple acts of exchange. They attempt forms of what I call *network regulation* -- that is, regulation that seeks to holistically govern, and redesign the broader processes that make the ‘thing’. This foregrounds the question of the many types of regulation that structure commodities/networks (‘sustainable’

or otherwise) and the possibilities for such regulation to be transformed. This requires analyzing the role of states in creating the enabling conditions for commodity production and exchange. It also requires understanding the architectures of markets and shifting policies -- such as sectoral policies in electricity, food grains or water -- that regulate the 'things' that make up everyday life in market societies. Commodities are not only 'things' but the material embodiment of a series of shifting relationships that include law and the state. Sustainable commodities also challenge traditional assumptions that it is only the juridical-legal state that directly regulates, involving as they do private forms of regulatory authority often at a distance from but not entirely separate from the state. Such regulation is not necessarily benign, but the result of negotiation and compromise: They mix corporate drives to maintain profit-oriented market-mediated accumulation, state logics and societal values, including efforts to 'decommodify'. In short, sustainable commodities challenge traditional ideas that there is a unitary and stable idea of the commodity, its regulatory architecture and of the ongoing relationships between the state, civil society, consumers and 'things'.

This chapter and the next concern theories for understanding and studying commodities and their regulation. While many approaches mention or imply an important role for regulatory institutions and organizations they often fail to clearly articulate the difference between general social science theories and methodologies for understanding commodities/networks and specific theories of regulation. In an attempt to remedy this oversight, this chapter interrogates theories and methodologies for answering the questions concerning *what* are commodities (and how to study them) and the next chapter concerns theories of regulation of commodities. While we need to develop a theory neutral language (hence 'commodities/networks' and 'production and consumption networks'), we also need to recognize that how we understand these processes is informed by an emerging galaxy of heterodox economic approaches which seek to understand "the actual processes which provide the flow of goods and services required by society to meet the needs of those who participate in its activities" (Lee, 2008, p. 27). However, rather than simply juxtaposing heterodox to neoclassical economics I suggest we need to recognize that this is a theoretically contested domain and affirm that theorization and its associated conflicts are central to understanding. I describe a range of approaches developed in economic geography

and other heterodox economics and politics for studying commodities. These are, in turn, selectively incorporated into the case studies in subsequent chapters.

In this chapter I argue that a geographical political economy approach can provide a theoretical basis for commodity studies, and draw on authors such as David Harvey, Doreen Massey, Erik Swyngedouw and Eric Sheppard. I also show how such an approach can both draw on but also provide a theoretical orientation for a growingly diverse and catholic array of approaches being developed in geography and other disciplines for understanding commodities. While some existing work (such as in GPNs) does loosely draw on geographical political economy sources there has not yet to date been a conscious and systematic attempt to reflect on how central principles of that tradition might guide geographical analysis of commodities/networks.

In the following I introduce a geographical political economy approach to commodities (2.2). I argue that a geographical political economy perspective recognizes not only the role of capital and the production of uneven development but can be extended to consider issues of materiality, nature, culture and regulation. I then canvass work in commodity chains, value chains, commodity cultures, commodity networks, political ecology and global production networks (“GPNs”). GPNs has emerged as a central umbrella concept for commodity studies and often draws on and adopts themes from geographical political economy (2.3). However, GPN has remained primarily an eclectic orientation directed at empirical studies of diverse commodities/networks rather seeking to provide a consistent theory (of network ontology, methodology and account of driving causes). It has not to date sought to reflect on the theoretical commitments of geographical political economy, and, the ways this might shift what has become a hybridizing, fluid and theoretically imprecise program. GPNs work faces many criticisms and theoretical tensions and I suggest that a focus on core concerns of the geographical political economy approach might provide a firmer theoretical grounding. I suggest that rather than phrase work on commodities/networks in terms of the broad umbrella of GPN, research should seek to develop a more theoretical focused account -- a geographical political economy of commodities/networks that can apply to local and global systems (2.4). I then compare such an

approach to research in ‘sustainable production and consumption systems’ which also seeks to understand sustainable commodities (2.5) I also situate a geographical political approach to commodities/networks in debates around commodification. I argue it points towards a *substantive* analysis of how commodification occurs and the institutions that shape commodification, rather than simply identify whether goods do (or should) take on the commodity form (2.6). This then leads to the second chapter, which develops a geographical political economy approach for the *regulation* of commodities.

2.2 A Geographical Political Economy Approach

Eric Sheppard (2011) suggests that a core approach in economic geography as a discipline is that of ‘geographical political economy’. Its genealogy can be traced back to the 1970s when geographers began to discover Karl Marx’s work, and David Harvey’s geographical critique and extension of Marx’s theories played a central role. The tradition is not wedded to Marxian analysis nor economism, and researchers in this tradition have branched out to adopt new theoretical perspectives such as feminism, cultural studies or economic anthropology. However, many writers retain a post-Marxist sensibility of engaging empirical research to challenge or vindicate theoretical claims that emerge from the Marxist tradition. According to Sheppard, geographical political economists do share a series of core views. Capitalism is named as an economic system and is seen as conflictual and unstable. It produces inequalities and uneven development and is not necessarily superior to many other possible ways of organizing economies. Because economic processes need to be considered in relation to the biophysical, cultural and social processes with which they co-evolve, capitalism penetrates and transforms the natural and the social world (and vice versa). Geography is not an outside constraint or extraneous to the economy, but both shapes and is produced alongside economic activities. Commodities/networks are a central concern of this tradition, and a number of the tradition’s theoretical ideas are salient for understanding commodities/networks.

Geographical political economy begins with the actions of capitalists setting aside capital to finance the production of commodities, rather than at the moment of exchange. It engages in a substantive analysis of economic processes that can include tracing the material flows and

geographic spread of commodity systems. This includes both quantitative methods (such as statistics on embodied carbon or units of steel imported into a country) as well as qualitative methods (such as interviews or ethnography). It stresses the latter because the full range of experiences and processes involved in commodity production and consumption cannot be represented through abstract production functions or models of standardized products (such as ‘widgets’). Instead there is a need to attend to the “complexity, contingency, uncertainty, materiality and complex spatio-temporalities that accompany production” (Sheppard, 2011, p. 325). Commodity production includes transformations of nature into resources, creating entanglements with biophysical, social, political and cultural processes and “is always a highly politicized process” (Sheppard, 2011, p. 324). Beyond Sheppard’s excellent overview of the tradition we can also identify four central theoretical concerns in this tradition which can be brought to bear on understanding commodities/networks. These can be labelled as ‘dialectics’, ‘space’, ‘contingency’ and ‘change’.

2.2.1 Dialectics

Not all geographical political economists work with a concept of dialectics, but it is central to David Harvey’s work. David Harvey reads dialectics as not explicitly stated by Marx but evident in how *Capital, Volume 1* is structured. It thus names theory and practice, and many geographers have taken on methods that dialectics implies. Dialectics, most broadly conceived, describes processes of conceptual, social (and sometimes even natural) conflict, interconnection and change, in which a key role is afforded to the generation, interpenetration and clash of oppositions, leading to their transcendence (Sheppard, 2008, drawing on Bhaskar, 1993). While Marxist analysis is often believed to use a simplistic account of dialectics attributed (rightly or wrongly) to Hegel (“thesis - antithesis - synthesis”) an alternative reading has come to dominate in geographical political economy. Dialectics names a process “in which the Cartesian separations between mind and matter, between thought and action, between consciousness and materiality, between theory and practice have no purchase” (Harvey, 1996, p.48). Dialectics emphasized the understanding of processes, flow, fluxes and alterations over the analysis of elements, things, structures and organized systems.

Dialectics has significant repercussions for how we might understand a commodity as a ‘thing’. For Harvey, dialectics is “a deep ontological principle...elements, things, structures, and systems do not exist outside of or prior to the processes, flows, and relations that create, sustain, or undermine them” (Harvey, 1996, p. 49, also see Sheppard, 2008, p. 2606). ‘Things’ are constituted out of flows, process and relations and exist in relationship to larger wholes. As such “a dialectical conception of both the individual ‘thing’ and the structured system of which it is a part rests entirely on an understanding of the process and relations by which thing and structured system are constituted “ (Harvey, 1996, p. 50). Both things and systems are understood as internally heterogenous and constituted by multiple processes. Dialectics thus “forces us always to ask the question of every ‘thing’ or ‘event’ that we encounter: By what process was it constituted and how is it sustained” (p. 50). Harvey’s notion of dialectics points to a relational materialism. Commodities involve evolving metabolic relationships between producers (who bring investment capital and seek profits) consumers (who seek to fulfill desires and bodily needs) and nature (from which resources are obtained). Networks are situated within, reflect and can also contribute to the broader political economy, including the state in its role of upholding law and providing economic regulation and social cohesion. Commodities are shaped by local contexts which can include supportive and constraining legal frameworks, the nature of the local workforce (and its expertise) and available resources.

2.2.2 Space

Second, as a *geographical* approach there is an emphasis on physical processes that extend over space. While commodities/networks embody efforts by capitalists to invest capital in the search for profit there are spatial aspects to this process. As Harvey’s spatial treatment of Marx in *The Limits to Capital* (1982[2006]) implies, commodities/networks are a central conduit for the outward expansion of capital. Commodities/networks are subject to competing logics, as investors alternate between seeking to keep capital fixed in place so as to enjoy the benefits of long term investment and local knowledge and skills, or to look for new places to find profits from new markets, resources or labour supply. The result is a mixture of local infrastructure and long-distance chains that can span the globe. Harvey’s numerous books on cities underscore the

significant reconfigurations of cities over time as they are subject to rounds of capital investment and flight (e.g. Harvey, 2000) and little imagination is needed to extend this to systems of physical commodities/networks that might be managed, designed, assembled or assorted in cities. Sheppard thus notes that the ‘socio-spatial dialectic’ (Sheppard, 2011, p. 321) is central to geographical political economy: “Firms co-evolve with places and territorial economies, are embedded in multi-scalar corporate and governance hierarchies, and stretch their relations across space through polyvalent networks” (p.326). While Sheppard’s use here includes many different networks (such as communication systems or social ties) it also includes production and consumption networks. This socio-spatial dialectic can be also be read into Doreen Massey’s concept of the spatial division of labour (Massey, 1984). She explores how divisions of labour are replicated, and locations depend on, but also reinforce, existing spatial divisions in labour markets (such as factory labour in industrial towns and management in central cities). Implicit in her account is that these divisions of labour are not only within firms, but also extend across the supply chains integrated within firms. The changing fate of regions is thus linked with the re-organization of supply chains (and vice versa). From here it is only a short step to considering divisions of labour across multi-firm supply chains maintained by relational contracts, e.g. just what are often studied as production and consumption networks.

Geographical political economists have also extended socio-spatial dialectics to include relationships between the economy and nature. Harvey stresses a large city such as New York (with its numerous subway systems, freeways, food systems or flows of capital investment) contains “immense existing ecosystemic structures” (Harvey, 1993, p. 28). By this Harvey points to the significant two way relationship and interdependence between society and nature and the ways nature is transformed through human activity. He goes so far as to stress how such systems are a reworked form of ‘second nature’ (Harvey, 1993, p. 28, see also Smith, 1984, 1996), indicating both that nature is constantly being transformed by humans (rather than being ‘untouched’) but also that there is nothing unnatural about the myriad human-made networks that modify nature and embody resource flows. Erik Swyngedouw’s urban political ecology more explicitly links geographical political economy theorizing to commodities/networks (Swyngedouw, 2004a). Networks are not only the conduits through which nature is metabolized

(as food, water, energy or other necessities and wants are brought from distant sites to consumers) but are themselves transformations of nature. As such “circulation of capital as value in motion is combined with metabolic transformations of socio-natures...New socio-natural forms are continuously produced as moments and things in this metabolic process” (Swyngedouw, 2004a, p. 16). Networks are socio-spatial processes that are never socially or ecologically neutral, but instead work as both enabling and disabling conditions with uneven results for different places and people. As Sheppard notes “commodity production entails the transformation of ‘natural resources’ (themselves a social construction) into other material and immaterial objects, whose production and exchange are believed to be profitable. Production is thus entangled with biophysical, social, political and cultural processes and presupposes” (Sheppard, 2011, p. 324). This includes the materiality of biophysical processes, “machines break down; waste is created; human bodies and minds are co-implicated and transformed” (Sheppard, 2011, p. 324).

Part of political economic geographers’ treatment of space is an emphasis on the ways spatial categories are socially constructed, especially that of ‘scales’ such as the urban, regional, national and global. Harvey argues this is part of dialectical processes: “Space and time are neither absolute nor external to processes but are contingent and contained with them...processes do not operate in but actively construct space and time and in so doing define distinctive scales for their development” (Harvey, 1996, p. 53). Neil Brenner (not a geographer but who writes in this tradition and follows Harvey) emphasizes that scales are “tightly intertwined territorial-organizational arrangements that serve as “transmission devices” between localized, concrete forms of social action, national political-regulatory systems and the global space of abstract labor and the world market” (Brenner, 1998, p. 464). Brenner traces a broad process of rescaling in the long durée: Mercantilism in the 16th and 17th century was largely organized around the city-state as the basic territorial unit (as in Venice or Genoa); by the 20th century and especially in the Fordist - Keynesianism of the post-World War II era there was a centralized role for the territorial state and hence primacy of the national scale in organizing the economy; and by the end of the century there was a further reorganization with a decline of the national state as primary scale and a new role for both the global scale and cities. In the last two decades the social construction

of scale has been a central debate in geography (see Cohen and McCarthy, 2014 for a recent review) and geographical political economists have consistently argued that scale is important for explanation (the urban operating very differently than the global, for instance) but that scale can also be disrupted and transformed.

Literature on rescaling also notes a strong role for commodities/networks in the rescaling process. Brenner thus links the national state to “the construction of transportation infrastructures such as highways, canals, ports, tunnels, bridges, railroads, airports, and public transport systems; the management of public utilities and energy resources such as gasoline, electricity, and nuclear power, as well as water, sewage, and waste disposal systems; the subsidization of public housing, schools, universities, and other research facilities; the maintenance of communications networks such as postal, telephone, and telecommunications systems” (Brenner, 1998, p. 469). Swyngedouw has more explicitly focused on the role of networks in these rescaling processes. Networks are simultaneously local and global (‘glocal’) and also subject to rescaling. The ‘global’ is made up of “proliferating networks and flows of money, information, commodities and people” (Swyngedouw, 2004b, p. 31) and “cities are dense networks of interwoven socio-spatial processes that are simultaneously human, material, natural, discursive, cultural, and organic” (Swyngedouw, 2004a, p. 9). In his study of Franco’s Spain, Swyngedouw shows how an interconnected system of irrigation and dams created a national-scale hydraulic system (Swyngedouw, 2007). Swyngedouw shows how networks contribute to and are transformed by the social construction of scale: The ‘nation’ was actively constructed through water networks and in the process water networks were transformed.

2.2.3 Contingency

A further feature of geographical political economists work is a turn from grand theorizing to provide empirically supported and specific analysis and recognizes that social phenomena has contingent and specific aspects and cannot be simply read from templates describing deep social structure or the logics of capital. This calls for not only in situ analyses of actual social relations but also making links back to larger processes to show how they unfold in particular contexts. This can be seen in Jamie Peck’s ideas about variegation, which suggests attention be paid both

to how discourses such as neoliberalism take on different meaning and are differentially applied in different times and locations (Brenner, et. al. 2010). However explaining local variation -- “a *particularly* economic-geographic task” (Peck, 2005, p. 159) -- also requires recognizing interconnection and family resemblance and so not simply celebrating contingency for its own sake. While we need to understand the specificity of networks, we also need to draw connections to see how they are examples of, and shaped in uneven ways by broader social processes.

Bruce Braun has voiced this attention to specificity and contingency in a different way. Responding to what he feels is an overemphasis in Harvey on the logics of capital, he argues that capitalism is not “an all encompassing, ever-expanding system that engulfs all of nature and society within its logic” (Braun, 2006, p. 214). Rather, it is “local at all points, it exists as a series of links and interconnections composed of specific, situated practices such as trade organizations or financial markets” (Braun, 2006, p. 214). While the reproduction of value is central to capitalist commodities/networks there still exists the need to study specific networks to see how they are organized by people who unevenly personify drives for profit-making, and how their execution of their plans is shaped by a host of pre-existing and contingent factors such as institutions, the materiality of resources, the configuration of markets or the physical lay of the land. Braun thus cites Timothy Mitchell’s analysis in *Rule of Experts* (2002) of Ahmad ‘Abbud (a mid twentieth century Egyptian plantation owner and capitalist investor) (Mitchell, 2002, p. 31; Braun, 2006, p. 215). For Mitchell, ‘Abbud does not personify an abstract ideal of capital but rather a particular instantiation which is deflected by ‘Abbud’s personality, ambitions and cultural context. ‘Abbud’s actions and his investment logics depend on, and are influenced by the material realities and contingent outcomes of specific commodities/networks he invests in and controls, such as sugar and nitrate (for fertilizer). Exploration of commodities/networks is a way of showing the contingent and uneven ways that capitalism as a broadly penetrative social process take material form.

2.2.4 Change

Finally, geographical political economy emphasizes both that social reality is subject to change and that this can include political mobilization to create a better world. This can be linked

to the tradition's institutionalism, that is, recognition of the important role of regulation, norms and built infrastructure in shaping the economy and in shaping change over time. It connects with the traditions roots in radical political philosophy and quest for social justice and is also supported by dialectics.

This focus on change is highly relevant to the issue of regulation in commodities/networks because it goes to the heart of state and civil society interest in networks and the regulatory process. Generally, geographical political economy recognizes an important role for governance "given the complex ways in which states and markets are co-implicated" (Sheppard, 2011, p. 326). Because capitalism is seen as an incomplete and crisis prone system, geographical political economy particular focused on the many institutions of states that do the necessary repair way to ward off crisis, and which result, over time, in considerable variegation in the trajectory of capitalist development in different locales. While the next chapter focuses on diverse theories of regulation we can here note the emphasis geographical political economists have placed on change, examining the shifting regulatory architectures in advanced capitalist states such as the build up Keynesianism and Fordism from the 1930s to the 1970s and from the 1980s onward shifts towards market-oriented neoliberal policies. This analysis can be extended to particular networks. Swyngedouw (2004a) thus shows shifting paradigms for managing water systems over the long term globally and particularly in Quito, Ecuador. Karen Bakker has offered a detailed analysis of water privatization in England and Wales (2003) and in divers locales in the Global South (2010a).

There is broad scope for examining the possibilities for new ideas and social movements to reshape production networks. Geographical political economy does not assume that such change should be directed exclusively towards facilitating economic development or that qualitative change should only be along the axis of a more equitable sharing of developments' gains. It can recognize diverse voices calling for eco-social transformation. Geoff Mann has argued geographers should recapture the 'ethico-political moment' ask 'how the world could be better' and that doing so requires we ask "not just how the world came to be unjust, but also why— why it came to be this way, and why this way, morally, is unjust" (Mann, 2009, p. 343). Such

explorations can include not only explaining the formation of particular networks but also exploring ideals for reworking particular networks to include greater public participation, attention to environmental and climate justice themes or calls to design networks so they fit within broader goals of bioregional or non-growth economies. Here, special attention can be paid to the institutions and organizations that shape networks, and how they can be changed to, in turn, change networks.

This emphasis on social change is an important component of dialectics. As Harvey explains, because ‘things’ are internally heterogeneous they are subject to conflicting tendencies and transformation over time. As such “change is characteristic of all systems and all aspects of systems -- so change and instability are the norm -- persistence and equilibrium are not the natural state of things but require explanation” (Harvey, 1996, p. 55). Further this instability can also arise from the new ideas and social movements. Dialectical enquiry is itself a process that produces concepts, abstractions, theories and institutionalized structures of knowledge. Dialectics rejects the idea that there is a clear separation of subject and object, researcher and social agent. Instead, “I take in ideas and thoughts through listening and reading. I gain a sense of selfhood thereby but in the process reformulate and transform words and in projecting them back into society change the social world” (Harvey, 1996, p. 53-54). Harvey thus stresses that dialectics includes the exploration of possible worlds and potentials for change in diverse ethical, moral and political directions.

In what follows I seek to contextualize many different accounts and theories of commodities and networks as entry points for grasping what are dynamic, complex and evolving systems and which might contribute methods to or help expand geographical political economy analysis of production and consumption networks. As will be further explored in sections on commodification (2.6) there are tensions in geographical political economy theorizing, because the possibilities for change in networks also challenge the idea that networks (and their regulation) can be explained through a unitary logic of capitalism.

2.3 Biographies, Chains, Circuits and Networks

In the last two decades there has been a tremendous growth in social science, journalist and civil society organization research into the complex geography and backstory of goods. The result has been a range of methodologies and theoretical interests which extend to both global and domestic commodities and offer divergent perspectival entry points. By the mid 2000s “narrating commodity stories about global resource flows has almost achieved the status of a genre” (Bakker and Bridge, 2006, p. 13). Much of this work, such as in World Systems Theory, linked long distance chains to the workings of the global economy in the long *durée*. Others, such as the ‘global commodity chains’ (GCCs) approach, drew on this to focus on how inter-firm networks connected manufacturers, suppliers and subcontractors in contemporary global capitalism: This approach was also concerned with contemporary development issues such as how to facilitate industrial upgrading to improve export earnings (as discussed in Bair, 2005). Some work in “global value chains” (GVCs) sought to add to commodity chains a sense of the role of how value was added at each step to help explain the political economy of unequal development. Other GVC affiliated researchers tacked closer to Michael Porter’s narrow developmentalist focus on upgrading of national capabilities (such as through moving from commodity production to manufacturing in division of labour of a chain) (as discussed in Bair, 2005). The result is that while some researchers seek broad historical and political economic contextualization, others aim for parsimony through focusing on issues of relational contracting and the role of powerful companies in organizing networks (Gereffi, 1994; Gereffi et. al., 2005, for critiques see Bair, 2005, 2008; Gibbon et. al., 2008).

Commodity culture approaches have sought to add on to (but not thereby replace) concern with material histories by focusing attention on the meanings of commodities and how they create an interplay and thereby mediate between production and consumption. Production and consumption are not understood as opposite ends of a linear chain but rather as parts of ‘circuits’ in which there is continuous feedback. This draws attention to the discursive production of commodities, the ‘imaginaries’ that circulate within them and the role of consumers as participants in a relational process. Consumers are understood as motivated in part by how the

circuit as a whole is represented (Leslie and Reimer, 1999; Bryant and Goodman, 2004; Hughes and Reimer, 2004). Analysis shifts to cultural difference and meaning and extends to breakfast cereal boxes (Bryant and Goodman, 2004), images of darkness and racial fear looming behind ads contrasting African conflict diamonds and pure Northern Canadian ones (Le Billon, 2006) or the “utopian Valley of the Jolly Green Giant” (Prudham, 2009, p. 134). Such work shifts attention from the role of producers: Consumer subjectivity becomes integral to the makeup of goods, and involves a complex interplay of societal values, consumer subjectivity and the actions of producers (Lovell et. al., 2009). In this way commodities/networks are no longer seen as exclusively driven by producers but also involve participation by consumers. Analysis thus extends, potentially, to the broad nexus of consumption practices. Such practices both shape networks (such as through influencing which goods consumers buy) and are shaped by networks (such as through product advertising or the material effects of dominant goods such as automobiles and television).

The motif of the *network* has been a central metaphor through which researchers have sought to understand the combination of material, processes and culture involved in the production and consumption of goods. Indeed, the first such analysis by Thomas Hughes plays on the relationship of that metaphor to electric circuitry. In *Networks of Power* (1983) Hughes provides a comparative, institutional history of the early American, English and German electricity systems. He sets up a double meaning of networks. Electricity was both a physical network, but also a socio-technical system, co-produced through both technical and social components:

These components are connected by a network, or structure, which for the student of systems may be of more interest than the components. The interconnected components of technical systems are often centrally controlled and usually the limits of the system are established by the extent of this control... Because the components are related by the network of interconnections, the state or activity, one component influences the state, or activity, of other components in the system. The network provides a distinctive configuration for the system (Hughes, 1983, p. 5).

Edison oversaw the formation of that network, but a wide variety of persons and things contributed to making it possible. Hughes was an early precursor to the field of science and technology studies which continues to emphasize the social nature of technology and the intermingling of material objects, cultural values and social institutions.

Actor Network Theory extended the network metaphor as a broad descriptor for diverse heterogenous and contingent arrangements of people and things. The network is seen as an alternative topological system in which elements are held together and retain their integrity in virtue of their position in a set of links and relationships. (In the following I use ‘actor-networks’ to refer distinguish this broader idea of a network from the more specific use of ‘network’ for commodity systems. However, the concept of networks has become very pervasive and is used now --and in some of the quotes used in this thesis!--to refer to many different types of networks (such as communication networks or social networks). The identities and modes of calculation of agents are produced within actor-networks rather than being already made (for a redescription of Hughes’ work on these terms see T. Mitchell, 2008). Actor-networks are ‘assembled’, which indicates that they can come together through contingent and loose group action, or be the intentional object of strategy, calculation and struggle at central points of organization (Law, 1999; also see Whatmore and Thorpe, 1997, Raynolds, 2002; Hughes and Reimer, 2004). Diverse elements in such systems can keep them together and ensure their operation and ‘stabilize’ them -- including physical machines, capital investment, hard infrastructure, knowledge systems and documents, natural resources, legal codes, workers, consumers, managers and other people and things. Geographers Sarah Whatmore and Lorraine Thorpe reintroduced the network metaphor to describe long-distant and alternative commodities such as fair trade coffee as “intricate interweavings of situated people, artifacts, codes, and living things... particular tapestries of connection across the world” (Whatmore and Thorpe, 1997, p. 288). This creates a strong ethical dimension, highlighting how consumers engage in relationship and act at a distance, both contributing to but also potentially transforming distant wrongs. Consumers are engaged in complex ethical and political decision making (Barnett and Land, 2007; Barnett et. al., 2010). Others have suggested that the network metaphor can be combined with other commodity studies approaches: Alex Hughes and Suzanne Reimer (2004)

suggest commodity culture, chain and network can be combined together to understand diverse commodities (both local and global) and to conceptualize the way different types of ‘nodes’ such as people, firms, states or organizations are connected through webs of interdependence. They suggest the term ‘commodity networks’.

A number of writers have picked up the idea of a political ecology of commodity networks. Political ecology has traditionally been concerned with issues of resource conflict and the role of social structures (such as capitalist states and class divisions) in remaking nature in the Global South (Robbins, 2011). In some variants, such as ‘critical political ecology’ it focuses on discourses of the environment and the theoretical underpinning of ecological research (Forsyth, 2003). Some work that links political ecology to commodity networks shows a concern with social and political conflict over resources, the operating of regulatory institutions in promoting diverse interests and the marginalized position of small producers (Armitage, 2002; Klooster, 2006, 2010). Others expand commodity cultures approaches to link the impacts that consuming practices in the North have for people and environments in the Global South and the use of imaginaries in distant places. They thus explore ‘rainforest friendly’ breakfast cereals (Bryant and Goodman, 2004), conflict free diamonds (Le Billon, 2006) or carbon offsets (Lovell et. al. 2009).

The political ecology of commodities/networks is a relatively new area of research and there are many possibilities for novel forms of analysis. Also, there is a growing body of work extending political ecology to developed industrialized countries (as in Walker and Fortmann, 2003): This suggests the approach can be applied as much to networks situated in the Global North. Creative use can be made of emerging methodologies from resource management. Lifecycle analyses such as the ‘ecological footprint’ shows that the most rudimentary concern with the environmental effects of daily consumption and the economy more broadly requires tracing the materials, travel patterns and origins of goods (Wackernagel and Rees, 1996). Forms of environmental and social assessment can be performed at various points in the chain to show impacts and to analyze the trade offs implied by applying different principles for changing how networks operate (Winfield et. al., 2010; Butler, et. al., 2013). Stakeholder analysis seeks to

document who uses, works with, are affected by, and take interest in networks, seeking to gauge their interests and goals (Barton and Fløysand, 2010). Networks may also be linked to the ecological impacts of global capitalism over the long term: Writers who link world-systems with ecology stress how global chains are vehicles for unequal ecological exchange leading to global environmental degradation (Jorgenson and Kick, 2003). As Erik Swyngedouw's work on water systems in Quito, Ecuador suggests, it is possible to combine political ecology, geographical political economy and Actor Network Theory to study networks. In this way the study of networks (such as for water) becomes central to an urban political ecology that explores the city as a vast collection of metabolic flows that are shaped by histories of urban and national scale politics.

The "Global Production Networks" (GPNs) framework developed by Neil Coe, Peter Dicken, Jeffrey Henderson, Martin Hess, Henry Wai-Chung Yeung and others has sought to provide a broad umbrella framework under which Actor Network, value chain, commodity chain, commodity cultures, and other approaches might be combined (Henderson et. al., 2002; Coe et. al., 2008). Original framers saw it as continuing the work of global commodity chains to understand the dynamics and consequences of uneven economic development in an emergent global space of flows. It would, however, offer a series of correctives. These included, inter alia, a greater attention to the organizational dynamics of transnational companies and their subsidiaries, a focus on the interaction between flows and places, attention to the spatial patterning of chain-related activities, a focus on the state as an agent of economic development and the varying policy regimes that impact on the chain at each of its nodal points. The GPN framework has been widely followed (see Coe, 2012 for a review). Two of the case studies in this thesis cite the GPN approach explicitly, drawing on its emphasis on culture, circuits, consumption and institutions. Other case studies in the thesis use underlying insights but do not name it explicitly. Here I want to discuss some of the pros and cons of this approach and argue how geographical political economy perspectives can both learn from but also offer a distinct theoretical framework from work in GPNs. I thus suggest that, geographical political economy suggests a more focused theorization, and offers a bridge for linking global networks and those that remain within a particular city, region or country.

GPN has come to operate as an umbrella framework in the sense that it allows diverse methodologies. This echoes a broad strategy used by theorists of heterodox economics who stress the strength of a coalition that can stand against neoclassical orthodoxy (Lee, 2006). This flexibility has meant that many writers have begun to work under it and to extend it in creative ways. While initially framed as oriented towards developmentalist themes (rather than environmental or social welfare considerations) work on ethical trade initiatives (previously done under the commodity networks label) (Hughes et. al., 2008) and industrial codes of conduct (Nadvi, 2008) point to closer consideration of possibilities for qualitative change in networks through regulation and civil society participation. Others, such as Ray Hudson, launched into creative theorizing using GPNs as a platform, seeking a cultural variation of a geographical political economy approach. While building on Marx's idea of circuits of exchange value, Hudson emphasizes the role of semiotics in shaping networks, allowing that the 'economic' is in part constituted by discourse. Networks are seen as "constituted via a variety of flows (of capital in various forms such as commodities and money, knowledge and people) between a variety of nodes, sites and spaces (of production, exchange and consumption), with varying governance arrangements, both multi-scalar (supra-national, national, regional and urban) and non-scalar networked forms of governance" (Hudson, 2008, p. 422). They are to be seen through a variety of perspectives (or registers), as simultaneously political-economic, semiotic (or cultural) and material (as flows of resources and materials). This suggests a wide scope to incorporate political ecology themes. As will be discussed further in Chapter 3 David Levy also suggests taking up a neo-Gramscian analysis of regulatory institutions within GPNs (Levy, 2008).

There are, however, a number of downsides to the GPN approach. It has not won over some writers: Jennifer Bair argues that in practice research "does not differ greatly from studies of global commodity chains" (Bair, 2005, p. 356) and that its best seen as "a complementary rather than a contending paradigm" (p. 357). Some writers work under the title of different approaches, depending on context (compare Nadvi, 2008 and Lund-Thomsen and Nadvi, 2010). More significantly, there are disadvantages to creating a unified but heterodox framework -- it flattens theoretical difference and obscures underlying theoretical contradictions. While the GPNs approach draw on "Marx's definitive deconstruction and interrogation of the commodity"

to focus on “the social processes involved in producing goods and services and reproducing knowledge, capital and labour power” (Henderson et. al., 2002 p. 444), it deviates from theoretical consistency through the catholic addition of diverse approaches. GPN work is linked to a broader ‘relational turn’ that stresses myriad social connections and entanglements but as Sunley (2008) has argued, “is evidently not a carefully defined analytical framework; instead, it is a loose assembly of theories and ideas that share some common features and articles of faith and differ in important respects” (p. 4). If poorly framed it can exclude key categories -- such as ‘local production networks’ which form an important contrast class and for which there an already rich literature of political economic and cultural analysis, especially in the areas of shifting regulatory paradigms and architectures. That said, and as the next section explores, these concerns might be met by a focus on how GPNs work has drawn on geographical political economy and could be given greater theoretical consistency by more explicit attention and adherence to that tradition.

2.4 Beyond the Global Production Networks Approach

Many writers do implicitly or explicitly link GPNs to geographical political economy (Henderson et. al. 2002; Hudson, 2008; Glassman, 2011; Sheppard, 2011; Coe 2012) Such an approach can help bring insights from GPNs to geographical political economy, explore ‘local production networks’ as well as global ones (or ‘glocal’ in Swyngedouw’s terms--2004b) and renew GPNs as a framework. In the following I outline key ways in which the GPN approach faces problems due to its drive to include post-structuralist, relational and economic sociology ideas and how geographical political economy can provide correctives.

A first set of concerns relate to whether Actor Network Theory oriented research and political economy can be reconciled. In some guises, ANT is disdainful of broad political economic theorization, seeking instead to trace connections between relationally intertwined actants that make up actor-networks (Latour, 2005). Within geographical research this often takes the form of distinct camps, with ANT influenced researchers and political economists taking on distinct concerns. There is, however, considerable possibilities for a meeting point on this issue. Some ANT scholars, such as John Law do recognize the importance of politics and frame it in

terms of conflicts of 'modes of ordering'. For Law, participants in networks may often disagree over the configurations of the actor-networks they participate in. He studies how scientists in research laboratories differ over their collective purpose, institutional design and research output (Law, 1994).

Alternatively, many writers in the geographical political economy tradition share with ANT a materialist, relational ontology and, as discussed above (in sec. 2.2) a desire to show the specificity of economic processes. Noel Castree suggests there is considerable room for a meeting point between geographical materialism and ANT in which both sides "split the difference" (Castree, 2002, p. 123). On this approach ANT is softened to acknowledge that generalizations can be made across different actor-networks, recourse can be made to background social forces with widespread effects, and that capitalism can be directly named as a process that is embedded in and transforms natural and human systems. Geographical political economy is also softened, in that "this all does not mean that natural entities are mere putty in the hands of capital. Rather, they are necessary and active moments in a continuous process of circulation and accumulation. ...the material effects that "natural" entities have upon capital accumulation are variable and contingent, but rarely passive" (Castree, 2002, p. 139). For Castree, analysis of commodity networks helps give materiality to geographical political economy claims: "the 'thing' we call capitalism is constituted by hundreds of thousands of commodity networks, which mix different people, machines, codes and artifacts in often unique ways" (p. 140). Swyngedouw (2004a, 2006) offers a similar analysis, stressing that commodities/networks embody "circulation of capital as value in motion" (Swyngedouw, 2004a, p. 16). Hudson (2005) asserts that both ANT and geographical political economy approaches "conceptualize the economy as always a product of interaction between heterogenous networks of people, nature (both animate subjects and animate objects) and things -- of relationships between the social and the natural" (Hudson, 2005, p.11). Here we can restate the focus on contingency and specificity that makes geographical political economy amenable to the exploration of specific institutional configurations and modes of ordering of networks. As Braun (2006) argues capitalist logics can be seen as personified in particular persons, who execute plans

through designing, gaining control and altering a myriad of material systems including commodities/networks.

Second, there is an issue concerning the breadths of the GPN mandate. How is it possible to make generalizations across thousands of different commodities? Attention to biophysical idiosyncracies, and the distinct geographies, cultures and technologies of different actor-networks would suggest significant conceptual challenges in comparing or making broad claims that are true of all of, say, bamboo, smart phones, cars and coal. Here Jamie Peck's idea of variegation can play an important role. A whole series of interconnections exist between different production and consumption networks. These include (admittedly varying) logics of capital investment, which are realized through business managers who often work with many different production and consumption networks simultaneously (such as in large diversified firms) or along the course of their careers, and who share expertise (such as business school training). It is also possible to see how commodities respond similarly to market dynamics, such as price reductions due to competition. There are also marked similarities in legal and regulatory controls -- property and contract law is often functionally very similar amongst North Atlantic states and their former colonies (e.g. almost everywhere) and there is an international *lex mercatoria* governing trade (Cutler, 2003). While state public law intervention can offer vary (rules for European electricity trade are very different from those for North American beef trade) there are often interconnections such as shared instruments (such as marketing boards, tariffs or certification), expertise and training (of regulatory lawyers) or global advocacy networks in areas such as human rights and the environment. As work in policy mobilities suggests discourses (such as neoliberalism or sustainability) can develop, spread and be differentially applied in ways that come to reshape and thereby create connections between what otherwise might appear to be distinct economic domains (Peck and Theodore, 2010; Peck 2011).

A third set of concerns relate to ambiguities in GPN work due to their use of overlapping ideas of networks. So far, this thesis has focused on the concepts developed by Thomas Hughes and Actor Network Theory, that of a socio-technical system and assemblage of diverse components. However, alternative meanings of 'networks' in transaction cost economics and

economic sociology are at times incorporated into value chain and GPN work. Transaction cost economics, associated with Oliver Williamson, had argued that pure market transactions (such as one-off exchanges between arms length rational actors) face various frictions of information and time. This led to a form of institutional analysis that focuses on the formation of regulatory institutions to help respond to informational and coordination failures. It also led to a concept of a ‘network’ as a middle ground between hierarchy and markets, that is, as forms of long term contractual relationships that bind firms together (Williamson, 2008). This can be brought to bear on commodity chains: In some formulations of GVCs there is an emphasis on the relational coordination of buyers and suppliers that emerge in cases of informational complexity that is difficult to codify (Gereffi et. al., 2005). This retains a methodological individualism and belief in the rational (but informationally constrained) actor that deeply conflicts with dialectical, relational approaches and provides little space for discussion of culture, context, power relations or uneven development. It remains a plausible hypothesis for the formation of some long term relational contracting in supply systems, but that is a small part of what needs explaining.

A further sense of the term ‘network’ is associated with Mark Granovetter’s economic sociology. Granovetter’s work arose in response to, and retains much of, the micro-social orientation of transaction-cost economics. It seeks to replace an under-socialized conception of human action with a fuller account of interpersonal relations between economic actors. It seeks to include analysis of the role of the social obligations and expectations in constraining malfeasance and guiding economic transactions. This in turn leads to concrete analysis of the systems of social relations that accompany economic activity (Granovetter, 1985). Certainly, this type of social network analysis can be overlaid onto supply chains as a further layer and production and consumption networks do at times involve social relations, trust and information sharing (Bair, 2008). Some accounts of commodities/networks do explicitly work with these accounts. Non-governmental organizations and diverse stakeholders participate in transforming some commodities such as Forest Stewardship Council wood, and these groups can be characterized and analyzed as production network affiliated social networks (Tollefson et. al., 2008). As such, they contribute to ‘communities of practice’ that build up knowledge and expertise (Bentley and Smith, 2010). GPNs appear to incorporate this idea in the term ‘network

embeddedness' (Henderson et. al., 2002, p. 453). While rather vaguely defined, it includes reference to "the degree of connectivity within a GPN" and "the stability of its agents' relations" (ibid.)

However, political economy oriented researchers have sought to maintain some distance from micro-social approaches because they tend to evict analyses of power and background political economic context (Peck, 2005; Bair, 2005; Sunley, 2008; Bair, 2008). While theorists such as Granovetter claim to be reintroducing the social they do so in ways that preclude precisely what political economy takes as central: "Homo economicus has more of a social life but he certainly has not been put to death" (Peck, 2005, p. 142). As such, this work often neglects systemic impacts of capitalist pressures and market forces (Sunley, 2008, p. 5). Alternatively, geographical political economy approaches can make use of methodologies for micro-social analysis, but, unlike much economic sociology that takes such analysis as central, they should not sideline the broader contextual analysis provided by traditions of comparative political economy, varieties of capitalism and extensions of Marx which seek to understand macro-institutional structures.

A fourth area of contention is that micro-social analyses (whether undertaken in Actor Network Theory or economic sociology traditions) can contribute to network essentialism -- an exclusive focus on the network rather than its relationships to places and territories and attention to the scales through which it passes (Jessop et. al., 2008). Global Production Network theorists attempt in part to bypass concerns about essentialism through an explicit concern with place-based institutions and a concept of 'territorial embeddedness' which emphasizes how commodities/networks "absorb, and in some cases become constrained, by the economic activities and social dynamics that already exist in those places" (Henderson et. al., 2002, p. 452). However this idea remains relatively undeveloped in the literature, and falls short of fully articulating the ongoing dialectical relationship between networks and the places they traverse. Indeed, the very idea of dialectics suggests that 'things' operate within broader structured systems or 'wholes' and involve processes and relations whereby thing and structured system are mutually constituted (Harvey, 1996, p. 50). Others, however, have focused on how this aspect

of the socio-spatial dialectic can relate to networks. Jessop, Brenner and Jones (2008) suggest a focus on the network or on the places they touch can serve as entry points for a multi-spatial analysis (Jessop et. al., 2008). An analysis of networks can then emphasize the network itself, or, alternatively focus on the relationship of places to networks. Jim Glassman (2011) emphasizes how over time long-term and durable networks such as for sugar and cotton have preceded and informed the development of colonies and nation-states, and “networks are best seen as produced by agents that straddle, and simultaneously produce, both states and markets” (Glassman, 2011, p. 157). Jennifer Bair and Marion Werner’s account of ‘disarticulation’ (developed under a global commodity chain framework) stresses that chains may arrive but also leave particular places, producing histories not only of chronic underdevelopment but of successive network flight (Bair and Werner, 2011). If networks are understood as always in relationship to broader contexts, researchers can focus on the interaction of networks and context, and that can include a focus on places where networks often leave.

Much of the shift in geography towards talk of networks is part of a general turn away from structuralist political economy and an emphasis on fluidity, flux and the shifting configurations of actor-networks. However, this has been met by a concern that structure has been abandoned (as critiqued in Sunley, 2008). Geographical political economy should not be identified as a static, structuralist account. As noted above, many writers do consider how consumer concern and culture shapes the economy and particular networks (c.f. Prudham, 2009 for an overview). More generally, there are many efforts to combine a recognition of the changing contours of the economy, the conditions for and process of change, and the consolidation of relatively stable institutions. In particular, and as will be explored in Chapter 3 and Chapter 8, geographical political economy can take on Bob Jessop and Ngai-Ling Sum’s Cultural Political Economy and in so doing stress the role of discourses, think tanks and civil society in transforming economic institutions and organizations. As Sunley has argued, Harvey’s dialectics provides a theoretical antidote to approaches that over emphasize either structure or agency: “While it is formally true that everything can be reduced to flows we are in daily practice surrounded by things, institutions, discourses and even states of mind of such relative permanence and power that it would be foolish not to acknowledge those evident

qualities” (Harvey, 1996, pp. 7–8, cited in Sunley, 2008, p. 15). Harvey stresses that there is “an interplay as process and relations become crystalized into structured systems” (p. 54). Even if “persistence and equilibrium are not the natural state of things” (Harvey, 1996, p. 54) they are also phenomena that “require explanation” (ibid). Context and place can form relatively durable backgrounds that shape networks, which in turn are structured by diverse regulatory institutions and more or less durable management techniques and strategies.

The above suggestions point to there being ample room for a geographical political economy informed approach to commodities/networks. It can explore local and global networks, consider the role of nature, regulatory institutions, labour and other elements that make up socio-technical market complexes guided by the search for profits. Networks are seen as shaping and being shaped by the many contexts they pass through. Because networks are always entangled with natural environments, a geographical political economy comes to merge with political ecology. To more fully explore such an approach I now turn to showing how it differs from research in sustainable production and consumption and offers unique angles on problems of commodification.

2.5 Sustainable Production and Consumption Systems

A geographical political economy/political ecology of commodities/networks can be compared to a parallel program in “sustainable production and consumption systems” (“sustainable PCSs”). This takes its lead from United Nations processes that followed after the 1992 Rio Summit. Agenda 21 included reference to sustainable consumption and production and there are scattered examples of governments following this mandate and creating programs to promote sustainable production and consumption. For the most part these feature cleaner production techniques (such as new industrial technologies and processes) and regulatory interventions such as carbon taxes or increasing consumer access to information. After the 2002 World Summit on Sustainable Development, the “Marrakesh Process” was created to both further the agenda as well as empower researchers to study it (Tukker et. al., 2008; Pogutz and Micale, 2011). The idea of sustainable PCSs research is to analyze how production and consumption are integrated in particular commodity networks and proponents cite literature in

geography and agro-food systems using ‘chain’ and ‘network’ terminology (Lebel and Lorek, 2008). Proponents of this research program argue that such approaches “would not replace the vast set of experiences and efforts with sector, place, product and consumer-oriented approaches to sustainability, but they would provide an important complement offering a more integrative and systemic view” (Lebel and Lorek, 2010, p. 3). It remains a small research project, with an introductory article (Lebel and Lorek, 2008) and a book of collected articles by diverse writers (Lebel and Lorek, 2010). Nevertheless it provides an example of how proponents of sustainability approach issues contemplated in this thesis.

Sustainable PCS research was introduced primarily as a ‘how to’ approach, suggesting a focus on identifying levers “to improve performance in the direction of sustainability” and showing how levers “can exist at diverse locations along chains” (Lebel and Lorek, 2010, p. 3). Examples include: Industrial ecology for ‘closing loops’ to find ways to reduce resource flows and waste; ‘codesign’ in which consumers participate in product design; extended producer responsibility where producers are forced to integrate consideration of waste processes in product design; the intentional designing of goods to more efficiently deliver the *services* consumer’s need rather than physical objects for possession; and eco-labels. It can draw on diverse forms of consumer behaviour, movements towards simpler lifestyles, consumption related educational campaigns or firm marketing that encourage new forms of reflection on the life histories and effects of goods (Lebel and Lorek, 2008). It thus canvasses diverse efforts under state, academic and non-governmental organization programs many of which also use concepts of sustainable consumption and sustainable production and take their lead from Agenda 21.

In this thesis I share with sustainable PCSs an interest in using social science methodologies to understand the workings of existing commodities/networks that have been labelled (for whatever reason and by diverse actors) as ‘sustainable’. However, political economy oriented geographers have argued that sustainability and sustainable development are fraught terms and not politically neutral (Mansfield, 2009). Dominant interpretations, especially those enshrined in the Bruntland Report and United Nations instruments, reflect the doctrine of

liberal environmentalism, asserting the compatibility of environmental concern, economic growth, the basic tenants of a market economy and a liberal international order (Bernstein, 2001). This is reflected in normative framing of the sustainable production and consumption program which affirms environmental economists ideas of utility and market based growth -- “transformation of energy and materials that maintains or improves human well-being (or utility) without irreversibly reducing environmental resources” (Lebel and Lorek, 2008, p. 15).

Alternatively, many critical geographers have read sustainability as articulated with neoliberalism in the sense of favouring market-based solutions and avoiding where possible the coercive arm of the state (c.f. Keil, 2007; Brand, 2007). There is a longstanding tradition of equating sustainability with a broader trend of ecological modernization, that is, as taking an affirmative view of capitalist processes, increasing technological innovation and giving a strong role for firms to help design policy solutions (Hajer, 1995). Geographers thus often equate sustainability as an essentially capitalist project (Bakker, 2010b). It can be compared with more explicitly social justice or biocentric readings of nature-society relations. Social justice approaches often call for broad transformations in societal institutions, twinning environmental change with wealth distribution and a changed role for the state, and recognize non-industrial ways of life and all people’s well-being. Biocentric approaches emphasize hard targets in areas like carbon emissions and seek to preserve diverse ecosystems. Both approaches see these goals as more important than, and often incompatible with, sustaining capitalist institutions and growth dynamics.

I agree with criticisms of sustainability that link it to a modest reform project but would add that it can also be seen as a distinct policy paradigm -- a strategic project for transforming economy and society which should be studied from development, dissemination and application. It arose from international diplomatic attempts to coral and fuse multiple contradictory streams of social justice, environmentalism, anti-colonialism and Saint Simonian developmentalism (Harlow et. al., 2013) .Once it left the relatively controlled space of international norm construction it was creatively interpreted in many ways, ranging from an explicit affirmation of multinational corporate practices to utopian and radical political philosophies (Mebratu, 1998;

Robinson, 2004). The result is that “people in specific contexts interpret sustainability on their own terms” (Mansfield, 2009, p. 46) often “as a materialization of dominant institutional ideologies supportive of growth and capital accumulation that maintains the existing status quo of class inequalities, with limited regard to the environment” (Gunder, 2006, p. 209).

Political ecology/geographical political economy also provides alternative methodologies for analyzing particular instances of sustainable production and consumption networks. In some cases there is an overlap of methodologies between these geographic perspectives and work under the sustainable PCSs agenda -- both might combine value chain and resource management frameworks such as lifecycle analysis, environmental assessment or tradeoff analysis (for PCS work see, for shrimp aquaculture, Giap, 2010; for coffee Tucker, 2010; for biofuels, Daniel et. al., 2010). In other cases there will be marked differences. PCSs research at times draws on environmental economics (Shamsub, 2010). However, and as Sheppard (2011) notes, a defining feature of geographical political economy is its split from the assumptions of methodological individualism, market equilibrium and the prioritization of exchange value of classical and neoclassical economics schools (Sheppard, 2011, p. 320). Some PCSs research draws on the ideals of sustainability transitions, arguing that particular systems such as organic food or renewable energy are examples of niches which reflect sustainability values and engage consumers in exercising citizen-style action and which might be scaled up (Reusswig, 2010; Tucker, 2010; Nölting, 2010). Alternatively, a number of environmental geographers have argued that sustainable transitions should be conceptualized as political projects, open to contestation and debate but charged with dynamics of power (Demeritt, 2011; Lawhon and Murphy, 2012; Bulkeley et. al., 2013).

Despite these differences, a political ecology of commodities/networks can draw from some insights of the sustainable PCS literature. The emphasis on ‘levers’ for transformation points to an analysis of the various institutions and organizations which structure networks but also might provide avenues for change. Seeing consumer choices in the supermarket as a ‘lever’ for changing networks crucially shifts the perspective from the first person perspective of consumers to one concerned with managing -- or regulating -- systems with many participants. It

invites deliberation of the shared values that can drive collective mobilization to transform such systems. It helps see how ‘levers’ are linked to novel forms of regulation: Non-governmental organizations may also engage in regulation as they mobilize consumer concern or public attention through shame and blame campaigns or go straight to the head offices of lead firms to negotiate changes to projects, new codes of conduct, industry wide agreements, or certification systems. This points to an institutional analysis that considers the role of the state, law and non-state actors in governing commodities *as networks*. However, rather than rendering technical and deferring to ‘decision-makers’, ‘levers’ should be understood as particular instruments (means), to be guided by broader visions (ends). In turn, the choice of ends is a political issue -- different strategic projects advance distinct ends -- and the result is confrontation and dialogue. So far, the levers and principles advanced under the rubric of sustainability policy have been relatively limited, excluding many of the broader eco-social imaginaries (such as social justice and biocentric visions) and instruments such as collectivizing (rather than individualizing) consumption, state ownership, cooperatism, and direct participation in management and system design.

2.6. Commodification

A number of geographical political economists have been particularly attentive to the issue of what makes commodities particularly *capitalist* commodities and the processes whereby nature becomes an object for sale on markets (for reviews see Castree, 2003; Prudham, 2009). This work stresses that the search for profits leads to the reorganization of production and prioritization of exchange value as commodity processes are remade to fit with the dynamics of capitalist markets. It thus stresses there are important differences between non-market provisioning, non-capitalist (‘petty’ or ‘simple’) commodity production, and capitalist commodification. The latter features a generalized system in which almost all aspects of daily provisioning are supplied through competitive markets paid for in money through wages from commodified labour. However, a focus on the institutions and organizations of production networks, especially those that seek to incorporate concepts of sustainability, offers some challenges to commodification theory (and geographical political economy’s use of such theory).

For this focus points to the *endemic incompleteness* of capitalist commodification and the emergence of *variegated commodification*. Sustainable commodities not only promise new ways to regulate and so transform commodities/networks but also foreground the problematics of how commodities/networks have previously been regulated and gaps in those systems. While sustainable commodities still feature a strong role for exchange value, they also involve forms of regulation that offer (even if, at times only very modest forms of) shifts towards incorporating other concerns. The result is changes to how commodification occurs and how it is regulated.

Geographers that work in Marxist traditions have tended to operate with what we can refer to as a “form analysis” -- they seek to analyze a unitary logic implicit in the very idea of monetary exchange and the ways it implies that qualitatively distinct things are rendered equivalent and exchangeable. As Noel Castree argues, “The question, therefore, is not ‘what is a commodity?’ but rather ‘what kind of characteristics do things take on when they become commodities?’”(Castree, 2003). Commodification can then be described as a process distinct from the thing commodified, but which affects them. While the making of commodities is constantly undergoing changes through new technologies, work processes, sources for materials, or location of production, the movement of goods into the *commodity form* signals a broad change--goods are now produced for sale in markets. Form analysis then analyzes what is assumed to now be fixed in this process -- the underlying logics implicit in the sale of goods for money. For instance, exchange is said to involve a process of abstraction whereby the specificity of a thing (such as a particular forest) is lost. This is then posited as the underlying driver for corporate and state practices such as the ecologically reductive *Normalbaum* that best facilitates profit-oriented timber extraction (Prudham, 2009). The legal theorist Margaret Radin has used such form analysis to show limits to the moral acceptability of some types of commodification. The idea of a trade in body organs, for instance, implies that organs are fungible, and so conflicts with commonly held norms of bodily integrity -- “it detaches from the person that which is integral to the person” (Radin, 1996, p. 88). Commodification may thus run counter to our moral intuitions.

However, form analysis faces significant limitations because it presupposes an abstract (and unchanging) model of market exchange. Here a series of arguments by scholars in the realist and critical legal studies tradition are highly relevant -- focused as they are on the relationship between private law and public interest regulation. To give some precision to the commodity form they focus on the structure of laws that enable and frame markets. The Soviet jurist Evigny Pashukanis (1923) was the first to make this move. He identified the commodity form with private law and the minimalist state as its guardian. The state and law, he argued, are oriented towards upholding the laws of property (ownership), contract (exchange) and the legal subject (subjectivity) that enable commodity exchange. It was necessary to show how the private law system was not a self-justified system but instead an effect of capitalism as a social process (see also Anderson and Greenberg, 1983; Jessop 1990; Head, 2004). The critical legal scholar Duncan Kennedy reiterates this move, arguing “what makes a commodity a commodity is independence, a separateness, individuality or privateness not in a physical, but in a legal sense.... What is important about the commodity system is its *legal structure*, rather than the physical or technological arrangement of the productive process” (Kennedy, 1985, p. 977). Phrasing the issue in this way calls for a substitution of an abstract formal analysis with an account of the actual legal and extra-legal regulatory structures that help shape markets.

This, however, reveals a deep problematic -- shared by classical, neoclassical and Marxist economic schools. Both Marx and Pashukanis differed from nineteenth century jurists that the law was *justified* as an expression of universal principles, but they implicitly accepted the idea that the law (and by extension ownership and exchange) could be understood as system of internally consistent unchanging abstract principles for private ordering. Nineteenth century liberal theory had conceived of private law as an independent and self-contained area, far from legislative influence and marking out a sphere of negative freedom. However, late twentieth century legal historians such as Patrick Atiyah have shown that judges and legal scholars at the time were highly influenced by classical economics and its use of an unspecified and abstract idea of exchange (Atiyah, 1979; Kennedy, 1985). The result was that judges (and at times legislators) changed the law to reflect these assumptions: “Primarily, it depended on economic assumptions about equilibrium in market processes (with entrepreneurial freedom and consumer

sovereignty)” (Habermas, 1996, p. 400). This legal imaginary implied that issues of managing, designing and shaping commodity processes would fall entirely on private sector firms and consumer choice.

However, by the 1920s this was challenged by social welfare paradigms in both Europe and the United States which rejected the tacit assumptions of the liberal private law model. They saw “the relation between private and political autonomy no longer as an opposition but as a nexus of reciprocal connections” (Habermas, 1996, p. 397). American legal realists such as Wesley Holfield, Morris Cohen and Robert Hale argued that private law of property and contract were not self executing concepts but had to be understood as state activity legitimately open to being changed to reflect shifting public interest values (See Rittich, 2003, chapter 4, for an overview of this movement, also Mansfield, 2008, for a geographers discussion concerning property law). Realist legal scholarship and the social welfare model helped support a rising tide of employment standards and state development projects as part of Roosevelt’s New Deal. In Germany public law was given priority in the Constitution during the Weimar Republic and reconfirmed after the Second World War (Habermas, 1996). Kennedy draws on realist scholarship to argue that the idea of the commodity form, largely a mirror of classical economic theorizing, is ‘hopelessly imprecise’ (Kennedy, 1985, p. 1000). Instead, he suggests, we need a fuller accounting of the actual rules which underlie commodity production and which are changed and deflected in new directions as part of “a moving project” (at p. 997).

There is, however, another possible answer to the problem Kennedy raises. We can look to the actual regulatory apparatuses surrounding commodity systems. His analysis points to the conclusion that the ‘commodity form’ is no less than the *totality of the regulatory apparatus that shapes a particular commodity/network in a specific conjuncture*. The emergence of the welfare model does not mean that the commodity form disappears, but rather that it becomes variegated, changing under different types of economies (with, for instance, Canada and Germany having different horizontal regulation) and for different goods (with the total network regulation in Canada coming to take on different aspects for water, electricity or socks).

The legal theorist Margaret Radin has voiced a similar issue in different terms. She argues that various forms of social regulation involve ‘incomplete commodification’ which she defines in terms of how they “do not fully exhibit the typical indicia of traditional property and contract” (Radin, 1996, p. 20). Instead, policies “reflect contested concepts and internally plural meanings” (Radin, 1996, p. 103). It is simplistic to think our social policy choices exist as a binary of complete commodification (e.g. laissez faire nineteenth century formalism) or complete noncommodification. As such, “Debates about some kinds of regulation can be seen as contested incomplete commodification... Residential rent control, minimum-wage requirements, and other forms of price regulation, as well as residential habitability requirements, safety regulation, and other forms of product-quality regulation all become contests over the issue of commodification” (Radin, 1996, p. 21).

Radin’s concept of incomplete commodification helps explain many grey areas for which the binary of complete commodification v. noncommodification is unhelpful, and helps show how commodification becomes variegated. Canadian large scale hydro-electricity production, for instance, departs from laissez faire because it is owned by the state and subject to extensive planning, environmental and price regulation. However it emerged in part from pre-existing electricity systems designed to operate in free markets, still uses elements of the property and contract system, and still works with economies of scale and wholesale conversions of ecosystems in the quest for cheap price to provide inputs for private sector industrial manufacturing (Forschauer, 2000). At the other end of the spectrum, much of our provisioning occurs outside of the formal capitalist economy whether this be in the ‘care economies’ of the home, or service provision in the non-profit sector (Williams, 2005; Gibson-Graham, 2006; Fraser, 2014). Yet these interactions may well involve forms of exchange for money and services and use physical goods that originate from capitalist industry. Further, commodification is ‘leaky’ (Henderson, 2004; Prudham, 2009): Objects routinely pass out of the commodity form, as when previously bought goods are gifted to friends or donated to food banks. Incomplete commodification also helps make sense of some moral dilemmas that the tight binary might otherwise impose. As cultural geographers have stressed, there are positive aspects of consumption and there are dangers of smuggling into analysis a blanket condemnation of the

practices of using and exchanging commodities (Jackson, 1999, Jackson, 2002) Many theorists maintain a concern with social justice but contend that there are (at least some) morally positive dimensions to markets--they may be intertwined with forms of social connection, trust or friendship or offer forms of emancipation to groups seeking to flee oppressive rural communities or gender roles (Williams and Zelizer, 2005; Fraser, 2012). There are also significant questions concerning whether a complex economy might be successfully coordinated without markets of any form or whether forms of socialized markets might be a better option (Elson, 2000). A flat out prohibition on the commodification of nature amounts to either calls for an unlikely utopia or, more likely, an injunction against the provision of human needs from ecosystems, amounting to an untenable “romantic ecofundamentalist perspective” (Fraser, 2012, p. 11).

Radin’s approach can help show how some debates around commodification and sustainable commodities boil down to an issue of classification. Julie Guthman (2008) argues that certification systems such as for organic food do represent instances of commodification, using a straightforward formalist analysis. She looks for and finds the necessary indicia--private sector provisioning through markets, with property rights, rents through scarcity and individual consumer choice. This overlooks what is different about sustainable commodities, (and which leads to much positive evaluation of them) namely the way they do (selectively) incorporate environmental and social values often missing from market exchange. John Vail (2009) provides an analysis that is the mirror image: These goods are examples of decommodification, read as a broad unifying program that unites diverse social movements and causes “that challenge and limit the scope of commodification by fencing-off non-market spheres from market encroachments”, contributes to “increasing the provision of public goods”, “enhancing social protection”, and seeks to “promote democratic control over the market” (Vail, 2009, p. 312-3). However, this overlooks just the points Guthman raises-- many of these initiatives are already part of mixed but still very capitalist economies and can involve returns on capital, private ownership and still very real forms of exploitation (such as the poor wages paid to farm workers on organic farms). Fridell (2007) provides a more nuanced argument: Fair trade still represents commodification because the issue is whether a certain (quite strict) threshold for decommodification has been met, that of “production in a democratic and consciously regulated

process in which *both* producers and consumers are involved and are accountable for the decisions they make” (Fridell, 2007, p. 93). Some forms of fair trade coffee, Fridell argues, may legitimately challenge some principles of capitalism or introduce new forms of moral economy but they still far short of the ideals of workers’ self-management and control over the production process, communal ownership of property and collective regulation of resources and the social co-ordination of economic life in a democratic and participatory process. Sustainable commodities, it would seem, cannot be placed at either end of what is best thought of as a spectrum between complete commodification (pure *laissez faire*) or utopian forms of complete noncommodification. Sustainable commodities represent new directions by which commodification is variegated.

Merely identifying commodification, then, says very little about *how* it is structured because it is often incomplete in Radin’s sense. This points to the need for a *substantive* analysis of the relationship between what Neil Fligstein calls the ‘architecture of markets’ (Fligstein, 2001) and the biographies of commodities, their physical makeup and the dynamic of their operation in markets over time. Building on Pashukanis’s early entry as framing a broad problem area, we need to trace how the state, law (and regulation), ownership, exchange, subjectivity and ‘things’ (and the processes behind products) are transformed in reciprocal relationship under different conjunctures. Recognizing these varieties of commodification does not preclude also showing what still connects them (hence, also, variegation). We can also work with an analysis of tendential forces that arise from capitalist social relations and at times push regulatory compromises in the direction of complete commodification. Indeed, some neoliberal experiments such as wetland banking (Roberston, 2006) may exemplify this precisely because it revives nineteenth century formalist thinking in a new guise. However, the degree to which such tendencies are also met by other social forces such as civil society pushback and state logics needs to be determined on a case by case basis in particular regulatory compromises.

Karl Polanyi is often identified with substantive analyses and his idea of ‘fictitious commodities’ captures the way land (or nature) does not come on the scene as always already a commodity but rather exists prior to being commodified and is subject to processes of

conversion. For Polanyi this is always an incomplete and contradictory process giving rise to forms of societal resistance. Markets are thus replete with dilemmas which require the state to step in and resolve, even if doing so only leads to stop gap measures which last only for a short time (Peck, 1996, chapter 2). The result is an ever shifting relationship of societies and markets from laissez-faire to social democracy and other forms. Taking up Polanyi's theorization, Scott Prudham offers an example of a geographical political economy informed substantive analysis. He examines how forests are transformed into lumber through combinations of state licensing, resource management regimes, environmental protection laws and corporate management practices for forestry exploitation (Prudham, 2005). Here, commodification processes are seen not simply as the workings of a 'pure' capitalism, but shift as part of interactive processes between firms, the state, markets, diverse stakeholders such as unions, local communities and environmental organizations, technological development, and the biophysical properties of nature. However, there is a need to extend such substantive analyses beyond the nodal point where nature is converted into fictitious commodities (e.g. in forest licensing, management regimes and sawmills): Analysis needs to extend to the broader ongoing processes and institutions which shape the 'thing' in a dynamic and interrelation process that includes multiple nodes along the network.

Many sustainable commodities promise to create shifts away from complete capitalist commodification to reintroduce non-economic use values. This changes the analytic game, demanding of researchers (and everyone) that they investigate not simply the process behind products but the processes and conceptual framings behind the regulation of the processes behind products. We need to understand processes of legitimation, consumer buy in, and the sensuous, psychological and moralistic appeal of these new goods and so the reasons for their expansion. Precisely what this demands is avoiding a simplistic account of commodification that is so rigid it shatters at the smallest fig leaves firms provide to civil society actors. Likewise, we need to avoid swinging all the way over towards celebrating these systems as alternatives to a straw man of complete commodification. Some early work on fair trade coffee seemed to do that -- arguing that it represents "mode of ordering of connectivity" in which "stories are told of partnership, alliance, responsibility and fairness" (Whatmore and Thorpe, 1997, p. 295, for similarly positive

accounts see Raynolds, 2002; Barham, 2003). There are positive aspects to these production and consumption networks but substantive analysis also needs to be brought to bear to consider how these operate as systems, and how framing institutions (such as certification standards) prioritize some ethical principles over others and involve a series of pragmatic (and often unappetizing) compromises. We also need to recognize not only that the incorporation of greater ethical concern can legitimate the expansion of commodification but in doing so also gain the support of many political actors (such as environmental organizations). In the case of Forest Stewardship Council wood in British Columbia, the proposal to use that system, rejecting as it does the Normalbaum in favour of eco-system based management, has been a central lever in facilitating the expansion of logging into contested regions such as the Great Bear Rainforest (Dempsey, 2011, p. 216; McDermott, 2012). This points to the need for a close analysis of both regulatory processes in networks, but also theories of regulation in networks. The next chapter directly addresses this issue.

2.7 Conclusion

This chapter has approached the question ‘what is a commodity’ through considering a geographical political economy approach and its relationship to a large and disparate group of approaches for studying commodities/networks. Amongst these approaches there has been a widespread recognition of the idea of a ‘chain’ that links natural resource extraction, production, distribution, retail consumption and waste. The metaphor of a ‘network’ has also become popular given its ability to show the circuitous interconnections in the chain, and role of culture. Commodities/networks can be analyzed in many ways, including resource flows, capital investment, added value, geographic spread, power between different firms, forms of state regulation, interests of stakeholders, ‘imaginaries’ of distinct places and ethical modes of ordering that unite consumers and producers in realizing alternative economic models. Networks can be changed, not only in virtue of the strategic interests of firms in responding to shifting markets, but as a result of shifts of regulation and to reflect distinct values, including the incorporation of values linked to ‘sustainability’. The result is that there is not a unitary ‘commodity form’ but instead shifting regulatory architectures.

This chapter has further argued that geographical political economy provides a distinct and fruitful approach to studying commodities/networks. It works with a relational materialist ontology which emphasizes both stability and fluidity, the interpenetration of the physical, semiotic, economic, social and cultural and commodities/networks as embodying relationships between people and nature. Geographical political economy emphasizes the role of capital investment and the search for profit and the role of the state in regulating networks. Networks exist in relationship to places and are transformed by politics. Scale matters to networks. Scale is socially constructed and networks are both shaped by and shape scalar politics. Because the 'global' is only one scale through which networks pass, networks may be local or global. This calls for the comparison of networks that operate at different scales, such as the urban and the global. Networks are sites of political struggle, but this is also shaped by scale. Urban, national and global scaled politics take on different dimensions, especially concerning the potential role of the state in coordinating networks. In this process, the local still matters and domestic laws (such as consumer health and safety standards) can play a strong role in shaping networks.

The question of how diverse networks contribute to local economies, development and state formation over the long durée of world capitalism is an important part of this account, but by necessity it can also fall into the background in the analysis of specific networks. While much research on networks has focused on their role in development this mirrors an economic, productivist orientation: Alternatively, both political ecology and sustainability influenced perspectives suggest closer attention to issues of wealth distribution, access to basic needs, and environmental outcomes. Sustainability advocates, especially, stress the networks can be the object of social construction, open to transformation through collective effort and institutional design. Political ecology adds that such social construction is a contested and political process, being as they are the building blocks of substantive, material economies that mediate structure metabolic relations between people and nature. The emphasis on how production and consumption networks can be changed shines the spotlight on how networks are regulated, and the following chapter discusses how a geographical political economy perspective might broach that issue.

3. Regulating Commodities and Networks

3.1 Introduction

There are many reasons why geographical political economy requires a theory of regulation. States are important for promoting some networks, constraining others and creating the backdrop of rules that shape networks. While they often fade into the background, rules concerning health, safety, environmental and other standards make a difference in shaping networks-- they guide the behaviour of managers and engineers who design and plan technologies, material infrastructure and logistics. Commodities/networks are social relationships and the state is a (at times relatively silent) participant in these relationships. Regulation is central to not only the ways that the state transforms the economy but is also central to efforts to transform economies and networks to reflect public interest values. As Sheppard (2011) notes, economic geographers have devoted considerable effort at tracking shifts in capitalism due to changing regulatory paradigms. They find that “state regulation of the economy is a constant struggle between conflicting objectives, with different resolutions of the relationship between the state and the capitalist economy emerging in different contexts” (Sheppard, 2011, p. 326). However, as many conflicting theories of state, law and regulation show, it is no easy task to specify the nature of regulation and how it operates.

As the previous chapter noted, sustainable commodities challenge many traditional ideas of regulation. They overturn notions that regulation should extend neutrally over all goods (such as with consumption taxes or workplace safety standards) rather than selectively apply to specific commodities. They may involve private forms of authority, challenging the idea that only the state does or should oversee regulation. Networks cut across scales and so challenge the idea that regulation should fit into neat scalar containers of city, region, and nation. Sustainable commodities exemplify incomplete commodification and so cannot be analyzed as simply an extension of capitalist commodification but do involve multiple, often incongruous logics. Sustainable commodities are phenomena that contribute to the need to move beyond the old polarity of state-centric public interest theories (as discussed in Jessop, 1990, p. 278-306) and cynical regulatory capture theories (as criticized in High, 1991; Radin, 1996). Theories of

regulation need to incorporate a sense of the play of ethics, routines, discursive frame and economic interests found in sustainable commodities. We also need a theory of regulation that can cover the special case of sustainable commodities but also more traditional state regulation.

In the following I identify four broad camps -- the Regulation Approach (3.2), theorists that promote 'governance' (3.3), governmentality (3.4), and neo-Gramscian approaches (3.5). Each in their own way provides for the possibility of understanding regulation as involving a diversity of participants with different values and interests, and as involving both action by the narrow juridical-legal state and as extending beyond it to include different parts of civil society. Each approach has also been used to analyze different types of alternative goods (such as organic foods) and certification systems. This chapter analyzes a representative sample of studies from each of the four approaches and which are directed at understanding alternative commodities or certification systems. The chapter argue that none of the four approaches canvassed are sufficient on their own or as a regulatory theory compatible with geographical political economy. The chapter suggests instead a fifth approach, Sum and Jessop's Strategic Relational Approach and Cultural Political Economy ("CPE") (3.6).

I argue that Sum and Jessop's approach offers advantages over others, and is uniquely situated to form the basis for a geographical political economy approach to network regulation. At times through the following discussion I draw on their ideas before formally giving them separate treatment (at 3.6). I also offer a more extensive analysis in Chapter 8 where I further extend Sum and Jessop's work to apply to the case studies of the thesis. To foreshadow that later treatment it is worth saying a few words about the orientation from the get go. For Sum and Jessop, the 'economic' is not a self-contained arena, but is always discursively constituted, always incomplete and so co-constituted by the political. As such, the workings of capitalism, including the workings of commodities/networks, are mediated by societal institutions and systems of regulation which negotiate tensions and discursive contestation between societal forces. Such forces may be economic (such as alliances of industrial firms to lobby for preferred policies) but they may also be extra-economic -- such as coalitions of citizen groups that seek to protect biodiversity. Regulation is not determined by capitalist interests, but is *heteroglossic*

(both a synthesis and bricolage of many voices--see Sum and Jessop, 2013, p. 106) and so combines state and private sector interest in capitalist accumulation with discourses of the public interest and societal pushback. Commodities/networks are a meeting point between the conflicting logics of profit-oriented market-mediated accumulation and political mobilization: Adjudicating these conflicts can fall on the state through economy-wide measures, commodities/networks-specific state regulation (such as electricity or water policy) or hybrid public-private systems such as industry-nongovernmental organization alliances for certification standards or firm based codes of conduct. As will be seen, Sum and Jessop's approach allows for a non-economistic account of regulation, a role for economic imaginaries to shape particular networks through the action of diverse societal projects and significant reworking, under diverse forms of regulation, of state, firm, consumer and civil society relationships.

3.2 The Regulation Approach

Many resource geographers have drawn on the Regulation Approach (Bridge, 2000; Kreuger, 2000; McManus, 2002; McCarthy and Prudham, 2004) It suggests a way to theorize resource management and environmental policies as a response to contradictions and dilemmas endemic to capitalist commodification. However, we can carve out distinct ways the Regulation Approach has been used, one that leans towards structure and one that moves beyond the Regulation Approach to consider strategy. This strategic interpretation also played an important role in the formation of Sum and Jessop's Cultural Political Economy.

The Regulation Approach had focused on explaining the rise of Keynesian policy as a move to 'intensive capitalism' whereby workers could not be simply treated as a resource to be exploited but had to be cared for and adequately paid so they could consume "department two" goods and complete the circuit of capital (Aglietta, 1979). Fordist mass production thus required mass consumption. The approach posited a structural coherence between industrial paradigms such as industrial mass production, national macro-economic policy (or accumulation regime) and a 'mode of regulation'. "Regulation" did not refer to law and administrative procedure per se but rather the self-corrective drives of capitalism as a whole in the face of crisis. Industrial pressure regulators thus serve as the relevant machine-metaphor. Regulationists "replaced the

notion of 'reproduction' with that of 'regulation' (Jessop, 1990, p. 307). The theory is not deterministic in the traditional sense -- it refers to tendencies which combined to form historically contingent institutions and practices, but it remains economic: 'Regulation' is a "means of mobilizing counter-tendencies to the various generic and specific crisis tendencies of a given stage of capitalism" (Jessop, 1990, p. 309). The 'mode of regulation' referred primarily to the overall configuration of the economy, across dimensions of wage relations, type of business enterprises and their management, the money system, the state and international regimes such as trade laws and monetary systems. They thus included law and state administrative action within this broad conception as well as allowing for non-state influences such as firm practices and consumption norms. However, this comes at a theoretical price: The focus was on how institutions structured the economy to aid in the completion of the circuit of capital in the face of inevitably generated antagonisms and crises: "They successfully expressed and regulated these conflicts until the inevitable build up of tensions and disparities among the various regulatory forms reached crisis point" (Jessop, 1990, p. 308).

Central to Regulationist writing is the assertion that the Keynesian-Fordist system ran out of steam in the early 1970s leading to the search for a new fix. McCarthy and Prudham thus suggest following Regulation Theory to "interrogate neoliberalism as post-Fordist regulation" (McCarthy and Prudham, 2004, p. 281): In so doing they point to a consolidated structure -- "neoliberal, capitalist modernity" (McCarthy and Prudham, 2004, p. 281). This has also led to considerable research that emphasizes how alternative production and consumption systems fit the mould of neoliberalism, such as organic foods (c.f. Guthman, 2008) or Forest Stewardship Council wood (Klooster, 2010). However, two problems can be singled out in applying this structuralist reading of the Regulation Approach to resource and environmental issues and alternative commodities.

In the late 1990s a range of geographers analogized the Regulation Approach to subnational environment and resource management issues, exploring the regulation of mining (Bridge, 2000) or forestry (McManus, 2002). These drew on James O'Connor's idea of a second contradiction to capitalism. O'Connor invokes Polanyi's notion of fictitious commodities to

argue capitalism depends on the extra-economic. Just as there is a need to reinvest profits in education and other aspects of the social reproduction of workers, there is a similar need to invest in ecosystems and resource management. Failure to do so leads to a potential crisis of “underproduction” and “cost-side profit squeezes” (O’Connor 1994, p. 154). O’Connor theorizes two responses: A ‘sustainable capitalism’ would look much like environmental economists’ prescriptions -- environmental taxes, subsidies for renewable energy and a focus on clean technology innovation. This makes use of the capitalist state in its traditional role as capital’s handmaiden: “There is hardly any state activity or budgetary item that does not concern itself in different ways with one or more conditions of production” (O’Connor, 1994, p. 165). Alternatively, a Polanyian pushback must circumvent the capitalist state. This requires an eco-socialist response (and so transformation of the state) with coalitions between labour and environmentalists. In Regulationist terms, sustainable capitalism -- or as its proponents often called it, ecological modernization (e.g Hajer, 1995) -- would represent a shift from the environmentally extensive system of the nineteenth and twentieth century to an intensive one where nature would be incorporated into but also carefully cultivated by capitalism (Bridge, 2000).

However, geographers using O’Connor and the Regulation Approach found something different. Bridge (2000) found that American mining companies face new state regulations driven not only by landscape oriented economic sectors (such as real estate, high technology, and tourism) but also from social movements. McManus’s (2002) study of forestry in British Columbia and New South Wales begins with the Regulation Approach but adds new theory to explain how the state balances corporate interests and an increasingly well organized, environmentally based opposition. He thus draws on neo-pluralism or ‘critical pluralism’, a discourse theoretical *political theory* for adjudicating contestation through dialogue, contestation and agonistics borrowing from Michel Foucault, Chantal Mouffe, Ernesto Laclau and William Connolly (see Schlosberg, 2002). Law and state action could *not* be explained economistically -- regulation in the legal sense (e.g. management regimes, state law, administrative action) had functions other than ‘Regulation’ (in the Regulationist sense). As a result, there were not clean

lines separating state action, capital interest and civil society mobilization in ways that could show these transformations were exclusively the product of capitalist logics.

A second problem relates to how to identify and define neoliberalism as a stable and consistent framework for environmental regulation. There is now an extensive body of case studies attempting to identify particular regimes as neoliberal and to draw from that literature general conclusions about the nature of neoliberalism and how it affects nature (Castree, 2008; Bakker, 2009, 2010b). This has not proved an easy task because while indicia can be found for neoliberalism (such as marketization and privatization) it is hard to see what unifies the studies. There are two conjoined difficulties. One is that the literature covers many different cases: These range from clear despoliation (such as through budget cuts that remove water quality monitoring) and the removal of protections to allow greater resource extraction, to initiatives that might fit with O'Connor's notion of sustainable capitalism. The latter include efforts to create new market-oriented regulation (such as renewable power sourced through competitive private sector contracts), proxy markets (such cap and trade regimes which seek hard caps on carbon emissions) or voluntary green goods (making use of emerging consumer concern). A second is that very distinct policy traditions are involved with distinct origins from neoliberalism. These include: Ecological economists' attempts to value ecosystems -- much maligned by more traditional economists who argue it bypasses contingent valuation exercises (Dempsey and Robertson, 2012); urban sustainability policies which inherit the planned management and state interventionism usually associated with the Keynesian era (Raco, 2005); property rights regimes in fisheries resource management that date from the 1950s (Mansfield, 2004); and eco-communitarianism in areas such as forestry that, like neoliberalism, holds a benign faith in civil society and 'community', but whose proponents feel their project is hijacked by neoliberalism (McCarthy, 2005). The result has been a cycling of suggestions of how to find some unity.

Some case study analysis, such as Guthman (2008), imply that commodification is a core principle, but, as argued in the previous chapter (at 2.6), this begs the question concerning the different ways of constructing commodification and the fact that very diverse regulatory approaches can include forms of commodification. Castree (2008) suggests an ideal-type of

neoliberalism that casts it as a push for laissez-faire. This abstracts from, rather than accounts for, the specificity of individual cases and does disservice to the distinct world-views involved. Some writers have appealed to the concept of ‘hybrid neoliberalism’ (McCarthy, 2005; Dempsey and Robertson, 2012) but that invites speculation whether it is neoliberalism or the other tradition in the hybrid which should be prioritized for study. Lerner (2003) used a Foucauldian discourse theoretic reading which leads to an emphasis on localized variation. This might be a good way to approach case studies, but it dodges answering the Regulationist question concerning whether a unified neoliberal approach might be found. As Brenner, Peck and Theodore note of such approaches to neoliberalism, the “macrospatial regulatory landscapes within which this variety is produced appear to lie outside the frame of analytical reference” (Brenner et. al., 2010, p. 202). The most likely proposal is that of variegated neoliberalism (Bakker, 2010b; Dempsey and Robertson, 2012). However, this forces the question of what explains the variegation. Original formulations of variegation had described a cluster of neoliberal thinkers (such as Hayek and Friedman) that could serve as a small set of genotypes leading to broad variation in phenotype expression. Variation would come from not only differences in the original cluster but from collision with path dependent institutional landscapes and subsequent mutations. Yet even passing reference to the political economic visions or the personalities and utterances of advocates behind red tape cutting sub-national governments, ecological economists and eco-communitarians shows they are worlds apart. If these are all united as ‘neoliberal’ then we are faced with the question of what, beyond a penchant for market devices, unites them. How can we infer back from all these different approaches to a stable and cohesive context that the case studies express? Making it even harder to create a unified picture is the fact that many initiatives built on the ‘win win’ of environment and economy seem to fail more than succeed, lacking the support of right wing political parties controlling the state executive (as in Canada from 2006 to present) or legislature (as in the United States under Barack Obama’s presidency), and, more deeply, faltering on the path dependency, momentum and lock-in of existing socio-technical and institutional complexes (Unruh, 2000). Large scale examples includes failures of climate action in the United States in 2010 (Skocpol, 2013), and the complete lack of uptake of the United Nations Development Program Green Economy

proposals for the Rio + 20 conference in 2012 (as spelled out in UNEP, 2011). Both were tightly modeled by economists to offer long term GDP gains over the alternative of business as usual.

An alternative response focuses on strategy rather than structure, and dispenses with the Regulation Approach's quest for structural coherence. This argues that there has been a broad but uneven neoliberalization process through society and economy as a whole, which issues in its extension to resource and environmental policy, it being met by existing approaches to resources and the environment (such as recalcitrant Keynesian era policies), alternative approaches (such as a long-standing biocentric resistance to capitalist growth) and a host of new innovations. In this last group (which includes types of ecological economics and communitarian proposals in forestry, energy or agriculture) we can find efforts to seek environmental improvement and incorporate forms of market-ordering, and often draw on and hybridize with ideas of sustainability. In all this there are significant differences over type of regulation needed, the principles that should guide that regulation, and by extension how commodification should occur. None of these approaches are guaranteed success, and they often exist as small scale examples or efforts that fail to achieve broad policy adoption or longer term sedimentation.

Such a strategic approach can draw on Bob Jessop's and others long engagement with the Regulation Approach. Jessop coupled it to an *anti-economistic state theory* which recognizes that the need for solving problems of economic and extra-economic relations are not settled by capital but by society as a whole through the state. The state, in turn, does not represent any kind of unitary capitalist voice but operates as a "form determined condensation of the balance of political forces operating within and beyond the state" (Jessop, 2002a, p. 6). That is, the state must find some degree of unity, often voiced as the public interest, to provide social cohesion and appease and balance the pressures and needs of diverse groups. For Jessop, the strength of the Regulation Approach was how it showed the dependence on the economy on extra-economic institutions. However, he saw "that its account of the state is a weakness" (p. 312), "it's role is still largely neglected or distorted" (p. 315). The state "cannot just be seen as a regulatory *deus ex machina* to be lowered on the stage whenever the capital relation needs it" (Jessop, 1990, p. 318). His alternative, strategic relational view of the state makes reference to "concrete agents

and strategies” (p. 318) the co-evolution of state and economy through “strategic coupling” (Jessop, 1990, p. 329) and the “evolution of different regulatory mechanisms without being forced into economic reductionism” (Jessop, 1990, p. 332). As such, legal institutions and bureaucracies do serve to ‘regulate’ in the sense of addressing incomplete capitalist relations, but they are separate sub-systems or orders from that of the economy, and serve political functions such as representing the public interest and ensuring social cohesion. This creates a potent *critique* of Regulationism – it failed to “fully explore to what extent and how these separate orders with their own social forms and institutional logics might pose deep-seated problems for the effective regulation of capital”(Jessop, 1990, p. 333).

Jessop thus conjoined the Regulation Approach with an account of strategic action in forming the state. The state would be shaped by successive state-making projects, and was charged with not only remedying capitalist contradictions but also balancing contending societal forces and realizing the public interest. He thus adopts Polanyi’s notion of fictitious commodities, but in a different way than O’Connor. On the economic side there is a need to deal with incompleteness, but societal pushback can work through the state, answerable as it is to diverse social forces. As such, profit-oriented market-mediated accumulation is a dominating influence on, but not determinative of, the state. By extension, and which became increasingly clear through the 1990s and 2000s, if no structural coherence emerged to stabilize the economy the result was strategic action directed at *both* the state *and* the economy (Jessop and Sum, 2006). The result is that there are now diverse environmental and ecological projects at play seeking to remake the state and the economy (Jessop, 2012b). Moreover, in times of uncertainty with no broad consensus, ideological projects can also capture the state and create *obstacles* to resolving underlying dilemmas. Theorists of variegated neoliberalization such as Neil Brenner, Jamie Peck and Nick Theodore thus stress neoliberalization as a strategic project, which often does get worked into state policy and laws, but *not* as a coherent paradigm for ‘regulating’ capitalism: “neoliberalization has *never* represented a stable institutional ‘fix’ (Brenner et. al., 2010, p. 210). Key to theorists who have moved *beyond the Regulation Approach* (as Jessop and Sum, 2006, title their book) is that neoliberalism is *not* a replacement for Fordism and rather than ‘regulation’ there is simply ongoing crises and contradictions and contested models in response.

This approach also provides a response to the neoliberal nature problematic, for it can recognize neoliberalization as reaching into shape local contexts, but also being met by, hybridizing with, and being altered by diverse alternative regulatory approaches. Neoliberalism is not a totalizing force and there are alternative strategic projects at play. We should recognize that there are a broad range of theoretical schools and policy tropes that overlap in promoting forms of market-making and commodification. In some cases these might be labelled as ‘green neoliberalism’ especially where they would bring regulation more closely (but certainly not all the way!) towards ideals of property ownership and arm’s length exchange, that is, towards complete commodification. However, in purporting to directly address environmental issues, and at times involving new technologies, ecosystem knowledge or even hard targets (such as renewable energy quotas) they can be distinguished from other types of neoliberalism. These can contribute to the contemporary conjuncture, respond to it and fail because they differ too much from it. This strategic approach can ask about the origins of diverse policies and their applications, what is unique about them, how they change the architectonics, material composition, resource flows and imaginaries of commodities/networks, and whether they promote narrow goals of accumulation or eco-social transformation and economic democracy. It can also treat the quest for a ‘win win’ opaquely, that is, as a policy discourse, quite independently of whether there is any systemic logic or hidden societal ‘pressure regulators’ that might snap into action to realize that objective.

3.3 Governance

A number of different streams of thought have tried to provide a closer empirical analysis of how regulation has changed through the 1990s and 2000s. Proponents of ‘governance’ -- theorists such as Guy Peters, John Pierre, Mark Bevir and Rod Rhodes -- argue that the idea of the singular public interest state is largely outmoded, that political authority is multi-layered, shared, and often operating across several different spatial scales. The traditional conceptual division between state and market, sovereign and society and public and private are seen as inapplicable or blurred (Bridge and Perrault, 2009). Environmental governance approaches look to the rise of civil society organizations and call for integration and public participation, a

transition to more flexible procedures that go beyond traditional initiatives and which include “networked forms of organization involving a wide range of non-state actors but also government, mainly through exchange and negotiation rather than through traditional state-led regulation” (Ponte et. al., 2011, p. 1; Gunningham, 2009).

These are at times also articulated with theories of the ‘Regulatory State’ and ‘Smart Regulation’. One characteristic of Keynesian planning was putatively public interest regulation made on a discretionary and secret basis by state bureaucrats engaged in bipartite negotiations and tacit collusion with large industrial interests. Theorists of the ‘regulatory state’ argue that the changes initiated in the United Kingdom by Thatcher and continued by Blair were not only concerned with privatization, but also redrawing the terms of regulatory control over the market to create better transparency. While much of this was guided by the belief that the state should only intervene in the face of clear market failures it also represented a move to articulate, in transparent and codified fashion, the principles that would guide regulation. Technocratic expert opinion and economic analysis based on public data would then prescribe the instruments by which the state would steer the parsimonious regulation of independent industries (C.Mitchell, 2008, drawing on Moran, 2003).

Smart Regulation theorists take this one step further. These argue that there is no good ideological reason to reject state “command and control” regulation but insist such regulation should be chosen as part of a suite of more pluralistic, flexible and context specific approaches that draw on a mix of policy instruments most suitable to explicitly stated goals. Such regulatory steering can extend also to the strategic use of resources outside the state where these promise desirable outcomes and can compensate for declining budgets. Governments should be ready to engage in continuing governance experimentation aimed at identifying and testing new ways to share governance responsibilities by empowering business and civil society through information, networks and partnership (Tollefson et. al., 2008, p. 257; Gunningham, 2009).

Many researchers have also extended these approaches to understand certification systems. There is now a large literature on private governance arrangements in commodities/ networks and the ways these involve rules and regulation comparable to public law arrangements

(for reviews see Vogel, 2008; Schouten and Galsbergen, 2011; Ponte and Cheyns, 2013). A number of scholars have noted the ability of non-state governance forms (or hybrid formations) to better integrate scientific, technical and non-expert forms of knowledge; to secure legitimacy across broad coalitions of stakeholder groups; to provide flexibility in uncertain and rapidly changing contexts and to address problems that have both causes and impacts that range across a variety of geographic and institutional scales. Pressures from both above and below have made it increasingly difficult for states to govern through traditional top-down, command and control forms of sovereign rule. Part of what motivates this literature is an awareness that these systems do involve the emergence of norms and a shift in what counts as legitimacy in international ordering. They thus rest on a broader norm complex present through society and represent an institutionalized authority with power resources. They are thus seen as reflecting, positively, the emergence of democratic, social, and environmental norms in the global public domain (Bernstein and Cashore, 2007). Certification systems become domains in which civil society actors such as environmental non-governmental organizations can have a direct influence on regulation that occurs at a distance from often closed state structures (Eden and Bear, 2010). Certification systems may empower consumers to participate in governance, while correcting for informational failures endemic to markets (Tollefson et. al., 2008, p. 19). Accountability and responsiveness flows to not just states, but broader shareholders, at times creating a complex set of problems given the need for moral justification, the diversity of stakeholders and their subject positions (Schouten and Glasbergen, 2011).

These approaches do offer convincing evidence of the emergence of new types of regulation and direct attention to the principles behind initiatives and the instruments marshaled to advance them. In some cases, the use of governance theories helps expand the repertoire of methodologies for understanding commodities/networks. For instance, Tollefson, Gale and Harvey (2008) offer detailed analysis of the quite sophisticated institutions and organizations involved in some governance style regulatory regimes (Tollefson et. al., 2008). Auld and Gulbrandsen (2010) show how institutional design involves tradeoffs between transparent public participation and support and timely response to policy problems. Also, the term 'governance' has taken on many different meanings (Bridge and Perrault, 2009) and critical scholars at times

contribute empirical case studies to this literature (c.f. Hall, 2010). One of the case studies in this thesis uses analytical vocabulary from governance approaches, specifically that of Tollefson and co-authors.

The approach has significant drawbacks. While writers in this tradition do level criticisms concerning these systems, they do so with reserve given they do not want to foreclose on what they see as the significant potential of these systems to create positive change (c.f. Tollefson et al., 2008; Auld and Cashore, 2012) They also avoid a depth analysis demanded by political economy -- e.g. naming capitalism as an economic system, an explicit analysis of power inequalities, a robust sense of market coordination as failing to meet public interest values or contributing to uneven development, and broad historical contextualization such as the ideological basis for the hollowing out of the state (for further critiques of this type of governance see Emel, 2002; Ioris, 2012; McCarthy, 2012; Hackett, 2013). They do the work of suggesting commonalities of purpose and so obscuring divergence and conflict over issues that go to the core of the political (Bridge and Perrault, 2009).

Jessop provides a bridge in this regard. In *The Future of the Capitalist State* (2002a) he argues that governance initiatives compromise a distinct class of economic coordination ('heterarchy') but which can also be analyzed in political economic terms. Heterarchic arrangements are resorted to by states, firms and civil society as a response to both market failure and state failure (Jessop, 2002a, p. 228-230). Failure here does not mean only that market ordering or state regulation does not get off the ground or collapses (that is, as a bridge may 'fail' by falling down). While that can happen, more modest forms of failure include failing to meet objectives such as serving the public interest (for markets) or securing self-ascribed goals (such as the welfare state aim to reduce inequality). Heterarchic arrangements can fail in the sense of falling apart because participants cannot agree, but they can also fail to meet public interest concerns (analogously with markets) and fail to replace state hierarchy as a viable alternative for securing state goals. Jessop argues they are very much prone to failure. They seek, as much as the state does, to create a meeting ground and balance for the "conflicting logics of accumulation and political mobilization" (p. 238). However they do not extinguish but

simply reproduce the complex coordination problems that lead to state and market failures. They are inserted into the state system and should be analyzed also in terms of the state's 'metagovernance' functions, by which it oversees and chooses between forms of coordination. As such, much governance theory, and the particular approval of governance systems, stems from the ideological distrust of state 'command and control' regulation. However the effective decision to rule out such regulation is not made *ab initio* but delegated to economists and regulatory experts for whom it operates as a heuristic empirical assumption (Jessop, 2002, p. 240). There is thus ample room for geographers to analyze heterarchic systems to show forms of failure and to provide correctives concerning heuristic assumptions that they are better than state coordination forms.

3.4 Governmentality

In environmental geography and political ecology there has also been a general concern with understanding environmental management as 'environmentality' and 'ecological governmentality' (Agrawal, 2005; Rutherford, 2007; Bridge and Perrault, 2009). These stress the broad 'conduct of conduct' that can occur as states or firms enact and promote broad rationalities of rule. Such rationalities can extend to the definition of what counts as relevant knowledge and metrics, leading to analysis of expert knowledge and how it is operationalized. It thus displaces the state as the exclusive source of ideas, power or control: What counts as political authority and expertise are not external to, but are instead shaped by rationalities of rule. "Government" can extend to a broad range of tactics and techniques beyond explicit legal coercion, to include the design of architecture in a school or prison, to "technologies of agency" which shape person self-identity and so morals, ethics, and modes of political participation. Arjun Agrawal argues the study of 'government' effectively reframes environmental politics to extend beyond issues of state action or conflicts of economic power. It points to how the "seemingly diverse fields of social action and change denoted by knowledge, politics, institutions and subjectivities in reality run through each other" (Agrawal, 2005, p. 203).

A number of scholars have found it particularly helpful for understanding codes and standards in commodities/networks, pointing as it does beyond macro-structural analysis to how

projects “are articulated and rendered workable in local settings and interactions, and how such processes relate to, make possible, as well as contest broader forms of governing conduct” (Higgins and Larner, 2010, p. 3). There is thus an increasing body of governmentality inspired research on knowledge systems, standards and soft law in commodities/networks (Gibbon and Ponte, 2008; Higgins and Larner, 2010; Ponte et. al., 2011; Raj-Reichert, 2013), including the use of corporate social responsibility to disciplining distant subcontractors along the supply chain (Sum 2009, Sum and Jessop 2013, chapter 9). Foucauldian approaches have also been directed at a range of voluntaristic consumption side programs that make up part of emerging regulation of commodities/networks (Slocum, 2004; Hobson, 2006; Brand, 2007; Aylett and Rutland, 2008; Pudup, 2008). As Rutherford (2007) notes in her excellent review of environmentality/ green governmentality literature, this work shows how “responsibility for the environment is shifted onto the population, and citizens are called to take up the mantle of saving the environment in attractively simplistic ways” (p. 299). Such voluntaristic programs are often initiated under broad sustainable consumption policies (Shove, 2004). Consumer subjectivization may occur through a general economy wide injunction to ‘act responsibly’ or ‘do one’s part’ and ‘ethical’ or ‘green’ products may provide the promise of enabling such action. Alternatively, specific networks (such as local electricity utilities) may actively use advertising and public relations programs to achieve goals (such as energy conservation and efficiency) through shaping consumer beliefs and action (Hobson, 2006; Aylett and Rutland, 2008).

There are however two key tensions in these accounts which point to the need for a more expansive theoretical repertoire. Much of this work builds on Foucault’s work in the 1960s and 1970s which emphasized the way power worked on subjects and easily leads to the assumption that the conduct of conduct has a partly coercive quality akin to but operating independently from state regulation. However, Foucault later came to emphasize power as a two-way relationship between subjects, which could be transformed through struggle to aid agent’s own capacities for self-definition and care of the self. Foucault’s own last writing (just before he died) on *parrhesia* emphasize attention to the openings created as subjects can enter into dialogue with, and speak truth to power rather than accept pre-given rationalities (Flynn, 1988; Miller, 2006). As such, subject formation cannot simply be read off of policy scripts and people do not

always follow the program laid down by the “normalizing gaze” (Slocum, 2004, p. 772). We thus “need to question how the heterogeneous assemblages of mechanisms, bodies, techniques, and knowledges that constitute the field of environmental governmentality actually act on individuals” (Hobson, 2006, p. 320). This should include accounts of how agents respond to and seek to transform discursively constituted, structurally inscribed contexts. Clive Barnett and co-authors thus argue that participation in alternative networks such as fair trade coffee are political acts in which agents seek to remake their own practices of the self *and* the broader economy -- the exchange process is refashioned as a field for exercising political responsibility (Barnett et. al., 2010).

There are long-standing complaints from political economy traditions that Foucauldian work is “somewhat diffuse for grappling with...class coalitions, interest-based politics, and scale-specific ecological dynamics” (McCarthy and Prudham, 2004, p. 280). Analysis of rationalities of rule can thus fail to ask the ‘why’ question, which can require linking state strategies and rationalities back to theorizing the state in terms of its relationship to social structures and the historical evolution of societal systems. If societal principles such as personal and political responsibility now have regulatory power in shaping networks we need to also interrogate why they arise, and how they work reciprocally with other institutions to structure networks to form part of negotiated regulatory compromise. We thus need to move from an agent centered view to a more systemic analysis of the workings of networks to ask not simply whether there is political responsibility at play but how it is mediated by the specific political visions embodied in the institutions of the commodity/network. We thus need to interrogate which public interest values are furthered -- how progressive really is this alternative economic imaginary? -- and how diverse tensions between the economic, extra-economic use and exchange value are temporally resolved. A clear methodological answer is to seek ways of commingling political economic and governmentality themes through context specific empirical analysis (c.f. Mitchell, 2002; Goldman, 2006). This is the approach taken in the case studies, where concepts of governmentality are invoked alongside many others.

3.5 Neo-Gramscian Approaches

Another, approach, however, is to rework the theoretical articulation of political economy to more explicitly include the role of discourses in shaping state and non-state action and regulation and link the development of rationalities of rule to crises and contradictions endemic to capitalism. An investigation into rationalities of rule may provide one entry point into examining complex processes of co-evolving economic and regulatory practices which are simultaneously economic, institutional and discursive. Neo-Gramscian positions thus suggest the possibility for mixing post-structuralist concerns with discourse and subject formation with political economic concerns with power, structure and the workings of capitalist dynamics. They can explain the emergence of new environmental governance arrangements in terms of shifts in the state understood in its integral sense (*lo stato integrale*) as including firms, civil society, consumers and other groups. What is at issue is not the abandonment of the state from the terrain, but a re-ordering of the relationship of societal forces that may be overseen from a distance by the juridical state. Neo-Gramscian accounts can recognize the shifts theorists of governance, Smart Regulation and regulatory capitalism identify, but also theorize them in terms of contestation over social power and the ever changing structures of the state. The emergence of a role in regulation by businesses, private-public partnerships and non-governmental organizations replaces functions traditionally performed by the administrative liberal state. It thus represents a new way to unfold hegemony and passive revolution by absorbing and deflecting ongoing societal concern over environmental crisis. There are however, a variety of readings of Gramsci (Thomas, 2009) and distinct neo-Gramscian schools (Sum and Jessop, 2013, p.77-81) and so different ways of theorizing this process.

Current articulation of neo-Gramscian accounts for Global Production Networks follow the “Italian” School of Robert Cox and Stephen Gill developed in international relations (Levy, 2008; see also Bloomfield, 2012 discussing FSC wood but not through GPN frameworks). David Levy argues that a neo-Gramscian approach shows how Global Production Networks integrate economic, political, and discursive dimensions. They feature asymmetries of power and income as well as opportunities for strategic agents to reveal these asymmetries, find points of tension

and leverage, and challenge their structures and processes. Global Production Networks feature dynamic struggles over governance -- struggles for hegemony over the institutional apparatus that structure networks. For Levy, regulation appears as a strategic response by industry to protect its interest in the face of resistance: He thus discusses the development of Fair Trade practices and industry codes of conduct in the coffee sector as an effort to protect the hegemonic stability of networks and create legitimacy for large brand names that carry Fair Trade goods (Levy, 2008, p. 957). In an analogous argument applied to corporate social responsibility, Levy and Kaplan (2007) argue corporate social responsibility is a discursive accommodation and material compromise that emerges from the strategies of various parties; particular CSR practices thus reflect the balance of forces among competing interest groups. Generally these accord a measure of legitimacy to external stakeholders, but reserve to corporate management the role of benign stewardship of societal resources.

There is a need to expand such analyses in light of repeatedly voiced concerns. The Italian School has been criticized for broadly overlooking “the constitutive presence of discourse inside the economic and the political” (Sum and Jessop, 2013, p. 77) or specific to environmental regulation, the role of new values such as environmental concern which do not originate from the interests of capital (Bernstein, 2001, p. 15). We thus need an approach that can show dialogic contestation over the principles, values, institutions, and organizational form of networks rather than reduce discourse to an expression of the results of interest based mutual adjustment. The Italian School has been criticized for overemphasizing macro-level economic structural factors that leave little room for the role of agency in localized compromises (Okereke and Bulkeley, 2007, p. 29). Concepts such as the ‘new constitutionalism’ (Gill, 1998) thus describe an ‘institutional lock-in’ that shapes all processes from above. In contrast, geographical political economy points to “the strategic role of national, regional and local state apparatuses as active progenitors of...institutional reforms and policy prototypes, and as arenas in which market-oriented regulatory experiments are initiated, consolidated and even extended” (Brenner et. al., 2010, p. 196). This variegation can be further extended to compromises over networks to explore the development of new forms of regulation. A concern for localized variation also dovetails with Gramsci as a *spatial theorist* (Jessop, 2008a). There is thus also a need to relate

discourses, strategies and regulatory compromise to the dynamics of networks as rooted in place, cross-cutting scales and involving myriad differently situated participants. The case studies draw on Levy's idea of negotiation and compromise in networks, but with attentiveness to the above concerns.

3.6 The Strategic Relational Approach and Cultural Political Economy

The case studies draw on a mix of perspectives from Global Production Networks, including ideas of governmentality and neo-Gramscian compromise. The conclusion seeks to elaborate a more nuanced neo-Gramscian position drawing on Jessop and Sum's cultural political economy and its articulation of spatio-temporal and institutional fixes. In the following I introduce the Strategic Relational Approach ("SRA") and its more recent extension into Cultural Political Economy ("CPE"). I do so here to extend the analysis of theories of regulation even though these ideas will only resurface in the thesis in the final chapter.

Throughout his academic career Jessop has sought to develop an orientation to political economy that avoids the pitfalls of economism and incorporate the ways discursively constituted projects can rework the state and the economy. As was mentioned above (at 3.2) Jessop draws from not only Marx but also Karl Polanyi to emphasize the role in the economy of structuring institutions (such as provided by law and regulation in the sense of administrative action and legal subrules), the primacy of the political in directing the state's economic policies, and the role of discourses and imaginaries of the economy in shaping intervention. The Strategic Relational Approach roots regulation in the inherently problematic nature of capitalism and builds on Polanyi's idea of capitalist economies being riven by inherent contradictions as land, labour, knowledge and money are at root fictitious commodities. The result is multiple regulatory dilemmas (Jessop, 2002b, p. 18-21). While Jessop's conception of regulation draws on the more abstract idea of crisis resolution it can also capture the workings of specific state policies and their translation into law. Jessop thus considers the role of intellectual property protection and opposition to it from those who see knowledge as a common resource (Jessop, 2008b, see also Sum and Jessop, 2013, p. 285-290). Others, such as Jamie Peck have used a similar schema as

Jessop to indicate how the state's need to negotiate contradictions and dilemmas can play out in terms of decision-making over the rules for labour market design (Peck, 1996, chapter 2).

Jessop has developed the Strategic Relational Approach over decades, starting with state theory (Jessop, 1990). Central to the Strategic Relational Approach is the claim that profit-oriented market-mediated accumulation does not determine the state but is instead 'ecologically dominant' (Jessop, 1990, p. 178). By this phrase Jessop means to indicate that the economy and politics are separate orders (or functional sub-systems) which are mutually interdependent but not necessarily equal. The state plays a central role in resolving underlying economic crises and is strongly shaped by economic actors. However, the state does not operate as the pliant tool of capital or the ruling class but at the same time it remains strongly influenced by the needs of capitalist reproduction. The state is reworked by distinct strategic projects. These projects shape the state but do not do so conclusively. Instead, they set the stage which constrains but does not determine future strategic action. The state must balance contradictions between the economy and its extra-economic supports and this results in a range of complex balancing decisions as legislators and other state officials consider various types of contradictions (of land, labour, knowledge and money), treat some contradictions as more important than others, prioritize resolving some contradictions at the expense of others, or displace problems in space and time (Jessop, 2002a, p. 18-21; Sum and Jessop, 2013, p. 249-250; Jessop 2013a, see also Peck, 1996, chapter 2). Jessop's state theory -- and later work -- is explicitly Gramscian not only in its use of terms like Fordism, and historic bloc but in the identification of successful, dominant, capitalist projects with hegemony: "A successful hegemonic project penetrates different functional subsystems, organizations and identities... it provides a conception of the common good and a framework within which different forces can cooperate and/or coexist with a relative degree of harmony" (Jessop, 1990, p. 336).

In a second stage, Jessop expands the SRA into a general heuristic that applies across society and analyzes the dialectic of structure and agency, path-dependency and path-shaping, the material and discursive, and how social life is undergirded by spatialities and temporalities (Jessop, 2008a, p. 240). It thus seeks to generalize 'strategic relationality' as a comparable but

alternative approach to Anthony Giddens's structuration theory. It has the advantage of not 'freezing' structures and agency into a duality but explaining the process over time whereby strategic projects have both structuring and strategic moments (Jessop, 2001a). During this period in the 1990s Jessop also drew heavily on the Regulation Approach ("RA") as an economic theory that sought broad explanations of national scale social formations (Jessop and Sum, 2006).

A third stage, 'cultural political economy' ('CPE'), which Jessop developed with Ngai-Ling Sum through the 2000s, emphasizes the economy as an object of strategic action -- it is constituted by specific discourses and discursive processes. Sum and Jessop do not seek to simply recognize and affirm the very many ways in which the economy is now understood as linked to cultural practices (such as in studies of cultural industries, linking the economy to everyday experience, or privileging the role of aesthetics, affect or consumption -- for a long list see Sum and Jessop, 2013, p. 18-19). Rather, Sum and Jessop seek to "reconstruct critical political economy in the light of the cultural turn" (Sum and Jessop, 2013, p. 20). CPE is not distinct from, but incorporates, Jessop's prior work. CPE emphasizes strategic projects. Jessop has long recognized that state projects are discursively constituted and his state theory was formulated in dialogue with post-structuralist thinkers such as Michel Foucault, Chantal Mouffe and Ernesto Laclau (Jessop, 1990). However, by the 2000s it became increasingly clear to Jessop that the economy could not be understood in the Regulationist manner as a stable economic regime. CPE extends ideas of strategic action and social construction to the economy. It builds on Marxian and Polanyian themes, but stresses the ways the economy does not exist independent of human efforts to construct it. It gives a central role for discourses and discursive practices in forming economic subjects, modes of calculation, and routines as well as the social 'repair' work that ensures responses to crisis and the reproduction of the economy (Jessop, 2005, p. 144). This opens up the possibility for a wide range of techniques such as discourse analysis and genealogy that can interrogate and trace the flow of policies such as the 'knowledge-based economy' (Jessop, 2005, 2008b) or "Wal-martization" (Sum and Jessop, 2013).

CPE also seeks to interrogate why and how some policies are selected from a vast pool of contenders and so move from academia, think tanks, and non-governmental organizations into the policy process. It hypothesizes a socio-evolutionary account that considers how imaginaries frame crises, the plausibility of interpretations and narratives, and their resonance with the lived experience of members of key classes, whether these be elite or crisis-hit groups (Sum and Jessop, 2013, p. 404). It also considers extra-semiotic factors such as the organization and operation of the mass media, the role of intellectuals in public life, and the workings of key institutions such as parliaments and firms. Jessop and Sum's CPE fits into the larger rubric of the Strategic Relational Approach. Not only are economic imaginaries important to how the state is reshaped, but the economy itself is a terrain that is strategically inscribed selectivity and site of strategic action. That is, current configurations of the economy favour some economic imaginaries/projects over others but this does not stop strategic action directed at remaking the economy anew. Successful projects become hegemonic in the sense that they involve social practices and narratives oriented towards winning overt or tacit consent (Sum and Jessop, 2013, p. 211) but they may over time also face resistance (p. 213). While Sum and Jessop's CPE is a complex and unfinished project drawing on decades of research we can briefly note its relevance to the themes of this chapter and broader thesis.

3.6.1 Geographical Political Economy

There is a direct dialogue and mutual learning between the SRA and geographical political economy. Writers in both traditions theorize capitalism through Marxian and Polanyian lenses and Jessop directly works with ideas of the social construction of scale (as developed by David Harvey, Neil Smith and extended by Neil Brenner). Central theses of Jessop's work draw on that tradition, such as the primacy of the national scale under Fordism/Keynesianism, the hollowing out of the state in the 1990s and the multi scalar nature of neoliberalism and responses to it (2002a). Sum and Jessop credits many geographers as participants in discussions that helped lead to forming CPE, including but not limited to Ray Hudson, Jamie Peck, Andrew Sayer, Erik Swyngedouw, and Nik Theodore (Sum and Jessop, 2013, p. xii).

In turn, geographers have spun off applications of each stage of the SRA and this has been particularly prominent in environmental and resource geographies. Jessop's ideas have been used to suggest a need for focused attention on the shifting contours of the environmental state (Gandy, 1999). In some cases this has involved showing how environmental policies, such as for carbon emission management, change the state, leading to 'eco-state restructuring' (While et. al., 2010). Others, such as Antonio Ioris use the SRA to suggest the state's role in managing water networks opens up a 'trialectics' of society, nature and the state (Ioris, 2012). Urban geographers have applied Jessop's ideas of state rescaling to the role environmental policies in promoting competitive urbanism and urban sustainability policies (Kipfer and Keil, 2002; Whitehead, 2003; McGuirk, 2004). Robertson (2006) follows Jessop's idea of state and regulation mediating and translating between functionally separate sub-systems. As discussed above (at 3.2), Jessop's 1990s era focus on the Regulation Approach was shared by a number of economic and resource geographers who sought to show how sub-national state management in areas such as water, mining, and forestry responded to a range of contradictions, crises, and extra-economic concerns.

There is, however, a deeper sense in which Jessop's work can be applied to the geographical political economy of nature-society relations. Recalling and expanding the discussion above (at 3.2) we can differentiate Jessop's use of Polanyi from O'Connor's interpretation and in this way show how Jessop points to an explicitly non-economistic stance towards state and nature-society relations. O'Connor emphasizes contradictions that stem from the depletion of a resource base and cites accumulation as the central driver of that problematic (O'Connor, 1994). Jessop acknowledges, like O'Connor, that there are inherent contradictions that arise from the commodification of land (and nature) leading to problems of ecological destruction. However, he stresses that the state acts in part from its own logics and responds to social struggles: State law and administrative action in relation to the environment is thus not guided only by the need to maintain a resource base. Jessop thus considers the importance of viewing fictitious commodities (knowledge, labour, land and money) in their non-commodity form rather than "subordinate them to the logic of market forces" (Jessop, 2007b, p. 130). Jessop only sporadically touches on ecological issues but he does underline their importance (as in Jessop 2007a, 2012a). The use values he attaches to labour show the general category is not

meant to reflect instrumentalism devoid of aesthetic or moral qualities -- workers, for instance, potentially enjoy a sense of craft pride in their work (Jessop, 2002a, p. 20). By extension, Jessop's approach suggests that there are many non-commodity 'uses' nature has for society as a whole and the state beyond supplying resources and ensuring the web of life that sustains all human activity: Nature also providing spaces for recreation or healthy air; it contributes to individual and collective identities and nation building; it can be seen as an object of appreciation, enjoyment, and spiritual concern, and -- especially concerning other animals -- as subjects in their own right. While nature may be seen as a resource and extracted to form raw materials for commodities/networks this is a conflict-ridden process that creates social dissent, civil society protest, and calls for political institutions to offer resolution.

CPE further points to analysis of various imaginaries that particularly address environmental problems. Jessop has in fact taken this up. He uses CPE to analyze 'the green economy' and the 'no-growth economy' as emergent responses to the crises of the 2000s (Jessop, 2012b). A focus on imaginaries provides space for a wide range of societal and normative concerns to be worked into how economies are imagined and constructed -- issues of identity, gender, race, ethnicity, popular common sense or the sciences contribute to a co-constitutive relation among ideas, power and institutions (Sum and Jessop 2013, p. 76-80). CPE also reflects geographical political economy's concern for the possibilities of eco-social transformation. CPE allows for a role for social movements, including environmentalists, to shift the terms of discourse and so remake the economy: "Agents can make a difference thanks to their different capacities to persuade, read particular conjunctures, displace opponents, and re-articulate discourses and imaginaries in timely fashion" (Sum and Jessop, 2013, p. 204).

3.6.2 Production and Consumption Networks

CPE can be extended to help theorize the regulation of production and consumption networks. Hudson (2008) has drawn on CPE to help show how GPNs combine the material, economic and semiotic. However, we can further draw on CPE to help analyze how production and consumption networks are shaped by diverse economic and societal projects. Dilemmas and contradictions may be specific to particular networks (such as water as a flow resource, basic

need and public interest concern) and give rise to network specific imaginaries and regulation. Networks may be viewed as ‘dispositives’ which Sum and Jessop define as “ a problem-oriented, strategically selective ensemble or assemblage of (1) a distributed apparatus, comprising institutions, organizations and networks; (2) an order of discourse, with corresponding thematizations and objectivations; (3) diverse devices and technologies involved in producing power/knowledge; and (4) subject positions and subjectivation” (Sum and Jessop, 2013, p. 208, using the ‘actor-network’ concept of networks). As I define network dispositives it refers to the total configuration of the network. As such regulatory institutions (such as laws and social norms) participate in shaping the dispositive. Particular configurations of production and consumption networks represent “modes of material provisioning” (p. 265) or ‘modes of ordering’ (p. 350) which can be differentiated from other possible modes (for affinities between CPE and ANT see Sum and Jessop, 2013, p. 217). A central question in production and consumption networks is that of *who* decides on modes of ordering and this varies, with the relative roles of states, firms, consumers, and civil society actors changing under different forms of regulation and rationalities.

Modes of ordering for production and consumption networks need not reflect, but can respond to and seek alternative trajectories from, neoliberalized background contexts. Mobile policies that shape networks can represent the application of broad societal projects (such as neoliberalism or sustainability) or be tailored to specific networks (such as specific paradigms for building renewable energy such as through large distant central station renewables, or alternatively the urban distributed energy favoured by grassroots groups). Like Levy’s neo-Gramscian account of GPNs, CPE points to processes of negotiation and regulatory compromise. However, it points to seeing such outcomes as polyvocal. Analysis must consider not only the interest of capitalist firms or how an economically determined state deflect civil society protest, but must include the ways civil society and public interest values shift and lead to the rephrasing of institutional regimes. An evolutionary account can trace the way current systems of market architectures favour incumbent network configurations as socio-technical complexes (what Hughes (1983) refers to as ‘momentum’), but possibilities may still exist for alternative

configurations to emerge in times of crisis, or for incumbents to selectively adapt and absorb opposition.

Networks can thus be remade by broad ideological projects such as neoliberalism, or be terrains for localized resistance to neoliberalism. Jessop argues that neoliberalism is not totalizing and has led to many forms of localizing resistance and adaptation (Jessop, 2002b). National, regional and city governments have responded to neoliberalism by creating localized variations as well as ‘neo’ prefixed forms of corporatism, statism and communitarianism that are adapted to neoliberalized contexts (see also Jessop 2002a, p. 259-264). They also get hybridized-- “elements of these different strategies for effecting the transition to a globalizing, knowledge-based economy are typically combined in specific cases” (Jessop, 2002a, p. p. 264). The same features can play out on production and consumption networks, and they can also take ‘eco’-prefixed forms. Above (at 3.2) we noted diverse regulatory paradigms for commodities/networks such as eco-communitarianism in forestry (McCarthy, 2005) and neo-statism in urban sustainability policy (Raco, 2005) and researchers have noted the degree to which these create ‘hybrid neoliberalism’ as they work within and merge with broader neoliberalized contexts. The degree to which transformations in a particular network take on these forms requires close empirical investigation. However, as Jessop’s discussion of modes of coordination relates, the last thirty years has seen considerable and ideologically motivated rejection of state command or hierarchy, and as a result a series of experiments with markets, heterarchy and metagovernance. Precisely because neoliberalism is both dominant and unstable it leads to many forms of hybridization and variegation. As noted above, we might identify a separate class of green neoliberal offshoots where appeal to markets is combined with explicit claims to seek environmental improvement. Projects shift network dispositives and in so doing shift the relative roles (and so remakes) firms, civil society, the state, consumers and nature. For brevity I restrict the discussion to considering how CPE might consider the shifting role of states and consumers in networks.

3.6.3 Networks and States

The SRA suggests further investigation into the questions that Pashukanis raised concerning the complex relationship between commodities/networks and the state. The state has many tasks, but one of them is managing networks. Recognizing the dangers of environmental determinism we might reference the “Wittfogelian state” of network management (for a critique of Karl Wittfogel’s environmental determinism see Worster, 1985, p. 22-30; Robbins, 2011, p. 56). It provides enabling conditions through the nightwatchman state of property and contract protection and enforcement and engages in public interest regulation that either incidentally shapes networks (such as health, safety, environmental or employment standards) or directly regulates networks such as water, electricity, telecommunications, airplanes or urban public transit. Jessop’s state theory suggests analyzing how the state is transformed as it takes on network management roles and how state transformation in turn changes production and consumption networks.

CPE is neo-Gramscian and works with a concept of *lo stato integrale* (or the ‘integral state’) which includes both the formal legally constituted state and the broader civil society. Sum and Jessop’s use of *lo stato integrale* underlines how the state is still involved as the regulation of networks shifts to heterarchic, governance type modes of regulation. If the state is understood as the condensation of the balance of social forces and a locus for the realization of the public interest, these functions can be transferred and reassembled onto other authorities. Just as the state is not separate from wider social forces, neither does “the corporate capture of regulatory function” (Eden and Bear, 2010, p. 85) entirely separate such regulation from politicization. As such, governance arrangements represent “an ill-defined political sphere in which ‘stakeholders’ or ‘social partners’ engage in political deliberation and negotiation about societal steering in areas of mutual interest” (Jessop, 2013b, p. 8).

The Wittfogelian network management state may operate in the integral sense. As the case studies explore, coordinating authorities (such as firms or industry-NGO alliances) take on,

regardless of their ability, state-like roles of balancing capitalist crisis tendencies and political mobilization. The state may still intervene if need be, and broad societal functions of upholding the public interest may also be channelized through, and redefined by consumers, firms, and civil society organizations as an alternative to the juridico-legal state. The actions of firms, consumers and civil society are not stateless, but grounded in the backgrounds of these institutions and people. In federal states, the integral state may operate as new issues are problematized and politicized which do not fit easily into existing orders of government but for which there are still calls for someone to take responsibility. The integral Wittfogelian network management state may also extend extraterritorially . Territorial states do in fact routinely act extra-territorially to shape networks. They operate in the background to provide laws and policies to enable corporations and global production networks, and sign trade agreements that facilitate the global economy. Some juridical legal states, such as the United States of America, contain explicitly extra-territorial laws that shape networks, such as rules about importing products that harm endangered species. Further. civil society and consumer concern (amongst others) follows networks and their concern thus extends outward from pre-ordained spatial containment. Networks cross cut scales and frustrate territorial based law and policy. The result is not that they thereby become depoliticized, but rather that politics becomes multi-spatial, resulting in tangled, overlapping and conflicting realms of power.

3.6.4 Networks and Consumers

Viewing networks as dispositives suggests a new angle on issues raised by governmentality approaches to consumer subjectivization. CPE accepts ideas of governmentality and subjectivization -- indeed part of Sum and Jessop's definition of dispositives includes reference to subject formation ((Sum and Jessop, 2013, p. 208). However, Sum and Jessop also suggest dispositives should be studied not only in terms of how they operate but "in terms of how they are assembled, selected, and consolidated in response to specific 'problematizations' in specific structural contexts" (p.208). This leads to analysis of how dispositives are also objects of negotiation, compromise and *hegemony*, which Sum and Jessop define as "modalities of securing domination through social practices oriented to the winning of

overt or tacit consent” (Sum and Jessop, 2013, p. 201). Consumers are active participants in networks and they play a role in shaping network dispositives. Consumers are neither simple dupes nor unbridled architects of networks. Rather, there are complex, shifting relationships of power in networks (such as between consumers and managers in firms and advertising agencies they hire). Consumers may resist efforts at subjectivization and seek to transform consumption practices and firms (and states) may offer forms of response and accommodation to such efforts.

Thus, CPE suggests an approach that differs from much discussion of political consumerism. Some accounts claim that an old binary of ‘citizen’ and ‘consumer’ is being broken down and that consumption is taking on political aspects that replace older models of politics through new forms of individualized action (Micheletti, 2003). However such an approach is at odds with theories of governmentality. These situate such shifts as part of a broad individualization process in advanced liberalism and its rationalities of rule (Rose, 1999, Barnett et. al. 2010). For CPE, acts of exchange, like other economic processes, are also political. Just as consumers may have mixed motives (concern with their basic needs, selfish desires or contributing to a collective project) consumption includes a political element. The politicization of consumption is not stable, but shifts depending on what is problematized. As Sum and Jessop explain, “ analyses of objectivation, problematizations, sites of intervention and modes of governance cannot be disentangled from the processes and practices involved in the rebuilding of social relations in response to ‘*urgences*’, such as lost competitiveness, a financial crisis or an epidemic. (Sum and Jessop, 2013, p. 212). Even if contemporary states feature adequate product safety standards, environmental concern may grow for the very reason that states continue to have weak laws. Consumption is a key site of problematization because it has been central to Fordist-Keynesian attempts to maintain economic growth and social stability, because a high material throughput consumer society contributes to environmental degradation and crisis, and because it cuts directly to consumer practices and subjectivity.

Consumers can operate as a political force in the *stato integrale*, working with civil society organizations to pressure the juridical legal state to seek environmental regulation (and more benign ways of providing basic needs). Activism of this nature can be directed at the juridical legal state (such as through campaigns for new environmental laws that change

networks) they can also be directed at firms and their products through direct publicity campaigns, boycotts, and 'buycotts', e.g direct support for ethically or environmentally preferable products. There is no reason to assume an 'either/or' choice need be made whether to target firms (through shopping or direct campaigning) or the state. The former may be an effective first step in consciousness raising over how societal level ecological transformation necessarily also includes transforming production and consumption networks and daily consumption practices. However, the success of such action also depends on the shifting contours of the state. Consumers' political concerns may be taken up by a strong state that secures public interest regulation or, alternatively, it may be delegated back to consumers to seek more conscientious choices in the market place. While much of the effect of neoliberalism in the 1980s and 1990s was to create a focus on individualized choice there still remains many voices calling for alternative models for changing consumption practices.

Consumers also operate as a political force within networks. The choice to buy some goods rather than others, take up an oppositional stance (such as rejecting the way brand names have seeped into their identity), engage in active complaints to management or take on legal proceedings need not be seen as only being done in 'self interest' but also includes a component of political action directed at reshaping network dispositives in the public interest. Consumer participation is a way of realizing shifts without engaging the traditional state. The stabilization of production networks includes recognition of the political force of consumers. Politicized consumers are an important part of the broader *stato integrale* but also part of a politicized community that exists *within* networks. On this account, the rise in the last two decades of certification systems and other sustainable commodities is not a unique example of consumption politics but one form that it can take. New rationalities have emerged for structuring relationships in networks between consumers, producers, the state, civil society and nature. The exercise of that rationality is not administered solely by the state but also operates through strategic action of diverse network participants (e.g. civil society, consumers, firms). The Keynesian-Fordist system included the widespread penetration through the economy of norms of mass consumption and widespread freedom of choice and was buoyed by an interventionist state and an extensive, exploitive relationship to the natural world. Alternatively, sustainable commodities involve an

architectonic transformation whereby consumers and civil society also participate in adjudicating and balancing tensions between use value, exchange value, the economic and extra-economic in a simultaneously political and economic process. Part of what is new in this equation is that many consumers have internalized post-Fordist ethical consumption norms and degrees of environmental awareness that help drive, but do not determinatively shape green goods.

So far this account is much in line with the work of Clive Barnett and co-authors who argue, based on extensive field work with fair trade consumers and advocates in the United Kingdom, that consumer action is not best understood as ‘choice’ because that is to already adopt an individualizing framework. Rather, consumers are engaged in practices that perform the economy, and fair trade provides for alternative economic imaginaries and the exercise of “political responsibility” (Barnett et. al., 2010). However, CPE suggests going beyond an emphasis on whether consumers engage in political responsibility to consider the effects of such action on outcomes for network dispositives. CPE suggests that production and consumption networks are sites of negotiation involving many different participants and in which ideals of the public interest serve to navigate conflicts between the drive for profit-oriented market-mediated accumulation and extra-economic use values. As suggested by the earlier discussion of incomplete commodification (at 2.6) those outcomes may selectively incorporate greater consumer awareness and only selectively and weakly include ecological and human use values. The result is considerable struggle as firms look for creative ways to win the battle for hearts and minds, readjust regulation to fit emergent societal pressures, and, if possible appropriate such efforts to create new niche markets. Sustainable commodities foreground the ways networks are collective projects that involve degrees of collective deliberation over the nature of consumption. For that very reason it is incumbent on us to interrogate the workings of such systems and the values they actually do (rather than say they do) embody.

In summary, CPE suggests the continued applicability of neo-Gramscian approaches, and highlights the ways the roles of the state, civil society and other elements can be transformed under different configurations. Dominant forces (such as firms) can work to stabilize and maintain networks, while effectively sidelining, absorbing and deflecting societal pressure.

However, CPE suggests that this is done through the inscription of strategic projects and imaginaries, and in the name of the public interest. This directs attention at the ways network regulation is not only shaped by firms or the state but can include the agency of civil society actors and consumers. It also points to the complex processes of legitimacy creation and buy in network regulation partially does address societal concerns.

3.7 Conclusion

While commodities/networks are subject to diverse types of regulation there is a need to provide theories of regulation that extend beyond traditional state regulation and to avoid the twin pitfalls of economic determinism and the naive optimism of public interest theories. While geographers have been drawn to the Regulation Approach it suffers a residual economism and works with an abstract concept of regulation too far removed from the daily realities of state and non-state institutions and organizations that operate to shape commodities/networks (3.2). Governance approaches recognize a variety of new forms of regulation and at times closely track new policies but they fail to offer *critical* perspectives that can show how such approaches can lead to failure, differ from widely held ideals of the public interest or be driven by capitalist processes (3.3). Governmentality approaches are more helpful, explaining how broad rationalities of rule can create shifts in regulation as well as operate on not only states but also directly on civil society, consumers and firms. Such approaches however need to be supplemented with explanatory theories that relate to state power, popular mobilization and political economy explanation (3.4). Neo-Gramscian approaches help show the shifting roles of the state and the possibility for network regulation to adapt to civil society pressure. However some accounts still work with an overarching and inflexible idea of neoliberalism, and through focusing on capitalist hegemony under-emphasize the agency of civil society and consumers (3.5). Sum and Jessop's Cultural Political Economy creates a more flexible, nuanced and context specific account that can explain the emergence of non-state political authority in networks and the politicization of consumption.

Thinking of production networks as regulated through the interactions and negotiated consent of many different actors acting in localized places suggests the possibilities for a

nuanced, and open ended approach which can track ongoing transformations in environmental thought, policy and practice. It captures how the agency of diverse actors such as civil society and consumers can involve struggles to redefine their practices and roles, embody but also change rationalities and be both subject to and participate in network regulation. As the conclusion discusses it invites an analysis of regulatory compromise in networks as examples of spatio-temporal and institutional fix: Rationalities, capitalist reproduction, and societal public interest concerns can coalesce and stabilize even for only a relatively short period. The following case studies explore the emergence of, and conflicts over, network regulation and the role of sustainability as a paradigm for shaping production and consumption networks.

4. Dolphin-Safe Tuna from California to Thailand: Localisms in Environmental Certification of Global Commodity Networks

4.1 Introduction

The ‘dolphin-safe tuna’ labeling scheme that emerged in the early 1990s in the United States and globally stands as an important part of one of the most successful consumer-driven global environmental campaigns ever launched. Largely led by the International Marine Mammal Project (IMMP) working under the umbrella organization Earth Island Institute (EII), proponents of the labeling scheme helped foment public concern for dolphins being killed as by-catch. The labeling scheme combined perceived consumer demand, product labels, United States' government labeling laws and United Nations resolutions with strong media-based negative advocacy. The campaign highlighted links between world trade and environmental issues, the pitfalls of commodity regulation in the existing international legal order, and brought consumer concern with the processes behind products to the forefront of environmental activism (Fahn, 2003). It stands as one of the first widely successful (and influential) attempts at market-based environmental regulation of an international commodity network. It resulted in a very large and significant decline in dolphin deaths and injuries associated with the purse seiner harvesting of yellow fin tuna in the Eastern Tropical Pacific (ETP) (IMMP 2008). It also significantly contributed to the reduction of large-scale drift-netting in the Western Pacific and Indian Oceans to catch tuna, especially albacore, for canning.

In late 1990, one of the authors of this article—Ian Baird—was a Caucasian university student from Victoria, Canada, having recently returned from living in Thailand.¹ After purchasing a Thai-language magazine (he was fluent in Thai), he read an article that accused EII of being a puppet of the American tuna industry, and depicted the dolphin-safe tuna campaign in the crude framing of U.S. protectionism in the disguise of environmental protection. Ian Baird wrote to EII, informing them of how they were being represented by the Thai media, and volunteered to write a letter to the Thai press. EII's response came as a surprise: They asked him if he would join the non-government organization (NGO) to help organize a certification

¹ The style reflecting more than one author is retained from the published article as is the citation order

program in Thailand. Given the passage of time (19 years), Ian Baird's transition from NGO worker to academic geographer (with the development of critical distance and awareness that involves), and the inclusion of a second author, we think his experiences in Thailand and with EII now form the basis for an interesting analysis of the dolphin-safe tuna certification network.

While much has been written about dolphin-safe tuna, most of the literature has focused on the environmental movements' campaigns in the United States against catching tuna by encircling dolphins in the ETP with purse seiner nets (Cullet and Kameri-Mbote, 1996; Bonanno and Constance, 1996; Joseph, 1994), and national and global legal and trade disputes associated with attempts by actors within the United States to impose requirements that imported tuna be dolphin-safe (Brown, 2005; Teisl, Roe, and Hicks, 2002; Headley, 2001; Joyner and Tyler, 2000; DeSombre, 2000; Wright, 2000; Korber, 1998). Little attention has been paid to the role of NGOs in the market based labeling scheme in the early 1990s. The development of 'dolphin-safe tuna' featured a dynamic history that created new social movements and international networks, both reflecting and reproducing international power dynamics and conceptual divisions between North and South. Key to this process was the ways in which the California-based EII came to dominate three central processes around dolphin-safe tuna: What counted as 'dolphin-safe' (codification or certification standards), who would decide those standards (certification institutions), and the processes whereby it would be verified that caught fish were dolphin-safe (certification processes). As this article explores, EII needed and then developed a Thai-based certification group to ensure its regulation of the tuna commodity network as 'dolphin-safe'. However, that organization came to contest EII's definition of dolphin-safe as entirely excluding gillnet-caught fish, and in doing so revealed wide conceptual and political differences of values and a democratic deficit within EII's dolphin-safe campaign and its labeling campaign.

In this article we examine the internal workings of Earth Island Institute and the formation of its dolphin safe tuna regulatory scheme. We draw on Ian Baird's direct experiences with EII and IMMP as the first coordinator of its dolphin-safe tuna monitoring program in Thailand and globally, between February 1991 and September 1993. We seek to unveil the workings of EII in defining, mediating, shaping and ultimately codifying what came to count as 'dolphin-safe' in the

United States and then globally, and the interactions between EII and local NGOs in Thailand. While there is a considerable literature analyzing competition between labels (such as between NGO originating and industry originating wood certification systems) (Tollefson et. al., 2008; Sasser et al. 2006; Gale, 2002), and conflicts between logics of the market and of alternative fair trade or certified goods (Taylor, 2005; Goodman and Goodman, 2001), there has been less specific focus on the political negotiations, struggles or ominous silences within particular standards and their associated labels (Ponte, 2007).

Our analysis of the emergence of the dolphin-safe label also casts a new light on emergent ways in which space and scale operate in networks, and the ways in which space and scale work with the conventions that guide these networks. Here we draw on the global production networks (GPN) approach to analyze the “nexus of interconnected functions, operations and transactions through which a specific product or service is produced, distributed and consumed” (Coe et. al., 2008, p. 272) and to highlight the flows of knowledge, systems of regulation, and the materiality of social and ecological relations embodied in networks. We are attracted to the GPN approach due to its ability to consider wider regulatory frameworks—state, private and non-governmental—in which commodity networks are embedded (Coe, et. al., 2008; Nadvi, 2008) and the potential role of consumers in driving environmental, social justice and ethical modes of ordering in some networks (Hughes et. al., 2008). Analyzing the dolphin-safe commodity network helps show the complex intertwining of environmental discourses (in this case of marine mammal protection), non-governmental and private regulatory orderings (through EII and the adoption of its standards by private industry), and the role of scale in shaping certification standards, institutions and processes in global production networks. Once EII branched into Thailand, and an affiliated NGO was created, the framing of the certification standards for 'dolphin-safe' became disputed and differences developed between the Thai and United States branches of the organization. The United States head office insisted on a single universal standard—tuna caught without the use of driftnets or gillnets of any size—which aimed to match the global scale of the tuna commodity network. EII imagined the network in ways that eviscerated Thai participation in the regulatory scheme and ignored small-scale fishers caught in the universal standards' net.

In what follows we first provide a discussion of theories of certification and conventions in networks, and show the relevance of scale to the study of regulatory networks. We then provide a case history and analysis of EII and IMMP's formation of the dolphin-safe network.

4.2 Regulatory Networks and the Logics and Scales of Certification

The EII dolphin-safe tuna labeling scheme now ranks as one of many attempted, implemented and or ongoing labeling systems—“regulatory networks” (Vandergeest, 2007, p. 1153)—governing internationally traded commodities. Notable examples include the Kimberley Process certification system for diamonds (Le Billon, 2006; Smilie, 2005), Forest Stewardship Council certified wood (Tollefson et. al., 2008; Sasser et al., 2006; Klooster, 2006), fair trade coffee (Taylor, 2005; Mutersbaugh, 2004; Raynolds, 2002), organic labeled foods (Raynolds, 2004; Goodman and Goodman 2001), and a wide range of consumer products unevenly governed by ethical codes, codes of conduct or ethical trading initiatives (Freidberg, 2007; Hughes 2004). Generally these systems create new hybrid trans-national public-private regulatory systems for commodities by specifying criteria for production methods. They vary widely based on whether individual firms, industry associations, non-governmental organizations or international organizations design, lead or operate these regulatory systems, and the degrees to which they reflect different values and thereby transform market activity (Gereffi, Garcia-Johnson, and Sasser 2001).

The global production networks approach emphasizes the “complex circuitry with a multiplicity of linkages and feedback loops” (Coe et. al., 2008, p. 272) and so is particularly useful for characterizing the complex interactions of consumer awareness, knowledge, certification systems and production processes typical of regulatory networks. The GPN approach seeks to combine diverse methodological and theoretical approaches such as global commodity chains (GCCs), global value chains (GCVs), and commodity networks (Bair, 2008; Hughes, Wrigley, and Buttle, 2008; Sturgeon, Van Biesebroeck, and Gereffi, 2008; Hughes, 2004; Bair, 2005; Ponte and Gibbon, 2005; Reikes, Jensen, and Ponte, 2000). Such an analysis is not meant to displace traditional commodity chain orientations that consider how power and profits function in networks, but instead to “contribute to a productive tension” (Mutersbaugh

2005b, p. 2034) which hybridizes different approaches to understanding production and commodity networks. In our view, a GPN approach to regulatory networks can be strengthened from three approaches that have so far been underutilized in geographers' treatment of such networks—conventions theory, institutional analysis from politics and law, and the analysis of scalar issues within networks.

Certification standards are central to how many networks are put together, including what values, politics, and power relations are at play (Klooster, 2006; Ponte and Gibbon, 2005; Renard, 2005). Conventions theory allows for an examination of these processes, including the “practices, routines, agreements, and their associated informal and institutional forms which bind acts together through mutual expectations” (Murdoch, Marsden, and Banks, 2000, p. 709). Conventions are “dynamic representations of negotiation” (Wilkinson, 1997, p. 318) which come to determine the content and form of the production and circulation of commodities. Commodity (or production) networks are linguistically constituted 'modes of ordering' which become institutionalized through certification standards. Conventions theory points to the requirements for collective action and frames in coordinating networks as business organizations. NGOs and other actors work together to forge 'quality' aspects of products which match the shifting or constructed ethical or aesthetic concerns of consumers (Klooster, 2006, p. 545). In turn consumers and other network participants become “enrolled” in networks and take on novel imaginaries (Callon et. al., 2002, p. 202). Conventions theory points to a focus on the discourse and practices which unite consumers, producers and others in participating in the commodity network; and the ways in which certification labels play a coordinating role. Alternative or ethically structured commodity networks show ways in which networks may engage different forms of actors' enrollment: They employ 'civic' conventions (the worth of certain goods in terms of their general societal benefits) and 'environmental' conventions, but must also negotiate various 'market' conventions, such as 'commercial' conventions of price and quality or 'industrial' conventions of efficiency and reliability.

Environmental and social justice laden production networks face a series of trade offs in balancing competing conventions. Simple product bans at times ignore effects on local

economies (c.f. the international ban on ivory trade, Bulte, Damania, and van Kooten, 2007; Stiles, 2004). At the other extreme, complex standards such as for fair trade coffee have at times raised the cost of certification and created barriers to entry for some southern producers (Mutersbaugh, 2005b). Alternative trade goods also involve complex imaginaries including the construction of spaces, places and biophysical environments that “inhabit and move along commodity networks” (Bryant and Goodman, 2004, p. 349; see also Cook et. al., 2004). Environmental conventions can come to dominate the field of civic conventions, with nature reserves (Neumann, 2004) or ecotourism destinations (Meletis and Campbell, 2007; Waitt and Cook, 2007) being figuratively rendered as uninhabited by people, or sites of production behind tropical produce being seen as containing exotic indigenous producers who live in harmony with their surroundings and serve as the “ecological Other” (Cook et. al., 2004; Bryant and Goodman, 2004).

Regulatory networks are also institutions with formalized norms and standards that coordinate network actors. They involve decision-making bodies with their own procedures for choosing the standards, agencies that promote the label and consumer demand, and professionalized bureaucracies that may certify whether producers and distributors fulfill the norms (Renard, 2005). Certification standards may work as a mode of regulation to shift, balance or re-assert power in commodity networks (Renard, 2005), redistribute power and monetary benefits from participation by producers (Klooster, 2006; Taylor, 2005), or partially reconfirm rather than question conventional market logics and practices (Taylor, 2005; Goodman and Goodman, 2001). In some cases standards have been quickly implemented and not debated, or politics has been obscured through 'rendering technical' (Li 2007; Ferguson 1990). As Tollefson et. al., note concerning Forest Stewardship Council (FSC) wood, “The interests embraced in this approach do not differ greatly from those present in most nationally based polities and include forest owners and managers, workers, communities, indigenous peoples, environmentalists and the range of downstream businesses that constitute the forest products chain including saw millers, chippers, wholesalers, retailers, and consumers” (Tollefson et. al., 2008, p. 251-2). Certification systems can thus be read in terms of: The identities of the parties and interests participating in such arrangements (the political dimension); the instruments deployed, and the

values (and conventions) sought to be advanced under such arrangements (the regulatory dimension); and the architecture within which such arrangements are housed (the institutional dimension). This last point considers formal decision-making arrangements (Tollefson et. al., 2008, p.341). The wide divergence between systems such as business led apparel certification or fair trade coffee are in large part a function of differences along each of these dimensions. For instance, business-led certification schemes (such as the industry led Sustainable Forestry Initiative) reflect at times an attempt to maintain control over the institutional dimension and so directly compete with NGO systems (such as FSC wood) (Sasser et. al., 2006).

Commodity networks and their governance also bring to light new “scales” such as the local, national, or global. It is now commonplace in geography to note how commodity networks can disrupt traditional ideas of territorial containers as geography “is being restructured into network spaces” (Sheppard 2002, p. 308; see also Bulkeley, 2005; Massey, 2004; Swyngedouw, 2004b; Amin, 2002; Dicken et. al., 2001). Some geographers have critiqued the use of scalar concepts such as ‘local’ or ‘national’ as foreclosing on more out of the box geographic thinking, and so now feel scale is no longer a relevant concept (Marston, Jones, and Woodward, 2005). However, we continue to find ‘scale’ a useful heuristic tool (also see Collinge, 2006; Hoefle, 2006; Jonas, 2006; Escobar, 2007; Leitner and Miller, 2007). Given that scales such as local or global “must be brought into being, pursued, practiced and evaded” (Tsing, 2005, p. 58), networks help to construct scales (Dicken et. al., 2001; Swyngedouw, 2004b; Bulkeley, 2005; Coe et. al., 2008). Also, networks may be subject to a politics of scale. They may differ dramatically in virtue of their size, reach and scope and also depending on whether they act between similar territories or across very different cultural contexts. As our case study will show, we find that within the “new spatiality” of network typologies (Sheppard, 2002, p. 317) each of the main dimensions of network governance—political, institutional and regulatory—will be both affected by and also affect scale.

Because networks are always grounded in particular places—as examples of “glocalization” (Swyngedouw 2004b)—the political dimension of networks may involve conflicts between the interests and identities of actors in different localities. Network managers

may construe as universalizable and legitimate what are in fact interests rooted in their local concerns and perspective. Alternatively, advocates for the 'local' may seek to privilege that scale, arguing that it ensures the integrity, functioning and effectiveness of the network through links to the grassroots, or because it better preserves concerns for democratic control and social and environmental issues (Vandergeest, 2007).

Likewise, in analyzing instruments and values such as certification standards, their ability to allow the network to go 'global' may be paramount: Standards based on universals (such as (re)defining what a 'drift gillnet' is and then stating that none are allowed) allow for the expansive reach of 'global action' while simultaneously obscuring the complexity and differences in networks. Universals become linked to the 'global', and the 'local' identified with a series of exceptions or differences, which are deemed too specific, complexifying, or too unimportant to be worth taking into account.

The institutional architecture of commodity networks may involve the unfair domination and exclusive decision-making authority by persons from one locality. Actors may reproduce the older spatialities of nested hierarchies: Environmental NGOs may identify (and re-enact) the head office (in San Francisco) with global policy and subsidiaries (in Bangkok) with local issues, increasing the effectiveness of lobbying central governments and marginalizing regional issues (Moog Rodrigues, 2004). Alternatively, regulatory institutions for networks may respond by creating regional and local variations. This repositions local to local relationships in the network, but in doing so may 'scale up' the complexities of the technical standards and institutional bureaucracy, heightening the complexity, expense and potential inaccessibility of the governance systems for some actors (concerning FSC wood see Tollefson et. al., 2008; Klooster, 2006).

As the case study below illustrates, conventions, institutional arrangements and scalar aspects of networks came to each be contentious and also intertwined in the Earth Island dolphin-safe tuna regulatory network.

4.3 Unicord, Bumble Bee and Beginnings of Dolphin Safe

In the early 1990s the international canned tuna commodity network had an extensive international scope, with established geographical divisions of production, labor and consumption. Industrial fishing boats harkened from many different countries, fishing not only in the ETP, but also in the Western Pacific and Indian Oceans and elsewhere.² Thailand had emerged as the number one tuna canning nation (with 25 different companies),³ while the main market for canned tuna remained in the USA, with other significant markets in the United Kingdom, Italy, Germany and France, as well as Canada and a number of other countries, including the Middle East.

In August 1989, the Uni Group, a U.S. affiliate of Unicord Public Company Limited of Thailand,⁴ the largest tuna canner in the world at the time (Nandi and Shahidullah, 1998), purchased Bumble Bee Seafoods, one of the top three American canned tuna companies, for US \$269 million (largely bank-rolled by Thai banks). The transaction marked the largest Thai purchase of an American corporation ever (Bumble Bee, 2008), and it was thus big news in Thailand (Woolman, 1992), even to the point of becoming an important source of nationalist pride, symbolizing increasing Thai economic power internationally.⁵ Unicord could combine low wages with economies of scale. They were canning about 500 metric tons of tuna a day in their Samut Prakan factory outside of Bangkok in 1991, and employed over 7,000 people. Unicord

² The main tuna fishing countries are Japan, Taiwan PC, Spain, Indonesia, Philippines, South Korea, France and others (pers. comm., David James and Helga Josupeit, FAO 2008).

³ In 1991, 272,800 tons, or 23%, of the estimated global production of 1,191,891 tons of canned tuna, was processed in Thailand. More tuna was being canned there than in any other country in the world (pers. comm., David James and Helga Josupeit, FAO 2008). Almost all of this canned tuna was being exported, as there was a negligible market for canned tuna in Thailand.

⁴ Unicord was led by its Thai Chinese President, Damri Kornanthakia, who would later, after Unicord ran into serious financial problems unrelated to the dolphin-safe issue, shoot and killed himself in Bangkok office on June 13, 1995. The banks that lent him the money to buy Bumble Bee Seafoods were calling in their loans, but Unicord was not in a position to meet their demands.

⁵ In 1996, Questor Management Company and the parent company of Star-Kist Foods, H.J. Heinz, announced a deal to acquire Bumble Bee from Unicord for \$200 million. In addition, Questor signed a letter of intent that Unicord would continue to supply Bumble Bee with tuna and salmon for packing. However, the deal fell through in December 1996 (Bumble Bee 2008). Unicord was forced to sell Bumble Bee as its income was not even enough to pay the interest on the money Unicord borrowed to buy the company (Quick Frozen Foods International, 1995).

bought Bumble Bee because they were anxious for a secure distribution channel for selling canned tuna in the US.⁶ Unicord's Chairman, Kamchorn Sathirakul, said, at the time, "Now Unicord can be assured of a distribution network in the United States, while Bumble Bee is sure of its supply. Now we've become a truly integrated, global business" (Nandi and Shahidullah, 1998, p. 118).

In the 1970s there were hundreds of thousands of dolphin deaths associated with purse seining for yellow fin tuna by American boats working in the ETP (Inter-American Tropical Tuna Commission 1984), and considerable concern by the American environmental movement. The Marine Mammal Protection Act (1972) (MMPA) prohibited the harassing, catching and killing of marine mammals by U.S. citizens or within the jurisdiction of the United States, but had exemptions for dolphin deaths from fishers in the ETP. However, by the early 1980s amendments to the MMPA required dolphin-safe technology and on board observers. This resulted in the number of dolphin deaths associated with tuna fishing in the ETP declining from 252,000 in 1973 to 8,258 in 1984, below the 20,500 deaths allowed by quota in the MMPA (Korber, 1998).

By the 1980s the issue had become more complex and international than envisioned in the original debates around the MMPA. The purse seiner fishing fleet in the ETP included fewer American boats, and more vessels from various Latin American countries which were setting seine nets around schools of dolphins to catch tuna for the USA market. In addition, the region of attention of the dolphin-safe campaigns extended to include new areas. Environmental groups began sounding the alarm about the use of high seas 'driftnets' (essentially long gillnets)—often 50 km or longer and termed 'walls of death' by their critics—to catch skipjack, yellow fin, and especially albacore tuna, particularly in the Western Pacific and Indian Oceans. The threat to dolphins from the tuna industry expanded, since dolphins were being caught as by-catch. EII became involved in the global fight against driftnetting, committed to promoting an international ban on large drift or gillnets. Purse seining for yellow fin and skipjack tuna for canning is also

⁶ In the past Unicord had only sold to companies with their own labels. They did not control any important tuna labels outside of Thailand, where the canned tuna market is very small, because tuna is not a popular fish in Thailand.

common in these regions, but for unknown reasons it is only in the ETP that large yellow fin tuna are known to school with dolphins.

These changes resulted in the (re)scaling of the meaning of `dolphin-safe`, with the concept going from being particularly associated to American purse seining in the ETP to becoming applied to more than one fishing method and covering more than one fishing region of the world. As a result of the complex interconnections between different networks and scales, EII's focus of attention became re-scaled. It was first a national-based strategy focused on the USA, and then grew to a regional scale involving the USA and other countries operating in the ETP. By the later 1980s it had become involved in a global system that involved different fishing methods, geographic regions, and a host of countries at the level of fishing, while also combining the post-catch, marketing networks and places of consumption.

Even with some gains in monitoring and reducing dolphin deaths, American public interest in the issue remained low, and campaigners only achieved limited progress in stopping commercial size purse seiners from setting their nets on schools of dolphins. In 1988 there was a breakthrough when Sam La Budde, an American environmental activist and biologist working for EII, posed as a crewmember on a large Panamanian-flagged tuna seiner. His video footage of dolphins drowning in tuna seine nets in the ETP was quickly released by EII. "The graphic images shown on television news programs shocked viewers" (Meier, 1990). EII was also collaborating closely with the radical direct action environmental NGO, Earth First!, which organized various high-profile banner hangings and other actions together with EII.

With both the ETP purse seiner and the Western Pacific and Indian Oceans driftnet campaigns gaining momentum, EII and other environmental groups were able to generate widespread negative publicity against the tuna industry. EII was especially effective in the United States, with a majority of consumers showing awareness of the links between tuna and dolphin deaths (Wright, 2000). The United States was also the largest market for canned tuna globally, consuming over 32 percent of global canned tuna production. This affected Thailand, which was exporting twice as much canned tuna to the USA than any other country (pers. comm., David James and Helga Josupeit, FAO, Internet, 2008).

In 1988 amendments to the MMPA were brought in prohibiting the importation into the United States of tuna caught in the ETP by non U.S. fishers that did not meet the same standards as required for the U.S. fleet (Korber, 1998, House Report No. 100-97, 1988). This amendment caused considerable international trade and environmental advocacy problems due to the implicit exertion of jurisdiction and trade power over other countries (Joyner and Tyler, 2001; Bonnano and Constance, 1996). However, EII was concerned that the amendments did not ensure that U.S. consumers were eating only dolphin-safe tuna. Further, there was still a lack of regulation in other tuna-consuming countries such as Canada, England and Germany. EII had shown U.S. federal enforcement could be unreliable, and tuna was also being fished from outside the ETP. EII's campaign thus continued with an emphasis on consumer choices. Its influence on the overall market for tuna forced the American—and later worldwide—tuna industry to take the issue seriously.

Recognizing both that sales were now at issue and that making a quick switch could benefit market share, H.J. Heinz, the largest tuna distributor in the USA took the lead (Korber, 1998). On 12 April 1990 it declared that its number one brand, 'Starkist tuna', would become dolphin-safe. However, H.J. Heinz's decision was made easier by the expectation that it could easily replace 'dolphin-unsafe tuna' with dolphin-safe tuna caught primarily in the Western Pacific and Indian Oceans without substantially increasing supply costs. Other brands immediately responded: Bumble Bee and Unicord followed suit the day after, as did Van Camp Food's 'Chicken of the Sea'. All three of the big U.S. tuna companies had suddenly committed to being dolphin-safe (Meier, 1990)⁷ with the result that a large majority of the U.S. tuna market was converted overnight (Murphy, 2004). In fact, the adoption of dolphin-safe did not significantly affect the global price of canned tuna (pers. comm., David James and Helga Josupeit, FAO, Internet 2008). In a very short time an effective (although at this point voluntary, loosely coordinated and unevenly applied) regulatory network had been instituted. The tuna commodity network was transformed to at least appear to be in accord with—and certainly appeal to—a specific standard of dolphin-safe defined by EII and its allies. EII successfully sued the U.S. Department of

⁷ The three companies controlled 71 percent of the U.S. tuna market in 1989—Starkist had 36 percent of the market share, Chicken of the Sea had 21 percent, and Bumble Bee had 14 percent (Murphy 2004).

Commerce in mid-1990 for not enforcing the MMPA with respect to imported tuna (Earth Island Institute v. Mosbacher, 1991; see also Earth Island Institute v. Brown, 1994). However, the main focus of EII was on developing the dolphin safe label. EII realized that ETP-sourced ‘dolphin-unsafe’ tuna was making its way to canneries in Asia, where it was then being imported into the U.S. for consumption.

The EII campaign for ‘dolphin-safe’ had significantly evolved. In the mid 1980s, before the ‘driftnet’ issue was identified as crucial, EII was advocating that consumers not buy yellow fin tuna as it was associated with purse seining in the ETP. EII at that time suggested consumers buy albacore tuna as it did not associate with dolphins. By the later 1980s international awareness was growing concerning the fishing of albacore. This fishery often used driftnets on the high seas beyond the control of individual countries and which created new threats to dolphins and other marine life. United Nations General Assembly Resolution 44/225 (1989) thus called for an international moratorium on “large-scale pelagic driftnet fishing on the high seas” (United Nations, 1989). EII had supported this resolution and in establishing its standards criteria for dolphin-safe tuna, expanded on the UN resolution. EII thus adopted a ‘no driftnets’ concept, claiming that any fish caught by ‘drift gillnets’ should not be considered to be dolphin-safe (Earth Island Institute, 2007).

For EII, defining all gillnets as harmful to dolphins helped simplify the system they were developing for defining what was dolphin-safe, and what was not. EII at this time had little technical familiarity with gillnet fishing methods, and staff were unaware of the wide variety of types of gillnets and the varied contexts in which they were used. Further, they wanted a message that was simple and easy to market to the American public, who also generally knew little about gillnets apart from what EII was telling them. The result was EII’s standards, which it agreed to with Heinz and has maintained since: ‘Dolphin-safe’ would mean: (1) No intentional chasing, netting or encirclement of dolphins during an entire tuna fishing trip; (2) No use of drift gill nets to catch tuna; (3) No accidental killing or serious injury to any dolphins during net sets; (4) No mixing of dolphin-safe and dolphin-deadly tuna in individual boat wells (for accidental kill of dolphins), or in processing or storage facilities; and (5) Each trip in the ETP by vessels 400 gross

tons and above must have an independent observer on board attesting to compliance with the standards (EII, 2009; Brown, 2005).

As part of this campaign EII also lobbied for a United States federal labeling law based on these standards. The result was the Dolphin Protection Consumer Information Act (DPCIA), which became law in the fall of 1990. It largely reflected EII's concerns, and gave particular protection to the private regulatory network against fraudulent use of the label, and specified standards for the use of the label. It thus provided standards for and financial penalties for the misuse of product labeling for any tuna sold or exported into the United States. Dolphin-safe was defined as tuna that was not fished with any kinds of 'driftnets' or with purse seiners that set their nets on or encircled dolphins. While EII maintained a strict 'no driftnets' policy, the DPCIA provided a more nuanced approach based on international legal negotiations. The United States had been involved in negotiations with North and South Pacific countries through the 1980s concerning driftnets, and the Driftnet Impact Monitoring, Assessment, and Control Act, 1987 was set up to allow U.S. officials to negotiate agreements with foreign governments concerning driftnets. It defined driftnets as one and a half miles long and made of plastic, and concerned the 'high seas'—beyond the exclusive economic zones of particular countries. It was thus silent on—and so did not include—near shore waters that would fall under other countries' domestic jurisdiction. By 1990 the United States' Driftnet Act Amendments implemented the U.N. moratorium and provided a ban (to take effect in 1991) on importing tuna caught with driftnets beyond the exclusive economic zone of any country. The DPCIA was thus coordinated with these efforts and took the definition of 'driftnet' from the Driftnet Impact Monitoring, Assessment, and Control Act. As a result, EII's working definition was much broader than the U.S. legal definition: EII's definition covered—but did not contemplate the effects on—gillnetters in coastal waters. Moreover, EII's direct relationship with the international tuna industry meant that U.S. law would play a secondary role to EII's emerging regulatory system.

4.4 The Beginnings of Dolphin-Safe Tuna Monitoring

For Bumble Bee and its parent Unicord, the dolphin-safe pledge, without further verification and certification, quickly became problematic—they were found to be buying yellow

fin tuna caught in the ETP by encircling dolphins. Unicord's competitors in Thailand tipped EII as to the fraud. Brenda Killian, the director of EII's dolphin-safe monitoring program, was able to verify this on a trip to Thailand in October 1990. Bumble Bee officials later acknowledged that they had indeed bought the dolphin-unsafe tuna, but a Bumble Bee representative from the U.S. blamed the problem on "language and cultural differences" in Thailand (Meier, 1990).

By December 1990 Earth Island was taking out full-page ads in the New York Times and Los Angeles Times specifically encouraging consumers not to buy Bumble Bee tuna. Bumble Bee fought back with defensive ads placed in the same newspapers (Meier, 1990). At the height of the war for public opinion, Brenda Killian debated a representative of Bumble Bee on the television talk show, Good Morning America (Bumble Bee, 2008). Earth Island's campaign capitalized on dolphins as prototypical 'charismatic mega-fauna', thus turning a complex issue into a simple message, and the U.S. public responded strongly. Children wrote in and donated money to EII and schools organized petitions. This was a campaign that had a great deal of grassroots support in North America, and parts of Europe, especially in Germany (GRD, 2006) and the United Kingdom (Brown, 2005). In the USA, Bumble Bee's market share and bottom-line began to suffer (Meier, 1990; Bonanno and Constance, 1996).

By the end of 1990 Bumble Bee contacted Earth Island with an olive branch in an effort to stop the bleeding from the negative publicity. EII's position as mediating between the tuna canning companies, distribution companies, and the American public was now recognized, reinforced and solidified by Unicord. EII and its ability to organize public opinion throughout tuna consuming countries became more of a concern to the industry than the US labeling law. EII proposed an intensive monitoring program in Thailand to ensure Bumble Bee tuna met its dolphin-safe standards. Because of Unicord's weak bargaining position, EII was able to negotiate control of the monitoring program. EII informed Unicord that it would only be willing to certify them as 'dolphin-safe' if Unicord agreed to fund a compliance monitor chosen by and answerable only to EII. EII had 24-hour access to all canning and fish port facilities, and access to all relevant documentation related to tuna purchases by Unicord such as ship log-book information (Woolman, 1992). This is where Ian Baird stepped in, having fortuitously contacted

EII just when they were searching for an English and Thai-speaking manager who they could trust for the monitoring program (see Figure 4.1).



Figure 4.1. Ian G. Baird inspecting for dolphin-safe tuna at the Uni- cord Cannery in Sumut Prakan, Thailand, 1992.

Ian Baird's initial monitoring framework was dictated by David Phillips and Brenda Killian at the IMMP, who worked out of EII's San Francisco office. Two separate classes of tuna were identified and treated differently in monitoring. For yellow fin tuna from the ETP there were already on-ship monitors and Ian Baird and his staff would check for U.S. approved Fisheries Certificate of Origin forms, confirming that dolphins had not been encircled during fishing operations. For other tuna, EII's monitoring staff could perform visual inspection: Identifying marks appear on the necks of gillnet caught fish that do not exist for purse seiner, longline, or

hook and line caught tuna. The simple monitoring process effectively imposed a ban on tuna caught by encircling dolphins in the ETP, and a universal ban on any tuna caught using gillnets or driftnets.

The monitoring process quickly expanded to all of Thailand's canneries. Once Thailand's largest tuna canner was being monitored by EII, the other 24 tuna canneries in Thailand quickly followed. The dolphin-safe movement was strong in North America and Europe and canners' certification would help access these markets. While EII threatened to ruin canners' reputations for violating dolphin-safe standards, EII's monitoring system would also bring legitimacy to their new labeling practices.

Despite the consumer and industry pressure, the Thai government urged the Thai tuna industry to not succumb to pressure from EII. In early 1990 EII proved that the Thai Fisheries Department had incorrectly claimed that no dolphin-unsafe tuna was being imported into Thailand for canning. In response, the Fisheries Department claimed EII's efforts amounted to an imposition on Thai sovereignty. Now less than a year later, the Fisheries Department stood to "lose face" if the Thai tuna industry as a whole capitulated to EII. The Fisheries Department reiterated the claim that the monitoring amounted to an American imposition on Thai domestic concerns. However, the Thai tuna companies realized that certification from EII was crucial for marketing their canned tuna. Within a year all the canneries in Thailand were certified dolphin-safe. See Figure 4. 2 for a schematic of the tuna production and market commodity chain, and the places where EII's campaign, legislation and UN resolutions impacted the commodity chain.

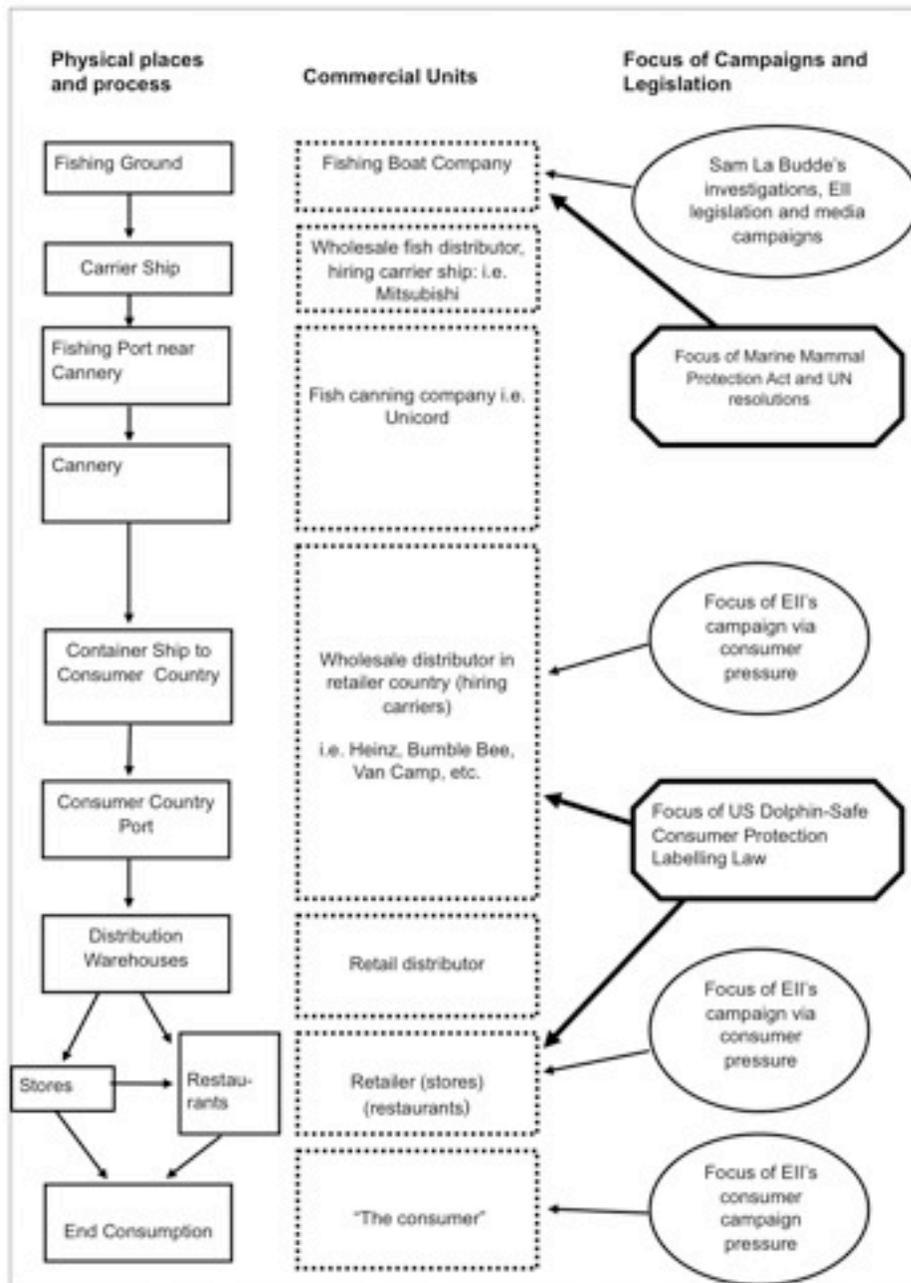


Figure 4.2 Strategic action in the tuna dolphin commodity network.

4.5 Enter Thai Perspectives

The increasing size of EII's endeavor in Thailand required developing a Thai based EII affiliate, and this considerably complexified EII's role in Thailand. The local staff brought with them distinct Thai perspectives and consciousnesses, including the view that it was important to 'Thai-ize' operations. Ian Baird held a delicate position as a Canadian bilingual in English and Thai, working for an American NGO. He was thrown into the position of translating language, culture and political-ecological orientation as part of, and in response to EII's expansion, re-territorialization, and re-scaling of its regulatory network.

Baird initially chose six Thai monitors based on trustworthiness, integrity and knowledge of the Thai political situation. His immediate concern was that they not be amenable to bribery to certify non-dolphin-safe tuna. Some of those hired, such as Saengkwan Vongsnara, were associated with the Theravada vegetarian Buddhist movement *Santi Asok*. The strict personal ethical standards and religious piety (even of lay members) made them both trustworthy and sympathetic to the cause. Others were selected from Thailand's NGO movement and came with sophisticated and locally developed understandings of grassroots democracy, public participation and environmentalism. This included Suwit Mattayanumat, one of the founders of the well-known grassroots southern Thai NGO, Yadfon Association, and Surimon Piriyanthanalai, a former university student environmental activist.

This Thai NGO environmental sensibility had a unique genealogy. Many NGO workers in the early 1990s had a history of student radicalism, and had formerly been involved in contestations over—and instabilities in—the Thai governing structure in the 1970s. After the massacre of Thai students on October 14, 1976 at Thammasat University in Bangkok, and the military coup d'état that followed, approximately 3,000 students (and many NGO activists) fled to the forests with the Communist Party of Thailand (CPT) led insurgency, where strong links with China ensured a Maoist orientation (Chutima, 1990; Morell and Samudavanija, 1979; Stuart-Fox, 1979). After only a few years most of the students became disillusioned with the

rigid ‘democratic centralism’ and blind adherence to Chinese Maoist ideas advocated by the CPT leadership (Heaton, 1982) and most participants in the insurgency made use of government amnesties in the early 1980s (Chutima, 1990). Nevertheless, this period left a strong imprint, and CPT jungle fighters turned NGO activists such as Jon Ungpakorn, Wanida Tantiwittayapitak, Sujitra Sutdiewkrai, Watchari Paolongthong and Gawin Chutima held a prominent place and exerted significant influence of the Thai environmental NGOs and Thai civil society in the 1980s and 1990s. While rejecting the dogmatism of the CPT, the time spent with the insurgency instilled a radical orientation (Clarke, 1998). There was a widespread hope that the emergent NGO structures would bring viable alternatives to both the traditional Thai state and CPT formations for empowering rural peasants (Baker and Phongpaichit, 2005). Thai Volunteer Service (TVS) trained a new generation of university graduates to be NGO workers, drawing indirectly on Maoist ideals of working closely with peasants. Training stressed the importance of spending long periods in the villages in order to fully appreciate the concerns of the grassroots (Ungpakorn, 2005; Chamarik, 1995). Through the 1980s, new NGO workers and student movements in Thailand were strongly influenced by ideas about grassroots democracy and participation. The NGO movement tended to articulate environmental problems in terms of livelihood struggles that played out at the local level and privileged the local: The role of NGOs was to support less powerful people from being victimized by capitalism.

The Thais with NGO experience who came to work for EII in Thailand in 1991 and 1992 came from this background. They accepted their roles as dolphin-safe tuna monitors, but saw themselves as part of the Thai NGO movement and so also wanted to work on ‘local’ issues and foster local empowerment. For most Thais, the main local coastal fishery issues related to conflicts (at times violent) between commercial trawler operators and small-scale inshore fishers. Large bottom trawlers would damage inshore coastal habitats, including coral reefs and sea grasses, and destroy the fishing gears of small-scale fishers (Fahn, 2003; Baird, 1993). Fishers were also concerned about the rise in marine shrimp aquaculture farms, which were destroying coastal mangrove forests, leaving marine pollution and disease, and damaging small fishers’ livelihoods (Fahn, 2003). There was pressure from within the ranks of EII’s new Thai workforce

to expand the organization's role beyond monitoring deep ocean tuna fishing and to directly support grassroots programs with small-scale fishers.

While Thai NGOs were initially suspicious of Baird, over time his actions and words demonstrated to Thai colleagues that he was sympathetic to their views. Baird oversaw the group in Thailand registering as a Thai non-profit association, called the 'Association of Earth Island Institute' (AEII). On top of the tuna-dolphin certification work, AEII began securing small grants from foreign donors to establish new grassroots fisher support projects. AEII partnered with a number of coastal communities in South and South-east Thailand, in Trat, Surathani, Trang, Songkhla and Pattani Provinces, and in particular, with communities that were interested in forging connections to wider grassroots environmental and social justice struggles. AEII's grassroots efforts had gradually improved the relationship with other Thai NGOs involved in coastal and marine fishing communities.

The new organizational structure evolved through a protracted process of negotiation between people in the U.S. and those in Thailand. While initially resistant, the mother organization in the U.S. eventually recognized the need for a semi-independent Thai counterpart, but wanted assurances that the new campaign activity would not interfere with EII's core certification work. The funding for projects unrelated to tuna monitoring would not come from the parent organization. Most of the Thais working for AEII did not speak English, and so Ian Baird was put in the position of translating (literally, faxes, and figuratively, political concerns) between the Thai and American groups. At times EII senior management were sympathetic with the views of the Thais, giving Baird and AEII the sense that EII might be willing to gradually increase their support for grassroots fisheries work in Thailand.

4.6 A Collision of Discourses

By 1993 visible rifts were emerging between the United States-centered global dolphin-safe agenda of EII and the emerging agenda of its Thai colleagues. A central result of AEII's role—one not initially fore-grounded by any of the companies that came to rely on EII services—was the definition of 'dolphin-safe', and the determining role that EII's central office played in

creating it. While EII favored a strictly environmental and marine mammal protection convention to govern the tuna commodity network, AEII sought to bring in a more complex mix of environmental and social justice values. The conflict emerged not only over the definition of 'dolphin-safe' but also with regard to whom in the emerging transnational EII system would decide on the definition and how the organization would make such decisions.

Thai NGOs that had initially met with EII in 1990 (and prior to the dolphin-safe regulatory network and formation of AEII) had been cool to the dolphin-safe requirements and had not backed the EII position. Witoon Permpongsacharoen was a prominent Thai NGO activist who met with Brenda Killian when she first traveled to Thailand. He recalled in 2008 that the EII framework conflicted with the basic values of the Thai NGO movement: "The argument for the ban represented an attempt to impose universal solutions, unable to accommodate or even recognize the political and social complexities of livelihood security at the local community level".

The Thai AEII workers, while schooled in Thai NGO discourse, were initially willing to work within the confines of EII's dolphin-safe standards, but came to have concerns as a result of the work with small-scale fishers. On the one hand, Thai coastal fishers often used gillnets. These differed from those used by large-scale commercial fishers and on the high seas. They were shorter than two kilometers and rarely targeted tuna. On the other hand, bottom trawlers and boat push-netters were immediate threats to Thai fishing communities and the inshore ocean ecologies upon which they depended, negatively impacting endangered sea turtles, coral reefs and sea grasses (Fahn, 2003; Baird, 1993). In this context, AEII activists in Thailand were convinced that gillnets were a preferable option for fishers.

For AEII, the solution to the impasse was to change EII's certification standards for 'dolphin-safe' to ensure coastal gill-netters were not excluded. AEII framed the underlying problem as being not simply the effects on dolphins, but the cumulative effects on coastal habitats, dolphins and small-scale fishing communities. Likewise, in their view, the proper object of EII's international ban should have been reconceived as large commercial vessels, including bottom trawlers and boat push-netters that cause a variety of by-catch problems. This fit into the

actual United States legislation concerning driftnets, which created exclusions for smaller nets and fishers in coastal waters. AEII thus sought to exert pressure on EII to recognize the grassroots struggles against trawlers and boat push-netters in Thailand. AEII advocated for an exception clause for Thailand and other countries with similar circumstances that would prevent small-scale gillnetters from being victimized by the broad-brush demonization of gillnets internationally.

In September 1993 Ian Baird took the message of AEII to EII in the U.S., meeting with Brenda Killian, the director of EII's global dolphin-safe monitoring program, and David Philips, the Executive Director of EII and the overall director of EII's IMMP in San Francisco. EII had no institutional framework for giving formal representation to the Thai counterpart organization, and the IMMP staff in San Francisco were in control of decisions regarding changing the certification standards. AEII's ability to advance its position would rest primarily on Ian Baird's advocacy. However, Baird did not have a senior management role or particular sway over the organization's overall leadership and policies. AEII's position was not well received.

The differences did not result in a disintegration of the relationship between the two groups. AEII remained dependent on EII and tuna monitoring for much of its funding, and EII relied on the successful tuna monitoring program in Thailand. However, the process of articulating and advocating and having rejected the AEII interpretation of 'dolphin-safe' served to clarify the ways in which the dolphin-safe regulatory network would depend on a complex relationship of mutual interdependence, conceptual disharmony, mistranslation and articulations between differentially conceived scales.

4.7 Analysis

EII had effectively instituted three widely recognized phases in the formation of a labeling scheme. They had brought negative public attention to an 'irresponsible fishery'; developed guidelines (and the quality characteristics) for 'good' consumption; and promoted the label amongst businesses under the threat that avoiding certification would threaten their businesses (Ponte, 2007; Klooster, 2006). Within the indeterminate space created by a relative lack of clear

law and the “continuous tension between ‘scales of regulation’ and ‘scales of networks’” (Swyngedouw, 2004b, 33), EII was able to advocate for, and ultimately impose its particular interpretive agenda of what counted as dolphin-safe. This applied not only to the American tuna-consuming public but for the tuna industry and consumers in many countries. As a result, the producer organization (Unicord/Bumble Bee) entered into a contractual relationship with EII that enabled EII to take on the role of regulatory institution. This strengthened EII’s unilateral position as creator, defender and guardian of the dolphin-safe standard. Any democratic or participatory input in EII’s system was thus relegated to consumers’ contractual choice (whether to buy dolphin-safe tuna) or the desire of EII’s funders to supply pressure for change or withdraw. This was particularly acute with respect to, and dramatized by, AEII’s efforts in solidarity with the potential interests of small-scale Thai producers. EII’s regulatory network thus fell into the naiveté of “assuming that certain models of environmental management can be exported tout court to the South” (Ponte, 2007, p. 171) much like many environmental campaigns in the 1990s (Moog Rodrigues, 2004; Brosius, 2003).

A mixture of commercial, industrial and environmental conventions dominated the dolphin-safe network, with market power and publicity taking central stage. The main canned tuna companies in the United States such as H.J. Heinz and Bumble Bee had their own reasons for accepting the label in terms of securing market power and EII did not want to challenge the gains it had made in terms of securing their cooperation. By the time Ian Baird flew to San Francisco to press AEII’s case, EII had expanded their monitoring program beyond Thailand to include the Philippines, Italy, the Ivory Coast and elsewhere.⁸ While many of these new dolphin-safe monitors were initially trained in Thailand by AEII, the mother organization was concerned with maintaining global uniformity of dolphin-safe standards—“immutable’ technical standards that circulate internationally” (Vandergeest, 2007, p. 1155), and which are “clear, intelligible, believable, and carry an unequivocal significance shared between the diverse actors that integrate the agrofood chain” (Renard, 2005, p.421).

⁸ At present, EII’s IMMP dolphin-safe tuna monitoring program is continuing, with the same standards as in the early 1990s. It certifies 300 companies in 51 countries (www.earthisland.org/immp/), accessed January 12, 2008.

EII was particularly concerned about maintaining its reputation for its funding constituency in the U.S. In the spaces of American ethical consumption driven in part by the appeal of charismatic mega fauna, the messaging of dolphin-safe (and avoiding animal cruelty) for a relatively affluent consumer base was different in kind than forging solidarity with rural Thai fishers. EII worked to help shape and give voice to consumer's ethical concerns, enabling ethical consumption (Clarke et. al., 2007). The environmental orientation of EII and its consumer base, and the ways these values were forged into coordinating frameworks for the network were central, and irreducible to concepts of rent-seeking, power or profit maximization alone. However, the dolphin-safe network stands as a specific example of the tendency of environmental values to take precedent over other civic conventions in environmental network activism. As Peter Vandergeest (2007, p.115) has noted, "People or communities that are most affected by the environmental practices of producers are seldom enrolled in any meaningful way in certification networks".

A central factor in explaining EII's framing of the dolphin-safe conventions rests on the organization's ideological commitments. The IMMP had the explicit mandate to protect aquatic mammals and did so from an animal rights perspective. Moreover, the organization's roots in American radical environmentalism led to animal protection being seen in terms of conflicts with humans and industrial activity. David Phillips had worked on the Condor Project, which had protested against putting endangered condors into captivity even for breeding purposes, and Brenda Killian had worked on protest campaigns with Paul Watson and the Sea Shepherd Society. EII's founder, David Brower, was one of the leading figures of American environmental activism having chaired the Sierra Club in the 1950s and 1960s. He had striven to protect "big, continuous wilderness... free from the pervasive influences of technology" where "he can be reminded that civilization is only a thin veneer over the deep evolutionary flow of things that built him" (quoted in Devall, 1985, p. 238). IMMP maintained alliances with animal rights organizations,⁹ and even one dolphin death was seen as too many.

⁹ This is particularly evident based on the organizations that they have tended to align themselves with, which at present include The Humane Society of the United States, the American Society for the Prevention of Cruelty of Animals (ASPCA), Defenders of Wildlife, the International Wildlife Coalition, the Animal Welfare Institute, the Society for Animal Protective Legislation, the Animal Fund, and the Oceanic Society (www.earthisland.org/immp/), accessed January 12, 2008.

In contrast, AEII, like other grassroots Thai NGOs, saw equity, social justice and political participation as central to environmentalism, in what has been called a “social green” (Clapp and Dauvergne, 2005), or a “socioenvironmental” (Moog Rodrigues, 2004, p.11) perspective. This was also reflected in differences between the American and Thai organizations of EII concerning institutional arrangements and process. In keeping with the insistence of viewing ecological issues as intertwined with social issues, the Thai NGO community came to see ‘process’ as integral to running campaigns (Chamarik, 1995). The politics of representation, and assuring that campaigns reflected the outcome of negotiations between effected groups, was central to many Thai NGOs. Alternatively, EII in San Francisco saw itself as ‘results’ oriented. As David Philips had told Ian Baird, “Keep your eye on the prize.” Opening the dolphin-safe standards to a democratic process risked altering those standards. EII did not want to give up its image as being radical in the California American context where they were based, and were therefore unwilling to recognize the cultural bias and erasure of Thai context within dolphin-safe standards.

In retrospect, EII’s rejection of AEII paled in comparison to other ways it would reject non-animal rights and mixed environmental, social and economic reasoning to protect the ‘dolphin-safe’ standards. Through the 1990s and early 2000s EII retained a strong grip on the world market (Economist, 2003) claiming that 90 percent of the world’s tuna industry follows its standards (EII, 2009). However, from the early 1990s on, the United States government faced strong opposition against the Dolphin Consumer Protection Act standards as Mexico successfully brought a challenge of the labeling standard to the General Agreement on Tariffs and Trade. The voluntary La Jolla Agreement, and then the international agreed Panama Declaration (1995) reflected a negotiated position by which the U.S. government meant to assuage foreign tuna producers. A broad network of environmental NGOs including Greenpeace, the World Wildlife Fund, the Center for Marine Conservation, the Environmental Defense Fund, and the National Wildlife Federation (the five member organization or FCO) also played a central role (Wright 2000). Greenpeace, for instance, maintained offices in Mexico City and its North-South collaborative structure meant it was under pressure to shun American consumer-led (or government-legislated) unilateralism and consider Latin American fishers' livelihoods (Browne, 1996). Other groups in the FCO also focused on principles of ecosystem management and were

concerned about reducing by catch of sharks, sea turtles, billfish and juvenile tuna and so supported an arrangement that would incrementally reduce, but not completely stop, dolphin deaths (Wright, 2000; Dudley, 1996). The International Dolphin Conservation Program Act of 1997 (IDCPA) reflected an attempt to change U.S. law to facilitate the Panama Declaration and its associated processes and was backed by the FCO (Wright, 2000). Despite the 1998 Agreement on the International Dolphin Conservation Program—a binding international agreement to formalize the Panama Declaration (Hedley, 2001)—EII stood fast to its principled rule that no dolphins should die (Economist, 2003).

Earth Island Institute was able to resort to litigation to ensure the new U.S. law did not interfere with its dolphin-safe standard. In the U.S. Congress defenders of the original labeling law focused on concerns that the use of purse seines to repeatedly chase and encircle dolphins might have physiological stress effects that could impede the ability of depleted dolphin populations to recover. The final IDCPA reflected a negotiated position and deferred the labeling changes to scientific study (Woellert, 1997): the Secretary of Commerce could allow purse-seined tuna to be ‘dolphin-safe’ if studies showed no “regular and significant association between tunas and dolphin” or no “regular and significant mortality or serious injury of dolphins” (IDCPA, s. 5). In two rounds of litigation it successfully challenged decisions by the Commerce Secretary that ‘dolphin-safe’ could include tuna caught using purse seine nets (and so fitting the Panama Declaration standards). An “Initial Finding” by the Secretary was found to be based on insufficient evidence (Brower v. Daley, 2000; Brower v. Evans, 2001). A “Final Finding” by the Secretary was found by the trial and appellate courts to not have sufficiently studied potential psychological stress on dolphins nor of systemic effects on dolphin populations (Earth Island Institute v. Hogarth, 2007). Further, EII has ensured its own standards maintain a monopoly position, in the face of attempts by the U.S. Secretary of Commerce and the Inter-American Tropical Tuna Commission to issue competing labels reflecting the ecosystem management framework of the International Dolphin Conservation Program. EII’s efforts included a campaign to force the Spanish processor Grupo Calvo to abandon the IATTC label (EII, 2009).

4.8 Conclusions

The dolphin-safe tuna regulatory network that emerged in the early 1990s and which EII led was successful in transforming the tuna market. As this article has shown, the EII network can be understood in light of global production networks, conventions theory and institutional analysis. EII was motivated by a conservationist and animal rights environmental framework, and this resulted in its seeking to impose a narrowly construed environmental convention on the tuna commodity network. EII's lack of sophistication and its insistence on a one size fits all approach became especially problematic once it started to operate at the expanded scale brought by the tuna commodity network. While the system it created was not particularly democratic, and was definitely not tailored to country-specific concerns outside of the USA, EII was able to effectively employ a simple universalized definition of dolphin-safe. These conventions had a particular geography—the guidelines for dolphin-safe were established by Americans (not just any Americans, but those from a particular socio-cultural group in California). EII was in the right place at the right time, and enjoyed relative ease and speed in having the dolphin-safe label accepted, and in gaining state legal protection for the use of the label. However, the regulatory network lacked institutional frameworks for hearing, responding to, or incorporating the concerns of Thai interests, or the interests of those from other areas that would be impacted by EII's demands. The relative lack of incorporation of civic conventions into the regulatory network played out as a lack of process in the creation and refining of the standards, as well as a disregard for the potential effects of the standards on small-scale coastal fishers in Thailand (and potentially elsewhere).

Some have argued that EII was simply biased against some countries or companies (see Woolman, 1992; Fahn, 2003; DeSombre, 2000; Brown, 2005; Bonnano and Constance, 1996). Many government leaders in Latin America and Asia have termed their actions as fundamentally 'neo-colonial' (Fahn, 2003; Woolman, 1992). Our interpretation is that EII was caught by a mixture of its own obliviousness and political-ecological position; a desire to maintain its own relative position as guarantor of the dolphin-safe label; a failure to properly articulate (and create institutions to reflect) the different functions of certification standard setting, institutions to

reflect stakeholders values, and institutions to certify standards; and a complacency engendered by the regulatory networks' quick success and market logic. While in part this can be attributed to naiveté, EII could in principle have formulated its certification standards in part on the basis of the exceptions in the United Nations resolution and U.S. legal wording concerning driftnets. As such, EII's decisions can be better understood in terms of the organization's own power base, clientele and discursive framing of the issues, as well as commercial and public conventions concerning the marketability and mobility of the 'dolphin-safe' label.

Central to the process was the transition of the scale of EII's activities. Once EII began to take seriously the task of monitoring and regulating the tuna commodity network, it became a transnational organization, with a re-scaled and increasingly globalized agenda. EII was blocked at the levels of territorial and international legal mechanisms, and so sought out the 'between spaces' of consumption and commodity networks as new sites of political activism and contestation. This implicated EII in new orders of reach and influence with transformations in kind as to the sets of questions and ordering institutions which would be appropriate. With the addition of AEII, EII itself came to embody a range of conflicts between 'local' and 'global', and 'center' and 'regional', as it, like the tuna network, came to involve articulations between multiple (imagined) scales. The formation of AEII resulted in a de-facto transformation of EII into an organization that reproduced divisions between head office (in San Francisco) and regional subsidiary, with global policy (in this case, certification standards) set in the center. AEII's own concentration on the 'local', motivated by both its workers' background discourses of public participation and its choice of coastal fishing communities for programs, helped to forge this scalar dynamic.

EII's intervention into the tuna commodity network—while itself rife with contestations—was made possible by the simplicity and breadth of the environmental convention and the universal “‘dolphin-safe’ means no gill or driftnets”. By providing a closed list of standards that are easily mobilized across expansive networks, certification could allow for extensive spatial reach. By allowing for narrowly focused action with large effects, small NGOs can maintain an effective role as campaigners (Heyes and Liston-Heyes, 2005), extending their influences over

long distances. While EII's particular West Coast American sensibilities provided for a simple convention and standard, that standard was not a good fit with the complexities of voices the tuna commodity network touched upon, and to the emergent transnational environmental organization formed once the Thai association became involved. The result was that the American EII view came to dominate rather than one that recognized the unique conditions and local struggles taking place in places like coastal Thailand, offering the sobering reminder to AEII and its Thai workers and client communities that the mere participation in a transnational network does not necessarily lead to an empowering role therein (c.f. Moog Rodrigues, 2004, p. 135).

Certification networks face a series of trade offs and tensions between adjudicating between adoption of conventions, institutional processes, and the scale and scope of their operations that are far from easily resolved. In part to address these issues, some alternative trade networks, such as Forest Stewardship Council wood, as imperfect as it may be, have worked into institutional design an explicit political awareness of the contested values at stake in certification standards. These systems thus feature participatory and democratic forms of institutional design, allowing diverse producers and users of the system to engage with management processes and technical certification standards (Tollefson et. al., 2008; Vandergeest 2007). This study of the contested nature of dolphin-safe labeling helps illustrate the challenges of creating an inclusive system when scaled up to include diverse Northern and Southern interests, especially when there are weak institutional structures for handling disagreement.

5. “This is a Montreal Issue”: Negotiating Responsibility in Global Production and Investment Networks

5.1 Introduction

Alcan Inc. (now merged with Rio Tinto), was a large transnational conglomerate and also the dominant aluminum smelting company in Canada. Responding to Indian economic liberalization, in 1993 Alcan entered into an agreement to invest in, design, and develop a project in Kashipur, Orissa, India through Utkal Alumina International Ltd. (“UAIL”): This would serve as a way of entering into the South Asian market and also securing access to bauxite reserves needed for aluminum production. However, the Utkal Project (or just UAIL), as Alcan's joint venture came to be called, became a test case for corporate social responsibility (“CSR”) and an object of worldwide criticism and activism. This paper analyzes how ‘responsibility’ plays an important role in global networks of production and investment: The Alcan controversy serves as an example of how ‘responsibility’ has become a key word, and subject to multiple interpretations, as solidarity activists, human rights campaigners, labour unions and others seek to transform and businesses respond to defend their investments.

The extreme nature of the social and environmental conflict at the Utkal Project gave rise to considerable activism in India and Canada. The project plans involved an open cast mine in a densely populated area, and would result in the displacement of local tribal (Adivasi) populations, air pollution, and despoliation of local rivers and sacred lands. Villagers resorted to civil disobedience. On December 16, 2000 one hundred police went to the village of Maikanch. As one Indian human rights report notes:

We were told that the police inquired about five youths including Prakash Jodhia of Maikanch and threatened that they would open fire if these five were not handed over. Women had gathered in front and they did not let the police enter the village. The Circle Inspector kept issuing threats every few minutes. He pushed an old woman and threw her down. She fainted and remained unconscious for some time. Some other women were hit with lathis. Hearing the cries of women, the men came out. It is at this point that the

police, ordered by the executive magistrate, opened fire. People began to run away in fear towards the surrounding hills. Firing continued for about half an hour. In all, nineteen rounds were fired on the retreating people, killing three: Damedo Jhodia, Anhilas Jhodia and Raghunath Jhodia. Eight others were injured (PUDR, 2005, p. 18-19).

Alcan was met in Canada with criticism in the press, street level protests at its annual general meetings in its home city of Montreal, shareholder activism and widespread negative publicity on human rights, anti-mining, development and North-South solidarity organization websites. In 2005 and 2006 Alcan resolutely defended the project against widespread opposition--including shareholder proposals that it revisit the social and environmental assessments for the project. By 2007 it decided to withdraw from the joint venture, citing corporate social responsibility concerns (Côté, 2007).

I started researching this project and the Canadian response when I was asked in 2007 by human rights activists to give a legal opinion as to whether Alcan could be sued in Canada by project affected villagers: The activists were outraged that Alcan could walk away from the project without compensating villagers for the harms incurred. I spent some time on the matter because the Alcan case was only one of many cases in the 1990s and 2000s whereby Canadian resource companies became connected to crises of environmental degradation and human rights abuses in the Global South (North et. al. 2006; Halifax Initiative, 2006a). Human rights and development organizations in Canada were actively lobbying at the time for extra-territorial human rights frameworks, and the idea of compensation for victims could potentially have been made part of that debate (Civil Society, 2005). When I saw there could not be redress, I was struck by the difference between, on the one hand, activists' convictions concerning just conduct in the trans-national relationships Alcan's investment created, and on the other hand, Alcan's legally defensible actions.

The matter struck deep at the foundations of Canadian law. The public documents at my disposal-- newspaper articles and radio shows, reports by development experts and Indian non-governmental organizations, anecdotes on anti-mining and human rights websites--were inconclusive as to Alcan's precise role and the degree to which it was working with its Indian

partners or the local politicians and police in Orissa. However, the problem in obtaining legal redress was not only about whether one could prove Alcan played a causal role in the violence in Kashipur. Rather, Canadian law both enabled Alcan's investment while providing no possible avenues of redress--a complex combination of 'lex mercatoria' governing trans-national investment, assumptions about territorial jurisdiction at common law and an absence of extra-territorial legislation covering Canadian companies (Scott and Wai, 2004). There were basic conceptual differences in how Canadian law, Alcan's CSR, and activist groups understood the relationships and connections tying themselves and Alcan's investment to villagers (and others) in rural Orissa.

I moved from exploring the legal situation to the wider geographies of the issue. Foreign direct investment (FDI) is central to the global space of flows that ties together distant economic actors into the global economy (Dicken, 2000, 2005). Following moves in relational economic geography (Boggs and Rantisi, 2003; Yeung, 2005) I was interested in how FDI cut across the scales of the territorial nation-state to forge new connections between people and how this leads to transforming how people understand themselves, their connections and the places they inhabit. The flows of Alcan's capital through the Canadian economy, to government revenue and pension plans, the social and business ties of Alcan headquarters to the Montreal area, the spin-off effects of Alcan's industries and headquarters in Canada all helped forge links between lands and people in India and Canada. Alcan's investment was only one of many offshore mining investments facing oppositional social and environmental movements (Bridge, 2004) and adopting CSR messaging and public relations (Himley, 2008). Alcan's investment could be understood in similar terms to global production networks such as for cut flowers or coffee that increasingly feature forms of 'ethical governance' (Hughes et. al., 2008). Activists and corporations existed in dynamic symbiosis as part of what researchers of ethical commodities call an 'ethical complex' --the combined results of negotiations, protests and manouvering by managers, activists, consumers and other stakeholders that produces soft-regulation and voluntary standards (Freidberg, 2004; Popke, 2006). I thus at times use the term "global production and investment network" to refer to Alcan's FDI.

Massey (2004) describes global networks as creating novel interdependencies as identities and places become entangled. Networks become ‘geographies of responsibility’ in virtue of the ways they foster relationships and demand rethinking the ethics of connection. As networks draw people together “propinquity needs to be negotiated” (p. 6). Massey’s insight suggests that Alcan and its CSR was working to respond to concerns about the relationalities of global commodity and investment networks. Alcan promoted its CSR and sustainability policies through advertising on TV and in its annual review that it was “Linked to the Planet”--with images of employees and community members holding hands in a line stretching from a smelter to a river (Alcan, 2006a; Yakabuski, 2006, p. 76). However CSR was not the only way in which people were seeking to negotiate these network connections. In the case of Alcan’s investment (and as the case study will show), Canadian law, Alcan, and solidarity and human rights activists all were invoking ‘responsibility’ in different ways. ‘Responsibility’ had become a key word in the emergent ethical complex: At times it was used to challenge FDI, and at times to defend it against criticism. The research shifted to a geography of ‘responsibility’.

This paper thus presents a detailed analysis of Canadian responses to the Alcan-Utkal investment as an example of how ‘responsibility’ is being used in struggles over FDI. The paper begins with a theoretical discussion of global production networks and the ways this approach can be used to understand the uses of ‘responsibility’. After a brief description of the socio-ecological conflict in Kashipur, Orissa, the analysis shifts focus to debates and struggles in Canada over Alcan’s investment. I discuss five ways of seeing responsibility that actors brought to bear on understanding Alcan’s investment. First, in the current international legal system, commercial law and liberalized trade rules both provided the enabling conditions for Alcan’s investment process and came with distinct concepts of what I call ‘commercial responsibility’. Second, human rights groups asked for binding rights norms and a complaints process which might have allowed the project under restructured conditions. Third, solidarity activists’ demanded that Alcan leave the project as an expression of solidarity with Kashipur villagers. Fourth, shareholder resolutions by socially responsible investors guided by ‘proxy voting guidelines’ sought, in uneven ways, to incorporate human rights and environmental guidelines into business practice. Fifth, Alcan’s own CSR focused on developing, and then relying upon,

codes of conduct and environmental management systems to justify the project. I conclude by suggesting that the Alcan-Utkal case shows that while investment can give rise to novel forms of social relationship, there are limits to mobilizing ‘responsibility’ in global production and investment networks: Not only is the term prone to shifting and strategic use in CSR, but also the fluidity, contingency and profit-oriented basis of foreign direct investment results in social relationships characterized by weak ties.

5.2 Bringing ‘Responsibility’ Into Global Production and Investment Networks

This paper follows the global production networks approach (GPNs) which has emerged as an attempt to combine diverse methodological and theoretical approaches such as global commodity chains, global value chains, and commodity networks. The GPNs approach provides a wide umbrella under which a variety of analytic frameworks can be marshaled for examining power, economic function, organization, governance and regulatory standards in global networks such as for automobile production or cut flowers. The GPNs approach seeks to show how networks involve not only profit making and power relations (such as between contractors and sub-contractors) but also involve complex circuitry and feedback loops as information flows, and cultural values (such as consumer concerns over quality) move back and forth between consumers, distributors and producers (Bair, 2008; Coe et al., 2008; Nadvi, 2008, Sturgeon et al. 2008).

The increasing role of activism, voluntary standards, CSR, and ‘ethical’ investment funds suggests foreign direct investment be analyzed in ways analogous to GPNs. Alcan’s investment was an alternatively physical and semiotic process of interlinkages as Alcan made profits from refineries and service provision in North America and reinvested capital in new projects and locations. This represents a classic movement from physical infrastructure and commodity production into the money form and then reinvestment in physical capital with an eye to expanding both profits and material production (Hudson, 2005; Harvey, 2006). Alcan’s CSR featured “knowledge flow and translation through ethical learning spaces” (Hughes et. al., 2008, p.356). Like other CSR initiatives (and alternative goods) it was shaped by an ethical complex which included international non-governmental organizations, human rights, environmental and

social justice movements. These movements, in turn, may also be conceptualized as global networks (Keck and Sikkink, 1998; Riles, 2000; Juris, 2004, 2005; Tsing, 2005; Routledge et al., 2007, Cumbers et. al., 2008; Routledge, 2008; Routledge and Cumbers, 2009). These networks increasingly use digital technologies such as the internet to enable dense informational flows within loose and flexible coalitions held together by the ‘strength of thin ties’ (Bennett, 2003, p. 146, also see Castells, 2003; Juris, 2004, 2005).

The GPNs approach suggests ways to reconcile divergent trends in geographers’ treatment of ‘responsibility’ in long distance networks. Since the 1990s geographers have sought to ‘unveil’ the ways in which everyday goods also involved troublesome methods of production far from industrial welfare state regulatory controls. Labour rights violations and environmental destruction at distant sites of production were widely documented, with the assumption that bare awareness could motivate consumers to (act responsibly and) change their buying practices or lead governments to forge new forms of economic regulation (Barnett and Land, 2007). However, researchers soon saw the problematics of a bare informational approach.

On the one hand, researchers found that consumers did not merely acknowledge distant harms and then change their practices-- rather, the process whereby people incorporated awareness of networks was found to depend on ethics and self-understanding (Barnett and Land, 2007). For the most part geographers have followed a relational perspective emphasizing an ethics of care. Massey (2004) thus emphasized how peoples’ identities and their places (such as their cities and neighbourhoods) were entangled through network connection. Case studies and analysis of consumption in this vein foregrounded the moral claims and motivations of consumers who took consumption as a terrain for acknowledging connection and acting with care towards workers and places at the other ends of long distance networks (Whatmore and Thorpe, 1997; Barnett et al., 2005; Popke, 2006; Quastel, 2008; Popke, 2009; Jackson et al. 2009, Barnett et. al., 2010).

On the other hand, there was a need to research and critically assess the workings of global commodities which expressly invoked consumer responsibility--”alternative goods” for coffee, cut flowers or wood with labels such as ‘ethical’, ‘organic’, ‘fare trade’ or with non-

governmental organization certification. Research concerned how such labels were not simply benign, but part of processes of restructuring power relations and the political economy of commodities as new products, production processes, niche markets and governance systems were created (Hughes, 2004; 2006; 2007; Mutersbaugh, 2005a, 2005b; Renard, 2005; Taylor, 2005; Freidberg, 2007; Ponte, 2007). Moreover, such products also played negatively with issues of personal identity and moral values: ‘Ethical’ goods at times were used to construct consumer concern as part of competitive market strategy (Guthman, 2008). Some such goods reworked unappealing tropes of neo-colonialism and North-South domination: For instance, labels such as ‘rainforest friendly’ employed ‘edenic myth-making’ (Bryant and Goodman, 2004) and origin-identifying Canadian (white, Northern) diamonds suggests not only African diamonds (but the ‘dark’ continent as a whole) were tainted by violence (Le Billon, 2006).

The GPN approach offers the potential for reconciling these different approaches. GPN analysts borrow from not only political economy approaches but also post-structuralist approaches such as Actor-Network Theory. These theories stress how persons’ identities are formed through the relationships networks create and how power may be dispersed--and contested-- through disparate sites. Networks are understood as hybrid collectives of material, technical, logistical, legal, procedural elements and human beings that are contingently assembled and impermanently stabilized and potentially transformed by network actors (Hess, 2004; Hess and Yeung, 2006; Hughes et. al., 2008). The GPN approach thus follows Levy (2008) in arguing that networks are not objective, predetermined structures, but “processes of social construction and meaning creation, wherein social order is negotiated” (p. 948, also Coe et. al., 2008). As such, the GPN approach has been used to bring out the dynamic interrelationships that evolve over time between consumer concern, ethical values, regulatory frameworks and the political-economic workings of environmental and ethical goods’ networks (Baird and Quastel, 2011). Retrospective analysis of the workings of ethical commodities can potentially be used by actors in networks to challenge and transform the networks of which they are a part. Such critical analysis can not only be extended to ethical codes of conduct, CSR and other management systems, but form the basis for rethinking (and mobilizing change concerning) the interpretations of ethical concepts used by such frameworks.

5.3 Rethinking ‘Responsibility’ in Global Production Networks

The role of ‘responsibility’ within regulatory frameworks such as CSR and consumer and shareholder activism makes the concept (and its various interpretations) important for understanding GPNs. The GPNs approach also suggests unique analytic and empirical tools for understanding ‘responsibility’. ‘Responsibility’ generally refers to the fact that a person or organization has the ability to act and so can be called to account for her or its actions. While often oriented towards blame (such as in legal contexts) it can also refer to a forward looking orientation that enjoins persons to act (Young, 2004). However, conceiving of ‘responsibility’ as a key element in networks opens up a series of further questions, such as: Who in a network should be considered, or consider herself responsible? and what sorts of roles and relations to others in networks does such responsibility imply? Current legal systems, commercial activities, CSR and the ideals of human rights and solidarity activists imply answers to these questions. In what follows I introduce a range of social theoretic approaches that fit within GPN’s “broad relational framework” (Coe et. al., 2008, p. 272) and which the case study uses to analyze how different concepts of responsibility bear on relationships in networks.

Networks involve ‘distributed action’ whereby decision-making roles are distributed to different people under different legal or moral regimes (Dugdale, 1999; Weiser, et. al. 2004; Karner and Weiser, 2006). Following this logic, Weiser et. al. (2004) analyze prenatal testing and the consent process as provided under Austrian law. While prenatal testing occurs against the backdrop of complex scientific evidence and networks of medical personnel and procedures, decisions that might be made by doctors is formally assigned by Austrian law to patients: “Responsibility is an object of a transfer process: the physician hands over his or her responsibility for what he or she does in the course of a prenatal examination to the patient” (p. 8).

Re-reading literature on commodity governance also reveals a wide variety of ways in which legal codes, values and social institutions distribute, or fail to distribute, action. In nineteenth century England and America the common law (and laissez-faire capitalist) principle of caveat emptor (“buyer beware”) assigned to consumers responsibility for ascertaining

important quality aspects of products, such as whether they were safe to eat. By the twentieth century this had shifted to a mix of labelling laws and consumer protection that transferred responsibility for product safety to other participants in the network-- store owners and manufacturers (Atiyah, 1979). A Foucauldian-inspired governmentality literature emphasizes how in areas of sustainable consumption in the 2000s (where consumers choose more 'environmentally responsible' goods) responsibility for environmental change was delegated to consumers and away from legal institutions, states or corporations (Hobson, 2004; Slocum, 2004; Aylett and Rutland 2008, Guthman, 2008). Alternatively, failures to allocate responsibility--such as where global production networks do not account for their significant environmental and social harms -- give rise to the problem of "unstructured collectives" (Kutz, 2000, p. 6). These are situations where people act together, but where there is a lack of allocation of roles to ensure harms do not occur. Christopher Kutz argues that in such cases--and especially where large numbers of participants are involved--it might be difficult to single anyone out as 'responsible' in the sense of playing a defining causal role. Instead, Kutz argues each is 'complicit', and 'complicity' is a defining concept of contemporary commodity flows. Many Canadians were complicit in the Alcan-Utkal investment, and each of the five ways of seeing 'responsibility' represented ways of envisioning 're-structuring' the collective to allocate roles and resolve complicity problems.

Persons' relationships in networks also involve power relations (Yeung, 2005), and different interpretations of 'responsibility' can legitimate or perpetuate such relations. Raghuram, Madge and Noxolo (2009) and others in the Geoforum themed issue on "Postcoloniality, Responsibility and Care" take up 'critical' approaches to 'responsibility', analyzing the term's role in "forms of evolving relationality" which are also "historicised, fractured and contested relations" (Raghuram et. al., 2009, p. 9). They thus seek to interrogate the concept to "reveal not only the intimacies and generousities within existing practices of care and responsibility, but also expose their political contestations and the pain and the absences that underpin global relationships" (p. 6). In an applied case study of this approach, Power (2009) shows how invocations of 'responsibility' in international development, and in particular in policy documents of the British Commonwealth, facilitate paternalistic and neocolonial forms of

“responsibility for and over post-colonial Africa” (p. 15). This contextualizes uses of ‘responsibility’ not only against the backdrop of how users stand in long-term geo-political relationships but also how forms of allocating responsibility can imply a “for and over” and so work to perpetuate power relations.

Global production and investment networks feature systems of knowledge which provide information to actors concerning how the network is structured and its effects. Systems of knowledge operate to stabilize networks as both elements within networks, and as overarching ‘modes of ordering’ (Whatmore and Thorpe, 1997, p. 294). Such knowledge systems may also be central to how responsibility is understood: For instance, activists’ networks often give a central role to informing the public about particular investments or products and counteracting corporate and government representations of the effects of FDI. Certification standards, verification procedures, reports, documents, newspaper stories and advertisements are active participants in networks: They provide narratives of how the network operates and ought to operate and in doing so they also constitute the network, its structures and effects. Knowledge production and dissemination are not only forms of relationship but also ways of stabilizing and ordering networks. I thus analyze how knowledge production was central to making Alcan’s network ‘responsible’: Taking testimonials and disseminating reports were central to human rights and solidarity organizations and Alcan’s CSR and public relations staff worked to offer their own representations of the Utkal project.

Knowledge systems may work to strengthen fractured, contested and power-laden forms of responsibility. In analyzing CSR I draw on work which looks at corporate and institutional environmental knowledge as forms of maintaining power. Braun (2002) documents how Canadian forest companies used advertising and public relations to construct “cultural and epistemic space”, which use a variety of “terms, and strategic silences, through which the company establishes its authority” (p. 36) in efforts to control representations of production methods, and so carry on business as usual. Likewise, Goldman (2001, 2006) stresses how the World Bank came in the late 1990s to rely on expert environmental and social impact studies to deflect growing criticism of its activities. These would use social and natural science expertise

to produce ‘knowledge’ of local conditions and contexts and so enable new development projects in the face of growing social and environmental oversight. What both Braun and Goldman help show is that having--and exhibiting--knowledge is central to being seen as ‘responsible’, and that the form and content of such knowledge systems can be tailored to portray institutions as acting responsibly.

Finally, interpreting FDI as a network of relations suggests difficult tensions created by what can be called ‘structured relationality’. This term is meant to contrast, on the one hand, the ways in which individual agents in networks participate in, are formed through, and relate to others through network connections, and on the other hand, the ways networks are complex social organizations subject to myriad regulatory frameworks, market conventions and global economic structures. While we participate in these networks they are not of our own making, yet we also struggle at times to reform them. Structured relationality also affects how we understand ‘responsibility’: Traditional structures of economic regulation and practice conceive of responsibility primarily in terms of duties to family, to workplaces, contractual partners and to nation-state legal systems and not in terms of responsibilities to distant others. This poses significant challenges for the claim that networks should be reformed to reflect relational ethics. One challenge concerns the degree to which such networks can be sufficiently reformed or whether ‘responsibility’ may simply be reworked through the ethical complex to facilitate such commercial networks. There are further conceptual challenges concerning whether commercial relations should be viewed as the source of moral obligation given the sorts of relationships they foster and their potentially transitory nature. Human rights organizations, for instance, argue that responsibility is based on international principles of human rights rather than particular network ties. Their concern is that the relationships that networks foster be structured to ensure rights are respected: It is not particular network ties that give rise to responsibility but rather the fact that persons in networks are members of a larger human community. Following the case study I offer further reflections on these challenges. In the case study, and in the conclusion I discuss the ways in which solidarity and human rights activists in the Alcan- Utkal case sought not only to transform the global production and investment network, but also to build their own networks

linking Kashipur and Canada and in so doing re-imagine and re-create ties on terms distinct from that of the investment network.

5.4. Alcan in India

The initial plans for the Utkal project called for an open-cast (or open pit) mine on the Baphalimali Hill, a twenty kilometre causeway for transporting bauxite, and a smelter for converting bauxite into alumina. From early on there were significant concerns that the project would transform local ecologies and displace the area's largely tribal (Adivasi) populations. Kond and Paroja (Jhodia) people's accounted for over 60% of the population, while another 14% were Dalits (known in the West still as Hindu 'untouchables'). Large amounts of fly ash (estimated at 1000 tons per day) and red mud discharge threatened air quality and the area's water supply, while 25 square kilometers of land would be appropriated (Khatua and Stanley, 2006; PUDR, 2005). As late as 2006, the proponents claimed only 147 families would be affected and so be eligible for any compensation, while local groups put the numbers at over 5,000 in 66 villages. Most of the land had not been comprehensively surveyed and many villagers depended on public or customary usage rights that would be affected by the project. Further disruption and displacement would be caused by the open pit mine converting a hill area commons held sacred by the locals (PUDR, 2005). While the normal process for such projects was to offer rehabilitation and restitution packages, most of the affected peoples were not compensated and those who did receive offers of compensation were promised resettlement homes (but not new farmland) and lump sum packages that most felt were too low (IPT, 2006). Because the populations were largely illiterate and had skill sets restricted to farming, they would be unlikely to find paid work providing adequate wages (Khatua and Stanley, 2006, p. 150; see also Siddan, 2003; Kalshian, 2007).

The actual administrative process of governmental approval was fraught with illegalities. Schedule V of the Indian Constitution prohibited tribal land from being sold to non tribals. This was reflected in the *Orissa Scheduled Areas and Transfer of Immovable Property (By Scheduled Tribes) Regulation, 1956*. In the Supreme Court of India decision in *Samatha v. State of Andhra Pradesh* (1997) Schedule V was interpreted to forbid the transfer of mining leases to non-tribal

individuals or societies (IPT, 2006, p. 20). Yet the federal government in Delhi (through the Ministry of Forests) permitted the Baphalimali Hill mine site in 1994, and the refinery at Dorugada in 1995 without also checking these area's status as protected tribal lands. The Ministry of Forests gave an environmental clearance in 1995 despite the fact that the required Environmental Impact Assessments and Environmental Management plans were not provided by UAIL-- "a total abdication of its oversight responsibilities" (IPT, 2006, p. 26). The *Land Acquisition Act* (1984) laid down specific procedures for consulting local peoples whose lands would be affected. The *Panchayat (Extension to Scheduled Areas) Act* (PESA) (1996) provided that the village electorate (gram sabha) would be consulted and could reject projects. While an Environmental Impact Assessment was submitted in 1996 (after project approval) it was never made public, making it difficult for non-governmental organizations, or advocates, let alone the villagers themselves, to understand the potential impacts of the project (IPT, 2006, p. 5 and 31).

Community opposition formed early as villagers "resolved not to submit to a fate thrust upon them by cold blooded market arithmetic", and "began with petitions and appeals to the administration and the state, and went on to peaceful demonstrations, rallies and road blocks, as the state continued in its indifference" (Das, 2006, p. 21). From 1995 to 2000 there were a series of mass demonstrations in central towns, unlawful arrests of civil society organizers (such as the villagers' organization opposing the project, the Prakrutik Smapada Surahsha Parisah, "PSSP"), police lathi (baton) charges, and tear gas and mercenaries attacking villagers.

The Makainch Massacre resulted in judicial commissions and project delays for four years (PUDR, 2005). However, widespread political support in Orissa for mining development projects ensured failure for the villagers: "The movement has little political support, with the Congress, Biju Janata Dal and Bharatiya Janata Party openly backing the corporations. Civil society organizations in Orissa have also sought to distance themselves from the Kashipur movement, fearing a state backlash" (Das, 2006, p. 38). The unhinging of the development process from judicial oversight, coupled with the notorious corruption of the judicial system, left activists without reliable legal channels. By September 2004 the UAIL and the District Collector were working to obtain the consent of locals -- aided by 500 police officers (IPT, 2006, p. 13). While

protests continued through 2007, they were increasingly restricted to a few holdout villages such as Kuchiepadar. Evictions, rehabilitation and resettlement work was started at the plant and mine sites in that year (Goodland, 2007). Completion was scheduled for 2010 (Hindalco 2007), but later pushed to 2012 with financing arranged for a nearby alumina refinery (Economic Times, 2010). By 2010 a “wikimap” dedicated website showed the plant site using Google’s satellite imagery (Wikimapia, 2010) .

5.5. Responsibilities in Canada

5. 5.1 Commercial Responsibility

Alcan’s investment decision set up capital networks linking the company, its workers and shareholders, its home city of Montreal (and wider province and country of Quebec and Canada), Indian industrial companies and rural Orissa. From 1993 to 2000 this took the form of Alcan's majority ownership of the Indian Aluminium Co. (Indal) which was at the time a major partner in UAIL (Montreal Gazette, 2000). After 2000 Alcan sold its stake in Indal, but then became a joint partner in UAIL, with its stake rising to 45 percent by 2003 after Norsk Hydro left in response to Norwegian activist pressure (Girard, 2005).

Alcan's investment was made possible in part by a series of Canadian legal frameworks which carried their own imaginaries of responsibility. Within Canada, a combination of criminal law, property and expropriation laws, environmental regulation and the political process make the Utkal situation unlikely. While in the 1990s there were many conflicts involving resource corporations and indigenous land rights, Canadian courts have slowly come to accept that domestic First Nations have rights to prior consultation (analogous to the internationally known principle of free prior informed consent): This became the norm just as Alcan faced the worst protests in 2005 and 2006 (*Tsilhqot’in Nation v. British Columbia*, 2007).

However, legal redress for victims of human rights abuses or environmental damages by corporations acting abroad is close to impossible in the current Canadian legal climate (*Recherches Internationales Quebec v. Cambior Inc*, 1998; Scott and Wai, 2004; *Piedra v. Copper Mesa Mining Corporation*, 2010) and criminal law mechanisms only apply in rare cases

of genocide, crimes against humanity or child pornography (Gagnon et al. 2003). Legal responsibilities for overseas operations are governed by commercial law norms. However, contract law, the law of Sale of Goods, and international “lex mercatoria” work from a concept of responsibility in networks that reduce responsibility to a concern to meet explicit agreements between nodes of exchange in networks: Such nodes are usually imagined to be structured in terms of the narrow commercial self-interest of autonomous individuals (Kasteley, 1995; Cutler, 2003). State territory-based human rights and environmental legal frameworks fail to reach the deterritorialized flows of international commercial relations, symptomatic of what Erik Swyngedouw has labeled as the tensions between the “scales of regulation” and “the rhizomatic rescaling of economic networks” (Swyngedouw, 2004b, p. 33). This uneven regulatory space--characterized as “governance gaps” by business and human rights experts (Ruggie, 2008, p. 3)--forms the backdrop for Canadian opposition to Alcan’s capital network and the efforts to create more answerable investment networks.¹⁰

5.5.2 Human Rights

In Canada there is a broad network of solidarity, advocacy and non-governmental organizations such as Rights and Democracy, Amnesty International, Mining Watch and the Halifax Initiative which work under the umbrella of the Canadian Network on Corporate Accountability. Faced with increases in Canadian based foreign direct investment and offshore resource extraction, they argue that the Canadian state should enforce human rights standards for Canadian companies abroad (Development and Peace 2007). The consensus based report of the Canadian National Roundtable on Corporate Social Responsibility (2007) suggested imposing a limited human rights framework, with an ombudsman to hear complaints of overseas violations, and the removal of state support (such as through export credit agencies) where violations were found. This limited human rights approach was not adopted by the Canadian government but

¹⁰ The chapter has not been changed from the form published in 2011. However, it is important to note that the legal context has changed. In Ontario, *Choc v. Hudbay Minerals Inc*, 2013 established a duty of care for foreseeable overseas abuses. Whether this will lead to a successful trial and award of damages remains to be seen.

does provide one vision of how to restructure networks.¹¹ Human rights groups such as Amnesty International accept a wide body of human rights, including social and economic rights and work with the assumption that “each of us has the duty to stand up, not just for our own rights, but also for those of others” and that “rights abuses anywhere are the concern of people everywhere” (Amnesty International, 2009). While seeing rights recognition as a mode of social inclusion and recognition of dignity, they look to legal processes to enshrine rights, and to create stability in rights protection through reliable monitoring and penalty systems. Responsibility is allocated to companies --to abide by (proposed) law--and to states to provide judicial surveillance through narrowly codified strictures concerning what types of conduct are unacceptable.

Canadian and international mining watchdog groups and human rights organizations publicized the Utkal project controversies soon after the Maikanch Massacre in 2000. They could already draw on considerable materials and campaign experience from Norwegian organizations who lobbied for Norsk Hydro’s divestment prior to its December 2001 withdrawal (Rønning 1998, Stave, 2001). The web pages of groups such as Mining Watch, Amnesty International and Mines and Communities are organized around vigilance over such networks and referenced and provided links to Indian non-governmental organization reports, newspaper reports, independent media and press releases concerned with the Utkal case (Mines and Communities, 2008; Mining Watch, 2007; Amnesty International Canada, 2006). As part of transnational activist networks “characterized by voluntary, reciprocal and horizontal exchanges of information and services” (Keck and Sikkink, 1998, p. 200) and “organization via communication systems – as opposed to communication merely reflecting or amplifying political organization” (Bennett, 2003, p. 150) they were able to draw on Indian human rights reports, communicative links and personal connections with Indian organizations to forge international collective action.

¹¹ In March 2009 the Canadian government issued a policy statement supporting voluntary but not mandatory guidelines for Canadian extractive companies abroad. This was panned by the Canadian Network on Corporate Accountability (CNCA 2009). In October 2009 Marketa Evans was appointed as a new “Corporate Social Responsibility Advisor” with a passive consulting role (DFAIT 2009). This was widely panned by civil society groups as ‘toothless’ for requiring consent from a mining company before allegations could be reviewed (Poplewell, 2009). In this same period a private members bill (“Bill C-300”) adopting many of the Roundtable Recommendations was tabled in Parliament and strongly supported by environmental and global justice organizations. However, the Bill faced strong opposition from the mining sector and was defeated in the Fall of 2010 amidst heavy lobbying (Curry, 2010).

Likewise, in India we see growing human rights non-governmental organization interest working to frame the issues in terms of human rights and the rule of law and forming reports which Canadian organizations could later use.

Through 2005 we see outside groups making investigations and missions: At least six Indian organizations made reports that corroborate one another, including the People's Union for Democratic Rights, The People's Union for Civil Liberty, Association for Protection of Democratic Rights, Human Rights Forum, The Indian Social Action Forum, and later, the People's Tribunal for Human Rights and the Environment which provides the best argued and most comprehensive of the reports (IPT, 2006). Lawyers and legal advocates from Delhi with the People's Union for Civil Liberties narrated how they decided "to go for a fact finding mission" in the Kashipur region and provided vivid accounts of police repression. They found the area to be "under siege" and people to be living in a climate of fear affecting their freedom to give consent. A People's Union for Democratic Rights "team" visited Kashipur in 2001 and again in 2005 "to examine the reported ongoing police repression" (PUDR, 2005, p. 3). They found that the village Collector had told area residents in 1998 that "If you don't vacate the land and take compensation, we will acquire it forcefully" (PUDR, 2005, p. 15).

Testimonials could be easily packaged into human rights reports. Indian and Canadian organizations then used the internet to distribute these as mobile artifacts. These drew on legal courtroom procedure (even where actual judicial process was unavailable), and provide key pieces of evidence to show police abuse or coercion in obtaining villagers' consent to the projects. As juridical forms for truth telling, activist groups mobilize these to give truth commissions, church reports, and human rights reports the gravity that they feel state legal inquiry should have (Ogilvy, 2007). They worked to allow NGOs to forge loose coalitions around their concerns about the network as a particular issue (Bennett, 2003).

A comprehensive citation of testimonials of police and company abuse are set out in the comprehensive India People's Tribunal report of October 2006 as part of its extended argument for why the government of Orissa should have ended the project outright. To give one example, Shanka Prasa Prasa Muduli of Baririjhola village narrated how police threatened, looted and beat

villages during raids on December 5, 2004. The report paraphrased: “Some 100 CID personnel under the leadership of Tikiri Police Station Officer in Charge Sri Kishore Chandra Munda entered Baririjhola village with guns and threatened the villagers. They told the villagers if you oppose the company, you will be shot dead... The villagers were so terrified that they fled and did not return for 3 to 4 days” (IPT, 2006, p. 67). Testimonials handled in this way showed that particular wrongs --violations of human rights principles-- had been suffered by individuals. Human rights activists networks could then transport these across space and work to assure they were heard.

5.5.3 Solidarity Organizations

From 2003 onwards the Montreal, Quebec based solidarity group “Alcan't in India” (“Alcan’t”) held demonstrations and vigils, sent delegates to Kashipur, wrote articles, posted bulletins, reports, timelines, and links to other sympathetic organizations on its website and held conferences, including one with the noted Indian scientist and activist Vandana Shiva (Alcan’t, 2008). Taking the position of solidarity activists in an international indigenous struggle—and so making explicit the links between resource companies and their use of Native land in Canada and India—they sought to relay villagers’ concern that the project be fully stopped and Alcan leave. Here the aim was to end, rather than reform the capital network. Key for Alcan’t was the idea that this was not, as Alcan claimed, “exclusively an Indian issue”. As Tamara Herman argued “this is very much a Montreal issue. It is Montreal-backed financing that is developing the UAIL project, for the sake of Montreal profit” (Alcan’t, 2005). Responsibility is cast into the mold of solidarity as “activism in one location—geographical, socio-economic, political—that works to ‘defend the interests, rights, and identities’ of people in other locations” (Sundberg, 2007, p. 147). However, this also refocuses responsibility onto individual citizens and places. By citing Montreal this locates the responsibility in *place* (Bosco, 2001; Escobar, 2001; Massey, 2004), confirming the city as not only a corporate headquarters, but as one in which political actors stand in relationship, as a locus of action that unites political actors, and as a meeting place where diverse persons can come together in action. Solidarity is thus construed in the fashion of Young’s “political responsibility” -- a generalized concern for others

throughout the world, but based on “acknowledging that one participates in social processes that have some unjust outcomes” (Young, 2004, p. 381). In the case of Alcan, its considerable linkages to Canada and Montreal resulting in blurring the distinction between a generalized political responsibility and Canadians’ complicity through a material actor network.

The solidarity work of Alcan’t in India was intensely focused on mobilizing truths about the capital network. Kashipur and the larger Rayagada District of Orissa were virtually unheard of in Canada before Alcan's involvement.¹² Activists and campaigners travelled to Kashipur to get testimonials, reproduced human rights reports, and held demonstrations, press conferences and letter writing campaigns to make these truths public. The results were major investigative articles in the *Toronto Star* (Cohn, 2004), and the alternative press, such as the *Montreal Mirror* (Sidaway, 2003). In January 2005 Brook Thorndycraft and Tamara Herman, working with Alcan’t in India, traveled to Kashipur, writing articles (Herman and Thorndycraft, 2005a) and recording interviews for radio (Herman and Thorndycraft, 2005b). The final radio show, broadcast in Montreal and also posted to the internet features villagers and local advocates, with an English language voice over, explaining how the ‘consent’ process in 2004 was coerced. Subram Night narrates how the *gram sabha* in September 2004 involved only 147 families, with others having no chance to attend: “The police people surrounded the meeting. They came with 9 big vans. The 147 people could not say anything, in the presence of these officers, and they were asked to give their signatures and leave. So it was a kind of forced meeting that was organized by the police officers”.

In mobilizing these truths, Alcan’t extended a relational perspective to knowledge production itself. In the hands of courts and some human rights reports, the production of testimony may omit local contexts, knowledges or perspectives and be produced to serve the interests of judges, lawyers or non-governmental organization workers. Alternatively, Herman and Thorndycraft worked in their radio show to convey the experience of villagers and life in

¹² A content analysis was performed of Canadian newspapers and magazines, using the Canadian Newstand Database. Of 30 articles found from 1993 to 2008 that mentioned Rayagada district (with a population of 80,000) or its towns and villages (including Kashipur), 29 concerned Alcan’s investment or Canadian opposition to it, and 1 a cholera outbreak.

Kashipur, using local music, and sounds and pacing the show to reflect the conversational patterns of a rural oral society. This casts testimonials as serving a larger purpose of building solidarity and so new forms of network connection. Testimonials worked to enable people to tell their own story (Slaughter, 1997), to carry the power of witnessing (Beverley, 2004; Warren, 1997), and symbolized “a revolt against invisibility” (Routledge 2003a, p. 262). While the work of Alcan’t displayed reflection on the power dynamics of representation (and its role in structuring network relations) their work also effectively framed ‘responsibility’ in terms of ‘responsibility *for* another’, one who needed help in being heard. Geographers seeking responsible forms of representation have celebrated contexts where villagers speak out about their own situation in their own organizing meetings (Routledge, 2003a, p. 261), or stressed that “mutuality in solidarity encourages individuals and collectives to speak for themselves” (Sundberg, 2007, p. 162). However, the material conditions of the Alcan-Utkal global investment network worked to separate Alcan’t’s activism from that ideal. It was Alcan’t members who spoke in Montreal and produced and distributed the radio shows. Alcan’t’s minimal solidarity network was made up of a few Canadian volunteers with little money or time for extended organizing, weak ties to Orissa marked by language differences, massive economic disparities, and long distance reach.

5.5.4 Shareholder Activism

Alcan’s general meetings from 2003 onwards featured street demonstrations (Sidaway, 2003) shareholders’ questions and resolutions, and attracted media attention. Alcan’t in India’s membership included Alcan shareholders Frederic Dubois and Abhimanyu Sud, allowing it access to Alcan AGMs (Alcan’t, 2004; 2005; Melnbardis, 2005). The Regroupement pour la responsabilité sociale des entreprises (RRSE), representing a group of Catholic nuns (the Missionary Oblates of Mary Immaculate) attended shareholder meetings from 2003 onwards to ask Alcan senior management about its response to lack of consent on the project, and provided detailed proposals for how to conduct new social and economic impact assessments (Parent, 2005). Herman and Thorndycraft traveled back to Montreal to attend and present their findings to the 2005 Alcan AGM (Alcan’t, 2005). In the run up to the 2005 shareholders meeting, Alcan

workers in Kitimat, British Columbia passed a motion in solidarity (with Alcan't in India and the villagers of Kashipur) to refuse to smelt any alumina that might come from the Utkal project: This was particularly effective in garnering media attention (Montreal Gazette, 2005) as were the protests at the 2005 AGM (Melnbardis, 2005; Marotte, 2005).

In 2006 a group of shareholder activists including private members, Shareholder Association for Research and Education (SHARE), Ethical Funds Inc., and RRSE were able to get a shareholder proposal before the annual general meeting. Citing the January 2005 report of the People's Union for Civil Liberties, the resolution asked for Alcan to sponsor an independent advisory committee that would recommend ways the project could gain free, prior and informed consent of the population (SHARE, 2008). It received 37 % of the vote (Swift, 2006). This is one of the highest rates of success SHARE had achieved for a social activist shareholder proposal in Canada (SHARE, 2008).

Shareholder activism involves multiple overlapping concepts of responsibility, tempered by the movement's structural commitment to capital network reform. Usually individual consumers or organizations (union controlled pension funds or religious orders) choose to purchase shares in ethical or activist oriented funds. Such funds own and trade shares for profit, but also provide screens against certain practices and strategically buy and sell shares and participate in shareholder proposals as a way to pressure companies on their ethics. This implies a scaling down of responsibility to shift concerns to the personal politics and virtues of day to day commercial decisions (Micheletti, 2003; Abbey, 2004). In large part values are expressed as general guidelines to abide by principles of international human rights. Consumers then entrust or subcontract ethical action to various shareholder organizations that draft shareholder proposals and monitor corporate activities. There are wide variations in motives and politics between organizations such as the union funded and based SHARE and the more activist and rights oriented RRSE. This can be inferred from the different values embedded in the screening processes for shares and proxy voting guidelines (which instruct fund managers how to intervene in shareholder resolutions). Because of the free play of what counts as risk, and the mediating role of public opinion on profits, human rights concerns can fit into shareholder resolutions.

Organizations such as Amnesty International Canada (through its 'Sharepower' campaign) also participate in shareholder activism, and backed the 2006 shareholder resolutions concerning the Utkal project (Amnesty International Canada, 2006).

Consumer led systems of responsibility are widely critiqued as they redistribute responsibility to individual consumers. Consumers are implored (“interpolated”) to *responsibilize* themselves within market conditions leading to individualized action that re-enacts market logics (Hobson, 2004; Slocum, 2004; Guthman, 2008; Quastel, 2008). However, such ethical consumption may also at times help consumers give voice to and act closer to their values (Clarke et. al. 2007, Barnett et. al. 2010). Shareholder activism may also seek to broaden the range of what counts as risk for companies to include social and environmental risk and so shift discourse of appropriate corporate behaviour (Abbey, 2004). However, shareholder activism is not directed towards, and is different in kind from, advocacy for state regulation of corporate behaviour. While corporate law may be flexible enough to accommodate persistent and widely held shareholder ethical demands (Lee, 2005) in practice there is a widely held assumption that corporations are to work towards profit maximization and this constrains corporate action that explicitly conflict with such goals (Bakan, 2005).

5.5.5 Alcan's Social Responsibility

International organizations such as the World Bank and companies such as Alcan came in the last decade to adopt international ‘best practices’ and voluntary standards, environmental management systems and codes of conduct: These developed relatively quickly in the years prior to 2006 and came to constitute new modes of regulation and network configuration (Wood, 2003; Goldman, 2006; Hughes, 2006). Initiatives such as the Global Compact, the Equator Principles and the World Bank's financial arm's “Performance Standards” emerged as prominent CSR norms, and provided frameworks (and promises) for companies to respect international rights norms, implement environmental management systems and do due diligence to ensure this happens (Halifax Initiative, 2006b; Morgera, 2007). The principle that Alcan would follow local laws, if not explicit in its CSR framework is certainly implied throughout its *World Wide Code of Employee and Business Conduct*. Human rights critics indicate that the prominent CSR norms

fail to provide mandatory language, enforcement mechanisms, or third party transparency (Gagnon et. al., 2003; Global Witness, 2007). Nothing in Alcan's CSR framework provided mechanisms for victims to seek compensation. By providing the appearance of taking on responsibility, companies hope to minimize risk through responsabilizing themselves, deflect the state from imposing limiting measures on them, and appear as suitably responsible agents to protect their role in existing social divisions of labour. As such they dovetail with neoliberal strategies in "advanced capitalism" to move responsibilities from the state to the economic sphere (Rose, 1999). From 2001 on Alcan sought to transform itself using CSR, including joining the Global Compact. By 2007 its webpage boasted that "the sustainability message is now an integral part of everything we do at Alcan, from strategy development at the executive level to improvements initiated by our operating teams around the globe.... We view sustainability as an enormous opportunity to reinforce our competitive edge" (Alcan, 2007). Through working with CSR and sustainability codes, conducting impact assessments and publicizing this work through public relations departments Alcan aligned its technologies and expert systems with international 'best practices' such as those of the World Bank (Goldman, 2006).

In the six years of active Canadian campaigning from 2001 to 2007 Alcan's strategy in dealing with the Utkal Project and its many opponents worked together with its sustainability project to create a complex geographic imaginary which operated to obscure rather than disclose the events in Kashipur. Alcan played on mixtures of silences and controlled representations of the project activities. As the spaces of Kashipur became spaces of risk, Alcan needed to either silence or contain these network fires in an opposite movement from that of the emerging testimonials and human rights reports.

Early on Alcan set down a two pronged approach which it stuck to. The first arm can be found in its annual reviews for 2004 and 2005, on its website, and in the annual general meetings. This featured defending the project's rehabilitation and restitution package and environmental and social record, in part by making reference to the company's social responsibility standards. The 2005 Sustainability Report explicitly mentions the Utkal project:

“Alcan understands the importance of balancing growth and profit with the needs of its stakeholder groups” (Alcan, 2005, p. 41) and as such “all project-affected people would be eligible for benefits stemming from a mutually agreed upon rehabilitation and resettlement package” (p. 41).

Likewise, at the 2006 Stakeholders Forum, hastily organized and held immediately prior to the 2006 AGM and in response to a shareholders’ proposal about Utkal, (and in materials on its web page referencing that forum) Alcan could assemble its own arsenal of imaginaries and instruments. In its slide show presentation it repeatedly references its own sustainability frameworks and membership in global CSR initiatives, inviting the audience to concern itself with Alcan’s intentions rather than analyzing the effects of Alcan’s actions in Kashipur. Unlike traditional Canadian resource extraction companies whose public relations employ the “conventional, but remarkably effective, tropes of scientific and technological progress” (Braun, 2002, p. 37), Alcan reshaped this to concentrate on its management of the ethical quandaries and risks of an interdependent world. Alcan could then project its own CSR standards as reflecting ethical expertise—industry best practice. Responsibility became recast as responsiveness, a form of public relations whereby what matters is having considered and navigated the issues and successfully self-responsibilized.

This strategy required the mobilization of silences. Alcan claimed that “the project was endorsed at an all-party convention in November 2004” (Alcan, 2006c, p. 3): This clearly ignored the various testimonials of coercion in the consent process. Alcan claimed that the project provides 180 families (revised upwards due to population growth) and provides them with new model villages, the promise of one job per household and some rudimentary health and school facilities (Alcan, 2006b). This omits the various customary, non-registered and collective forms of land usage and ownership which gave weight to the claim that thousands more people were affected (PUDR, 2005, p. 11). This land was purposefully cast as of little value “due to the poor quality of the soil and the lack of irrigation” (Alcan, 2005, p. 4). This ignored the history, ethnicity, languages, farming practices or socio-economic conditions of the villages in and around the site, and especially the fact that these “limited crops” amount to villagers’ subsistence

(PUDR 2005, p. 11). The Baphalimali Hill was described as an “uninhabited hill” (Alcan 2005, p. 3), while villagers such as Supram Night described the entire hill as sacred (Thorndycraft and Herman, 2005b), Alcan re-interpreted this as a legitimate claim by villagers to access a small reserve on the site’s north end.

The second strategy of Alcan was to re-interpret the geographies of the network links. One approach consisted of insisting that the issues were Indian issues and (by implication) not for Alcan to decide. Implicitly referencing the status quo logics of sovereignty and territorial division of responsibilities, Alcan Chief Executive Officer in 2005, Thomas Engen, told reporters that while there had been violence associated with the Utkal site “Resolution of these fundamental issues must come in India, not New York or Montreal” (Gibbens, 2005). Alternatively, in response to journalists or campaigners critical of the project, senior Alcan executives in the Montreal office would admit that the project was “troubled” but also say that Alcan had not yet made a decision as to whether to proceed. If it were to proceed, it would be on the basis of free and informed choice, or after a new environmental and social impact analysis (Mining Watch blog, 2001; Melnbardis, 2005). Here, the strategic and ethical issues revolved over whether Alcan should join the project. Key to this consideration was the relatively passive role Alcan would play: “With or without Alcan, the Project will likely proceed” (Alcan, 2006b). If Alcan did decide to be part of the project “given its recognized standards in the area of sustainability, its participation would bring added value to the local community and region” (Alcan, 2006b, slide 15; 2006c, p. 3). On the other hand, Alcan would only proceed once there was an independent assessment of “the social and environmental dimensions” (Alcan, 2006b, Slide 3).

Collectively, the combined focus on responsibility did have material effects. Alcan’s CSR messaging ultimately created a system of legitimation which rendered Alcan vulnerable to immanent critique. By 2007 there was a large body of evidence marshaled by solidarity and human rights organizations showing that consent was illegitimately and violently obtained. Alcan had to then act responsibly: As Jacynthe Côté, president and chief executive officer of Alcan’s bauxite and alumina division told a mining conference, Alcan left the project “due to

constraints within the governance structure that limited Alcan's ability to participate in key decisions, including but certainly not exclusively related to sustainability” (Côté 2007). For the social activists and human rights groups involved this was only a partial victory--as of the time of writing the project was nearing completion, Alcan has continued to provide technical advise, and most of the project affected villagers of Kashipur remained without avenues for reparation. Activists then were largely unsuccessful in stopping the project and only partially successful in transforming Alcan’s (and so Canadians’) network links to the project.

5.6. Conclusion

The case study mapped disparate and conflicting uses of ‘responsibility’ as used by social actors, focusing on how a global investment and production network become bound up with the term. Each of five distinct approaches to ‘responsibility’ were linked to different institutions and organizations (commercial law, human rights groups, solidarity organizations, shareholder activists, and CSR). I analyzed and compared the approaches in terms of their implications for network structure and governance, knowledge production and approaches to potential distant harms. While CSR has come to dominate public discourse around regulating FDI, the human rights and solidarity activists working to publicize and change Alcan’s investment provided alternative visions. Alcan’s FDI was subject to an ethical complex of solidarity activists, human rights defenders and others who recognize their networked connections to distant others. Alcan, through its CSR, sought to both incorporate and deflect such concern. “Responsibility” became a sword for activists to challenge Alcan’s actions, a shield for Alcan to protect its position and as a key word in network regulation.

However, the fact that Alcan withdrew, did not compensate villagers and the project continued suggests significant problems with the forms of relationality created by global production and investment networks. Relational approaches (such as Massey’s) suggest that ‘responsibility’ attaches to global production and investment networks because such networks are the source of new forms of social relationships. However, global production and investment networks create very specific forms of social relationship dominated by commercial norms. Investment networks are centered on the expansion of capital and its geographic reach is based

on finding sources of profit. If it is blocked through one channel it will flow to other sites (Harvey, 2006). If the forms of relationality demanded by an ethical complex become too constraining, capital may simply withdraw, thereby ending, rather than reforming the relationship. This creates basic tensions and contradictions for academics or activists who wish to re-imagine such relationships as also of care and connection

Here it is relevant that the human rights and solidarity activists that worked to transform Alcan's investment emphasized broader sources of moral obligation and also worked to create new forms of network links between Canada and Orissa. Human rights groups such as Amnesty International are interested in securing rights for everyone, everywhere, and Alcan't spoke in the name of international solidarity. These forms of activism swing free of the contingency of global investment and production network links and are motivated by notions of shared human dignity and rectifying structural injustice. On the basis of these ideals, they sought to create structures for (or, in the case of Alcan't, simply end) the investment network on the basis of these ideals. In doing so, these activist organizations worked to create new networks which allowed for relationships on terms different from that of global production and investment networks. For such networks were based on the idea that persons and environments were worthy of concern regardless of whether they were linked through trade relations to, or were the source of profit for Canadians. These approaches suggest rethinking geographies of responsibility. It is not particular network ties that give rise to responsibility. Rather, persons and places in networks are persons and things we already have reason to care about and we should ensure our relationships with such persons and things reflect our values. We need to work to make more just the relationalities in which we are entangled, but we also need to address the structural injustices of the global economy that give rise to unjust social relations.

6. Political Ecologies of Gentrification

6.1 Introduction

In 2007 the Onni Group of Companies-- a private real estate developer with large scale (“multi-unit”) developments through the Vancouver, British Columbia, region -- created a community garden at a vacant lot it owned in Downtown Vancouver — at the relatively affluent corner of Seymour Street and Pacific Boulevard (Fig. 6.1). The company had the land divided into small garden plots, and advertised a contact number for anyone interested to call so as to reserve a plot for growing plants or flowers. Although ostensibly to help promote urban gardening, it also served to “make gardens a marketable amenity like swimming pools or health clubs” (Garr, 2008). Chris Evans, Onni’s Vice-President of Development, admitted it was less than an altruistic move. He told reporters that, given Vancouver’s homeless crisis, leaving vacant buildings standing inevitably led to squatters and public safety problems, and that creating the garden would avoid that headache and in the process also burnish the developers’ image (Garr 2008). The garden came to serve the further purpose of citing a large billboard (Fig.6.1) for Onni's newest development in the city core -- a new condo complex to the east at Main Street and Union Street, in the heart of Chinatown and the Downtown Eastside (Fig. 6.2), Vancouver's poorest neighbourhood and an area long recognized as subject to gentrification pressures (Smith, 2003; Blomley, 2004; Lees et. al., 2007; Cumming, 2008). At the same time the billboard implored potential buyers that they should “move east” - cynically parodying the pioneering (and colonizing) spirit of “the West” in a well worn gentrifier's cliché (Fig. 6.1).



Figure 6.1 Onni community gardens, Seymour Street and Pacific Boulevard, Vancouver, British Columbia. Source: Photo taken by author on April 2, 2008.



Figure 6.2 Construction site for Onni's V6A Development. Union Street and Main Street, Vancouver, British Columbia. Source: Photo taken by author on April 2, 2008.

This charitable provision of a community garden may have been a one off publicity ploy, or simply a low cost way for a developer to hold land. But it was loaded with deeper meanings and points to new transformations in the political ecologies of gentrification, which I want to explore in this paper. The garden was symptomatic of how gentrification draws on and thereby

reflects a growing ability by real estate developers and their target consumers to use, discourses and policies of the environment. Vancouver, like many cities, has seen a growing interest in, and social movements concerned with, food security as part of sustainable urban systems and the city has worked to increase the number of community gardens (Jonas and While, 2007; for community gardens in other cities see Domene and Suari, 2007; Pudup, 2008). In the process of promoting high end condominium living, the Onni corporate group drew on earlier social movements and government response to recast hobby gardening as an urban consumer good, an individual practice of self-betterment, and a contribution to 'the overall betterment of the surrounding community' (Fig.6.3) as well as its own corporate self-promotion. The Onni Gardens are also symptomatic of a larger unfolding process. The densification of Vancouver's downtown area is associated with environmentally sensitive planning, but was also spreading eastward (in part through Onni's efforts) to gentrify poorer neighbourhoods.



Figure 6.3. Sign at gate, Onni community gardens, Seymour Street and Pacific Boulevard, Vancouver, British Columbia. Posted at gate visible in right lower corner of Figure 6.1. *Source:* Photo taken by author on April 2, 2008.

Traditionally, environmental discourses (from both government and environmental organizations) in North America have largely framed 'nature' and 'the environment' as separate from (and implicitly ignoring) human interdependencies, social and economic practices within socio-natures, and social justice considerations (Braun, 2002; Robbins, 2011). As a result, the recent surge in environmental awareness and governance in cities has not been matched with an analysis of (or practice reflecting) concerns of inequality, gentrification, and other social dimensions that can accompany changes brought by new environmental realities and concerns. It is in this uneven ethical space that the Onni Group was able to freely promote and so juxtapose its environmental benevolence and its gentrifying push.

Sarah Dooling recently has studied the links between urban park planning and the eviction of homeless persons from parks, and in this context defined the term “ecological gentrification” as “the displacement of vulnerable human inhabitants resulting from the implementation of an environmental agenda driven by an environmental ethic” (Dooling, 2008, p. 41). Using the example of Vancouver, the Onni Garden and the newly gentrified spaces close to it in the city’s inner core, I argue that eco-gentrification emerged between 2006 and 2008 as an urban environmental concern directed to be consistent with increasingly competitive neoliberal real estate markets. In Vancouver’s case there was a unique combination of a strong environmental movement, the presence of large brownfield redevelopments which the city owned or over which it could exert strong zoning controls, public institutions such as universities involved in real estate development, and high, escalating land prices. The situation was intensified by Vancouver’s particular geography, the use of containment boundaries to protect agricultural land, and the combination of car dependence and lack of freeways, making inner city living desirable in order to avoid long commutes. The shifting geopolitics of energy threatened to further reorient patterns of extensive urban development in favor of densification. Thus the Vancouver case is a particular example of how the political ecologies of gentrification can play out, while recognizing that the same conditions could develop in other cities.

This study begins by providing an overview of gentrification studies and urban political ecology, suggesting avenues for the synthesis of these research focii, and surveying the existing literature that may be relevant to understanding political ecologies of gentrification. Much of the recent literature has noted contingent links between urban environmental governance and problems of affordability and gentrification (Lees and Demeritt, 1998; Gibbs and Kreuger, 2007, Hagerman, 2007; Jonas and While, 2007; Kear, 2007; Krueger, 2007; Krueger and Savage, 2007). However, little attention has been given to drawing on existing gentrification literature to provide a systematic understanding of how these processes are related. Interpreting the political ecologies of gentrification involves recognizing the ways in which material relations and uneven resource consumption, concepts of nature, and the politics of environmental management are worked into or involve gentrification processes. My aim is not to create a new comprehensive theoretical perspective. Rather, it is to shed light on the unexamined ecological dimensions of cities; help overcome long established binaries of economy, city, and culture (on the one hand) and nature and environment (on the other); critically scrutinize the role of discourses concerning the environment in urban planning; and be vigilant as to the possibilities that marginal inner city populations will be rendered as “collateral damage” (Kear, 2007, p. 327) in the emerging contests between environmental governance, middle class affordability, and urban revitalization.

Second, I will discuss the phenomenon of eco-gentrification as it has emerged in Vancouver. This will be based on a synthesis of ideas from recent research in urban studies, political ecology, urban environmental governance, and consumption and gentrification, and also draws on public policy documents and newspaper stories to fully examine the Vancouver context. As such it is part of a larger ongoing project and requires further corroboration through quantitative, interview, and ethnographic methods. It will be argued that Vancouver represents a well-developed urban crucible for the new political ecologies of gentrification.

6.2 Political Ecology and Gentrification

Political ecology seeks to synthesize political economy—with its emphasis on the distributions and dynamics of power and critical theory of discourses—with the study of biological processes and the shaping of environmental relationships. Eschewing the management discourses

of “resources” and the romantic glosses of “nature,” political ecologists seek to understand the material flows, human/non-human relationships, and power regimes that comprise “socio-nature,” and the discursively and materially constructed systems—simultaneously social and biological—that we inhabit (Heynen et. al., 2006; Keil, 2007). This can involve a downward shift of studies to account for processes such as material flows and energy use as well as context-dependent studies of resource conflicts in particular places; it can also involve an upward shift to the histories of thought and political discourses, social and environmental policies, and the workings of capitalism that shape human practices. During the past decade, a subfield of urban political ecology has emerged that focuses on how economic and social processes create and recreate urban landscapes (Keil, 2003, 2006; Braun, 2005; Heynen et al., 2006). Eschewing the “crude binary ruling of city versus the environment” (Heynen et. al., 2006, p. 3) researchers have studied the violence and conflicts involved in transformations of urban landscapes, urban social movements for environmental justice, and the political economy of urban regimes. As Robbins explains,

City streets, gardens, golf courses, kitchen sinks, and garages are all teeming with life, connected and regulated through systems of power and fixed through investments of capital... political ecology might integrate critical theories of urban growth, decay, investment, and control with ecosystem analysis of daily life. (Robbins, 2004, p. 216)

Gentrification research classically has examined the processes by which working-class residential neighborhoods become inhabited and transformed by middle-class and wealthy home buyers and renters, and by landlords and professional developers who target those markets (Smith, 1982). Through case studies of neighborhoods in transition and analysis of census surveys and databases, close empirical study has revealed a 40+-year process whereby the city has been a site of decay and regeneration, of winners and losers through capital accumulation strategies, and of transformations fueled by new values systems and generational change (Slater, 2006; Lees et al., 2007). In the 1960s and early 1970s, gentrification was a sporadic process driven in part by governments hoping to stem the tides of disinvestment in inner-city neighborhoods (Hackworth and Smith, 2001, pp. 466–467). By the 1970s, it had become a more

widespread phenomenon (“second wave”), at times dispersing to smaller cities across North America, and at times linked to the rise of arts communities in neighborhoods such as SoHo in Manhattan.

By the late 1990s, the process had increased in scale and complexity (as “third-wave gentrification”) to include large-scale capital developments (with infrastructures of marketers and public relations), government policies, and public-private partnerships as the key drivers (Hackworth and Smith, 2001, p. 468; Lees et. al., 2007, p. 174). As gentrification became a “systematic, comprehensive policy for city building” (N. Smith, 2008, p. 196), governments have shifted from labeling gentrification policies as such, preferring instead terms such as “regeneration” (N. Smith, 2008, p. 196) or “reurbanization,” thereby effectively “stripping the process they are describing of its social class character meaning and implications” (Slater, 2008, p. 214). Alternatively, as the state forges new development in “new build areas,” “gentrification is extending now into risky quarters where sometimes there are no prior occupants” (Shaw, 2008, p. 193)—and a process of “exclusionary displacement” (Slater, 2006) means poorer people are precluded from living where they may otherwise have settled. The result is often “the cleansing of the built environment and the streets from the physical and human detritus ... to make the city over into a pleasant site of and for bourgeois consumption” (Wacquant, 2008, p. 199).

Concurrent with newer waves of gentrification (and especially state involvement) have been both recognition and support for the process by academics and policy think tanks (Duany, 2001; Byrne, 2003; Freeman and Braconi, 2004). Typically, the arguments for gentrification are that it stimulates urban development. As Andres Duany argued in “Three Cheers for Gentrification,” gentrification is “the rising tide that lifts all boats” as it “rebalances a concentration of poverty by providing the tax base, rub-off work ethic, and political effectiveness of a middle class, and in the process improves the quality of life for all of a community’s residents” (Duany, 2001, p. 36). Widespread academic and policy support for gentrification, in turn, reflects the shifting role of the state from that of provider of social welfare to supplier of business services and amenities. One result has been a tightening of empirical research aimed at showing the harmful effects and displacement of poor populations by gentrification processes

and a renewed concentration on the right to stay in place (Wyly and Hammel, 2005; Slater, 2006; Newman and Wyly, 2006; Slater 2008). Traditionally, gentrification researchers were divided in orientation. Marxist-inspired accounts considered the role of landlords and capital in allowing poor neighborhoods to grow but also in converting them when profitable. Consumption accounts looked at the lifestyles and values of gentrifiers, finding them to be middle class and often white collar workers who were also often of liberal political orientation, and who sought—and so were tolerant of—racial, ethnic, and class diversity in their neighborhoods. Increasingly, researchers accept the validity of both approaches and seek to combine them (Slater, 2004). Researchers are also looking to include the role of the state, through both city zoning regulation and financial market regulation “in producing not only space but the spaces of consumers and producers of housing” (Wacquant, 2008, p. 201), as well as how differently situated knowledges and class positions provide different experiences of gentrification and the values and lifestyles it imposes on neighborhoods (Allen, 2008). Gentrification researchers can help bring to political ecology well developed empirical research methodologies and a cumulative process of understanding the dynamics of gentrification.

6.3 Towards a Synthesis

Critical work drawing on the Marxist tradition exists in both gentrification and political ecology, and finds a common ground (if not a conjoined research program) in Neil Smith’s tracing of the geography of capitalism to both the physical and conceptual production of “second nature” (Smith, 1984, 1996) as well as urban real estate markets (Smith 1982, 1984). Both critical gentrification studies and urban political ecology can now draw on the well developed theoretical program in Marxian urban political ecology (Swyngedouw, 2006; Heynen, 2006; Heynen et al., 2006) which draws on reinterpreting Marx’s writing as concerned with problems of ecology and metabolic relations between nature and the economy (Smith, 1984, 1996; Swyngedouw, 2006). Alternatively, new approaches in urban studies drawing on forms of “immanent materialisms,” such as Actor Network Theory (Swyngedouw, 2006) and “cyborg” post-modernism (Keil, 2007), can also be helpful in showing how urban social and cultural processes (and even bodies and personal identities) consist of, and involve, flows of energy and

chemicals as they transform ecosystems. Gentrification research can also draw on a broader, heterodox body of perspectives and theories in political ecology that stress how cities “produce environments that embody and reflect positions of social power” (Heynen et al., 2006, p. 6) and which can be applied to “the regulation of our relationships with nature in cities” (Keil, 2003, p. 730; for overviews of different approaches see Keil, 2003; Braun, 2005; Keil, 2006).

Gentrification can also connect to a variety of grassroots urban environmental and environmental justice movements, many of which are concerned with gentrification and provide activist and practical counterpoints to critical research (Keil, 2003; Wolch, 2007).

As a rough heuristic for organizational purposes, we distinguish among five political ecology approaches for analyzing gentrification. Each of these approaches “see the city as a metabolic circulatory process.... invariably infused with myriad configurations of power that saturate material, symbolic, and imaginary (or imagined) practices” (Swyngedouw, 2006, p. 35) As will become clearer in the case studies, the Onni Garden and surrounding neighborhoods can be read in terms of each of these dimensions of the political ecologies of gentrification and demonstrate how they can interact and work together.

6.3.1 Local Environments

Parks, gardens, and local forest ecologies in cities may change as a result of inequalities and gentrification processes. Environmental justice concerns have traditionally considered inequalities in the distribution of polluting industries but urban inequalities and gentrification can extend to parks, gardens, and forest ecologies within cities. Poorer neighborhoods may have fewer green spaces (Pincetl and Gearin, 2005), parks transformed into “violent ecologies” through neglect, lack of policing, the prevalence of crime, and neighborhood fear (Brownlaw, 2006); or particular social groups, such as the homeless, systematically excluded (Dooling, 2008). Studies of plant and animal ecologies within cities can also reveal ecological variation among neighborhoods: analyzing the differentials of forest cover in Indianapolis, Nik Heynen notes the ways in which “urban environments are controlled, manipulated, and serve the interest of the elite at the expense of marginalized populations” (Heynen, 2006, p. 500).

Local ecosystems, parks, and gardens can be read as telling complex socio-ecological histories about how people perceive and use these places, and how this is transformed over time as neighborhood demographics shift (Brownlaw, 2006; Domene and Sauria, 2007; Hagerman, 2007). The effects of gentrification in reshaping landscapes can be most dramatic when upgrading neighborhoods transform former industrial lands (Hagerman, 2007), or when gentrification initiatives occur after widespread environmental, but not “natural” disasters, such as in New Orleans after Hurricane Katrina (Bakker, 2005; Davis, 2005). Gentrification studies can investigate the dynamics behind these changes, and how shifts in parks, gardens, and local ecologies are linked to the upscaling of neighborhoods. Banzhaf and Walsh (2006) have suggested that environmental justice concerns about pollution in poor neighborhoods might be met just as gentrification takes place—when the removal of industrial facilities can be linked to what they call “environmental gentrification” involving neighborhoods modified in multiple ways including shifts in wealth and class. The close relationships between cleaning up neighborhoods and urban environments are not new. As Swyngedouw (2006) has noted, the “Hygeinic City” of the 19th century already celebrated the city as a system of “circulatory conduits,” and the reordering of the city to create “a sanitized urban life” also featured displacement: “Hausman’s opening up of Paris, King Leopold’s sanitation of Brussels, the visionary construction of Vienna’s Ringstrasse, and London’s slum clearance also point to the combined processes of political–ecological transformation and socio-cultural reconstruction” (ibid., p. 22). These perspectives point to the Onni Garden being read in terms of the transformation of local ecology (formerly cement cover as a restaurant and parking lot), an accounting of who will use it and why, and as an ideologically saturated green space.

6.3.2 Urban Metabolisms

Cities involve complex metabolic circuits linked to distant ecosystems, through piping in water and oil or trucking in food and cement, and sending out wastes such as greenhouse gases, plastic bags, and used cooking fats. Gentrification will create transformations in resource use and urban metabolism as “urbanization occurs in and through a vast network of relationships, and within complex flows of energy and matter, as well as capital, commodities, people and ideas,

that link urban natures with distant sites and distant ecologies” (Braun, 2005, p. 637). Initially, gentrifiers may use more resources per person because “there was one family living where there once were four” (“Gentrification Blues” quoted in Slater, 2008, p. 216). Alternatively, there are a growing volume of claims—for the most part unverified and without examining building energy requirements or consumers’ daily practices—that the (often gentrifying) transformation of cities to include urban high-rise condominiums forms the basis for sustainable lifestyles, that, for instance, Manhattan is a “utopian environmental community” (Owen, 2004, p. 111).

Material flow accounting is a relatively new concept and faces numerous complexities as to what to include and emphasize (Spangenberg, 2005). A few quantitative studies of total resource flows in and out of cities do exist, including case studies of Toronto (discussed in Keil, 2006), London (in Swyngedouw, 2006), and York, England (Barrett et. al., 2002). But no studies were found that traced urban metabolic flows through their network linkages to origins in the countryside or overseas, or that scaled down to neighborhoods, census tract levels, or income-group clusters. Research has been done on travel mode: gentrifiers in Canadian cities have been found to favor walking and cycling, reflecting their new inner-city amenities, but have not given up their cars, and in Vancouver’s Yaletown (adjacent to Onni Gardens), featuring “post-industrial planning *à la mode*” and ground zero for densification initiatives, more people drive to work (57%) than in adjacent census tracts (Danyluk and Ley, 2007). The ecological footprint analysis provides a proxy in terms of “needed land” for consumption, and has been used to provide quantitative analysis of the significant differences in resource use by rich and poor (CCPA, 2008, p. 24), suggesting this could also be applied to gentrification. Researchers have found that provision of private gardens and pools for a newly suburbanized middle class in Barcelona provides differential use of water resources (Domene and Sauria, 2005). A quantitative analysis of shifting resource flows in Vancouver’s Yaletown and Downtown South neighborhoods (where the Onni Garden is located) is beyond the scope of this study; nonetheless, the Garden can be read as symptomatic of a number of shifts in consumption. Not only does the Garden represent a way for people who now live in small apartments without significant private green space to grow their own food. It also represents new values of local food and reflection on food miles.

6.3.3. Urban Environmental Governance

Gentrification may arise due to new forms of urban environmental governance as languages of sustainability become applied to the entrepreneurial city. Urban governance trends toward urban revitalization, attracting wealthy residents, or cleaning up industrial sites that otherwise have gentrifying effects are now cast as green. New forms of environmental governance—such as planning for greenhouse gas reductions through transit-oriented developments—may also have gentrifying effects. In this vein, David Gibbs and Rob Krueger (2007) note a strong correlation between United States cities that have prospered in the “new economy” (the software, finance, and design industries celebrated as employing the creative class) and those that have adopted sustainability policies (ibid., p. 97). They emphasize the ways in which (sustainable) development initiatives reflect a form of capital accumulation that work within the rules of the game of international neoliberalism, marking a new “sphere of convergence” (ibid., p. 100) where sustainability “may not be an obstacle to capitalist accumulation but rather a *constituent* part of it” (ibid., p. 103). Others have taken up this theme, arguing that in particular cases environmental governance appears not as a cover for preexisting capitalist accumulation strategies, but instead transforms them as it serves to create a new “environmental capital fix.” Roger Keil interprets emergent discourses of sustainability since the 1992 Rio de Janeiro Summit as “a recipe for the survival of capitalism” in which “sustainability gets redefined as one of the possible routes for neoliberal renewal of the capitalist accumulation process” (Keil, 2007, p. 46). For Mark Kear, key terms such as livability and sustainability, when applied to new real estate developments in Vancouver, flexibly serve to enable “never-quite finished, trial-and-error processes of searching for new fixes” (Kear, 2007, p. 325) that employ an underlying drive towards the “harmonization of socionature with accumulation.”

State-initiated or planned urban redevelopment projects on brownfield sites typify third-wave gentrification in building for middle-class or wealthy consumers, and now increasingly employ sustainability language. They may be defended as ways of having people commute less, and may involve “green” features, such as water recycling and green roofs. Political ecologists have noted contingent links between concepts of nature, urban redevelopment projects, and

affordability (Lees and Demeritt, 1998; Gibbs and Kreuger, 2007; Hagerman, 2007; Jonas and While, 2007; Kear, 2007; Krueger, 2007; Krueger and Savage, 2007). Typically, governments and their development corporations, private companies, and private–public partnerships working within the advanced liberal political climates of the 1990s and 2000s favor projects that cater to middle-class consumers and clean and orderly environments.

The operation of a complex web of esthetic, political, and eco-social concepts and planning principles, such as “New Urbanism” and “liveability” underscore how environmental discourses transform these developments. In describing Portland’s riverfront redevelopments, Chris Hagerman noted how urban environmental governance has coalesced around the concept of “liveability” as combining new urbanist and environmental orientations: widely utilized in planning and civic governance discourses, liveability is “a set of understandings combining ideologies of nature, society, urbanity and nostalgia” (Hagerman, 2007, p. 288). While liveability can be a device for attracting mobile and desirable workers and pushing “a city’s reputation ahead of its peers” (ibid., p. 289), it is not merely a clever marketing concept, but incorporates a “hybridized imagination” that largely seeks to negotiate the demands of the urban growth machine, anxieties about environmental change, and the desires of elite consumers. However, critical geographers have long noted the ways in which New Urbanist principles impart a series of esthetic considerations that can serve to sanitize space and drive out the poor. As David Harvey has noted about New Urbanism’s communitarian landscapes, “‘Community’ has ever been one of the key sites of social control and surveillance, bordering on overt social repression” (Harvey, 1997, p. 3). And Mike Davis has noted, in the context of HOPE VI redevelopments that promised but did not deliver social mixing, that “Smart developers ... have been quick to put New Urbanist halos over their otherwise rampant land grabs and neighborhood demolitions. Likewise, shrewd conservatives ... have come to recognize the obvious congruence between political traditionalism and architectural nostalgia” (Davis, 2005). The situation is only made worse by Andres Duany’s explicit acceptance of the *grundnorms* of neoliberal gentrification advocacy (Duany, 2001). Peter Weir’s film *The Truman Show* captured the overly sanitary and willfully naïve atmosphere of Duany’s pioneering New Urbanist development at

Seaside, Florida. The expression *Truman Showesque* has repeatedly been applied to urban revitalization efforts in Vancouver's inner core (Punter, 2005, p. 226; Kear, 2007, p. 327).

Urban developments also increasingly draw on Smart Growth principles, which emphasize mixed-use and dense neighborhoods that are walkable, transit accessible, and combine work, living, and recreation. Green buffers protect farmland and transit use reduces automobile dependence. Urban developments may thus be designed as part of a larger process of Smart Growth–inspired urban densification and municipal environmental law (Kreueger and Agyeman, 2005; Cool Vancouver, 2005). Smart Growth initiatives that promote a return to dense urban neighborhoods as a planning model may also turn “the spotlight back on many urban core neighborhoods” (Bullard, 2007, p. 3) and making them more popular among those able to afford their increasing real estate prices.

Smart Growth as a set of planning principles can include provisions for protecting and providing affordable housing (Curran and Wake, 2008). However, Smart Growth initiatives, when adopted by city governments, become worked into packages of “actually existing sustainabilities” (Krueger and Agyeman, 2005) that include urban entrepreneurship and quality-of-life considerations as part of the New Urbanism. Exclusionary dynamics have been associated with Smart Growth initiatives in Austin, Texas (Gibbs and Kreuger, 2007); Worcester, Massachusetts (Krueger, 2007); Boston, Massachusetts (Krueger and Savage, 2007); and Oakland, California (Bullard, 2007). A number of cities have adopted Smart Growth policies, especially containment boundaries that create barriers to outward sprawl. Others, such as Vancouver and Toronto, border on agricultural land reserves that automatically operate as such boundaries. In many cases, these same cities face spiraling house costs (Gibbs and Kreuger, 2007; Jonas and While, 2007; Krueger, 2007; Krueger and Savage 2007), suggesting a troubling series of trends; assemblages of outdated zoning laws preserving single-family housing, NIMBYism, high migration rates, and barriers to sprawl are all linked to housing price escalation (see also Kahn, 2007). Smart Growth is oriented toward novel ways of providing choice to residents of growing cities, rather than systems of wealth or land distribution or laws governing consumption practices. As such, links between gentrification and Smart Growth arise as the

principles meet the market, and a number of conflicting demands between developers, no-growth homeowners, environmentalists, and the income needs of city government need to be balanced. Inasmuch as the areas around the Onni Garden in many ways serve as examples of such applications on the ground, they are also examples of how Smart Growth can become implicated in gentrification. Moreover, as recent planning exercises in Vancouver such as Eco-Density (discussed below) show, Smart Growth principles become increasingly complex when transferred to densification within the centers and inner suburbs of built cities.

6.3.4 Consumption

The Onni Garden is an example of new consumption practices and policies. Increasingly, urban environmental governance is attempting to shift consumption patterns through combinations of messaging and education campaigns. The Agenda 21 Process, following the Rio Summit of 1992, defined sustainability in terms of production and consumption, and gave prominence to “sustainable consumption,” with an emphasis on consumer knowledge and individual responsibility to seek out more energy efficient goods (Hobson, 2004; Slocum, 2004). This creates a blurring between state policy and market action, as individual consumers buy into green buildings and new urban green consumption practices and developers and marketers plan sustainable communities that draw on social concepts of nature and environment. A consumption angle in gentrification research stresses middle (and higher) class transformations in values and lifestyle leading to the rediscovery of the inner city as part of the “production of gentrifiers” (Mills, 1988, p. 178; see also Ley, 1996). Applying this lens to sustainable consumption raises a series of issues as to whether sustainable consumption policies and movements are building a new breed of consumer, whether these people are driving new forms of gentrification, and how gentrifiers use environmental discourses to negotiate their position in the city.

Forms of sustainable consumption at the urban level can play into (and intensify) particular forms of individualized market action (Brand, 2007). In North America, the sustainable consumption agenda has been driven by a mixture of adherence to market principles of consumerism and an “individualization” process—driven as much by environmental

nongovernmental organizations as governments—that asks citizens to engage in personalized responses such as recycling (Maniates, 2002). This downscaling merges with a heightened awareness by consumers of the process behind products and the ethics of their consumption decisions (Barnett et al., 2005; Quastel, 2008), and a proliferation of new urban environmental consumption movements such as slow food, farmers markets (Feagan et al., 2004; Slocum 2007), and community gardens (Pudup 2008). Critical geographers and political ecologists (Hobson, 2004; Slocum, 2004; Brand, 2007; Pudup, 2008) have for the most part read government and top-down interventions in terms of “eco-governmentality”—i.e., as a strategy foisted on persons for forging compliant subjectivities to help ease tensions between environment and market, and to construct “citizen subjectivities conducive to the often contradictory demands of the neoliberalized city” (Brand, 2007, p. 617). These movements may also feature significant grassroots momentum, but lack coordination or face problems of existing in and alongside the market (Quastel, 2008). Either way, when transferred to real estate this individualized or uncoordinated response may have gentrifying effects.

Green consumption may be emerging as a new form of class distinction. Consumption-focused gentrification research has long drawn on the concept of housing as “positional goods” (Mills, 1988; Warde, 1991; Bridge, 2002) and the ways in which “the material features of commodities are increasingly subordinated to their symbolic potential, especially their roles as gatekeepers to positions in the social world” (Mills, 1988, p. 170). A central tenet of this research is that a variety of esthetic and evaluative orientations for goods—such as preferences for housing styles and location—are both a mark of, and also reflective of, consumers’ performances and drives to establish their social class positions. This may be particularly acute in the social groups most often associated with gentrification—professional, scientific, and technical workers who constitute a “not yet sedimented social class” (Warde, 1991, p. 227). Emergent cultural forms that generate new meanings, practices, and inner-city housing change can include complex mixes of esthetics, values, and orientations toward self-realization. However, gentrifiers face systematic moral predicaments as the roles they perform in competitive housing markets undermine their values. This has occurred to those seeking racially and class-stratified neighborhoods because they believe in integration, but whose incoming presence changes these

characteristics (Ley, 1996). Gentrifiers may also face the problem that “the landscape of distinctiveness of the gentrified neighborhood” (Mills, 1988, p. 186) turns into a new conformity. Urban housing markets were replete with this in the 1990s as core values of “authenticity” became evolved into “gritty,” “hip,” and “cool” and were used to sell former garment fabrication shops as “genuine factory lofts.” As Wyly and Hammel (2005) discovered for New York City, real estate developers could then capitalize on (and therefore undermine) authenticity by hiring artists to publicize newly “discovered” areas such as DUMBO (Down Under the Manhattan Bridge Overpass). Dynamics of positionality have been found in green initiatives such as farmers markets that feature high prices and predominantly White middle-class consumers (Feagan et al. 2004; Slocum, 2007). This raises the specter that “green” real estate becomes another vehicle for consumers to virtuously display their knowledge and adoption of the latest values while also perpetuating social distinction and increased demand for products with limited supply.

6.3.5 Ecological Rent Gap

A fifth approach involves looking at the metabolic relations of cities from a different viewpoint: how shifts in the costs and valuation of resources can accelerate gentrification. This may occur because of increased fuel and transportation costs due to government demand management programs (such as carbon taxes) or oil shocks, because protection of agricultural land from sprawl suppresses the new housing supply, or because consumers seeking less material intensive lifestyles increase the value of central-city land. Here the focus shifts to how and why neighborhoods change as a result of these price shifts — generally toward increasing the value of the inner city—and draws on traditional bid-rent and rent-gap theories.

In the most basic bid-rent models, the city is imagined (and mathematically modeled) as a circle, with the central business district at the center holding all the jobs. Given the assumption of a free market without zoning restrictions and, all things being equal, that households will prefer to be closer to jobs in the center, the urban land market can be modeled as reaching equilibrium with a dense central city with high land prices and a downward-sloping curve of prices and density as distance from the center increases. Faced with urban change in the 1960s, whereby middle- and high-income residents were moving to the suburbs as the inner city became the

preserve of the poor, the models associated household utility with greater living space and argued that more affluent households could maximize their quest for living space by paying higher, affordable transport costs. However, following the cultural shifts of the 1970s, including a growing disenchantment with the suburbs, triggered in part by the oil crisis, the reading of individual utility had largely shifted. By the 1980s, neoclassicists could reinterpret consumer preferences to include various utilities such as reduced travel, access to day-care and other services, cultural networking opportunities, and intangibles such as vitality and hipness. Gentrification was then explained in terms of the presence of in-migrants who had the desire and resources to outcompete and displace existing city dwellers (Lees et al., 2007 pp. 45–46). At the metropolitan scale, gentrification processes would occur as the reintroduction of the traditional CBD-based conical structure.

In the rent-gap approach, gentrification is explained in terms of the changes in the utility (profit-maximization potential) for landlords and developers to reinvest in land, determined in large part by the relative age of the housing stock and potential post-development rents. The rent-gap approach analyzes differences between actual ground rent (economic return on land in its present condition) and potential ground rent, given the comparative power of developers to rebuild lots and transform neighborhoods. As neighborhood housing grows older and its tenants poorer, the chasm widens between both what locals can accomplish and the potential returns for capital-intensive development, until profit can be rendered through gentrification (Lees et al., 2007, pp. 50–72). Although initially derived out of a Marxist frustration at neoclassical economists' elimination of the role of developers, landlords and class difference in the gentrification process, similar ideas have been formalized along neoclassical lines, suggesting possibilities for reconciling rent-gap and neoclassical formulations (as discussed in Skaburskis and Moos, 2008). This can be done by examining the dynamic conditions under which development occurs as a result of landlords' income falling below the costs of maintaining the land (Badcock, 1990), or as a "production function" that considers profits to the producers of housing, given land and construction costs, current rents, and potential consumer demand (Gusdorf and Hallegate, 2007). Whereas critical geography bears an uneasy relationship with the normative ideals of the market embedded in neoclassical theories, empirical studies repeatedly

confirm that in large measure cities do have similar price-distance structures as depicted by these theories; however, accommodation must be made for local variations, zoning laws, and the idiosyncracies of different neighborhoods and cities in which jobs are more widely dispersed (Badcock, 1989; Skaburskis and Moos, 2008). Gentrification can be explained in no small measure by the fact that there have been considerable increases of (and shifts in) the relative value of land in the center as opposed to peripheries of large Canadian cities, and these findings (see Fig. 6.4) are consistent with both neoclassical and rent-gap explanations (Skaburskis and Moos, 2008).

Given this congruence of explanatory frameworks, political ecologists of gentrification would take seriously the predictions of energy economists who use the neoclassical “monocentric closed city model” to predict changes in urban form as a result of rising fuel costs or heightened pressures on land (Gusdorf and Hallegate, 2007). Even assuming the old version of utility in terms of living space, a doubling of transportation costs results in a sharp restructuring of the bid-rent curve to increase inner-city land prices (Fig. 6.5). The logic is simple: as travel costs go up (or, because of increased reliance on transit, consume more time), more people will find that living closer to the center best balances their quality of life with household budget constraints. Adopting a production function, the model also predicts that developers will construct higher-density buildings closer to the center (effectively exploiting an enhanced rent gap), thereby providing new density curve predictions (Fig. 6.6). This suggests that new waves of gentrification could follow shifts in energy costs, as could the emergence of “slumburbias” stripped of their former appeal.

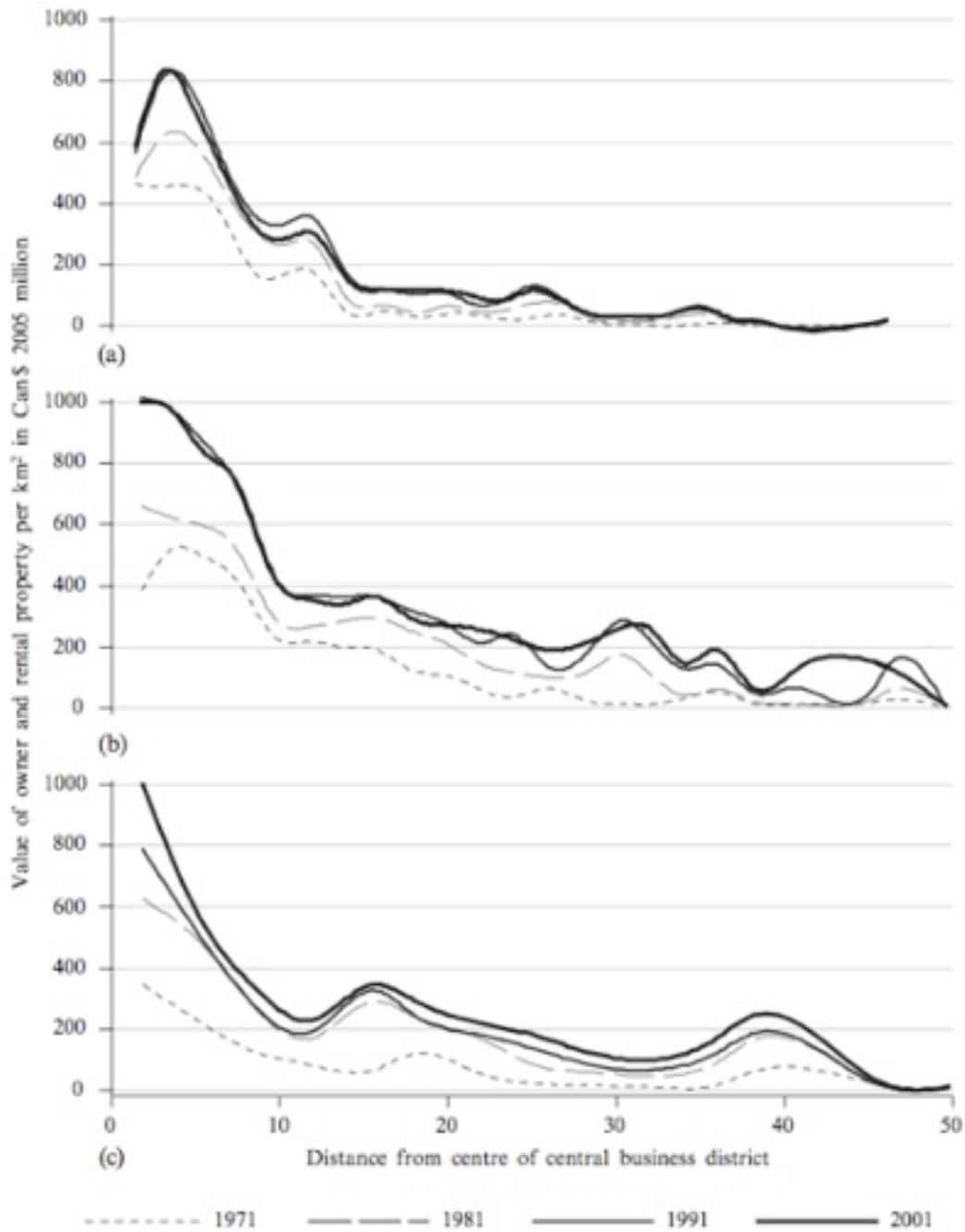


Figure 6.4 Residential property value per km², 1971 to 2001: (A) Montreal, (B) Toronto, and (C) Vancouver. *Source:* Skaburskis and Moos (2008, p. 906).

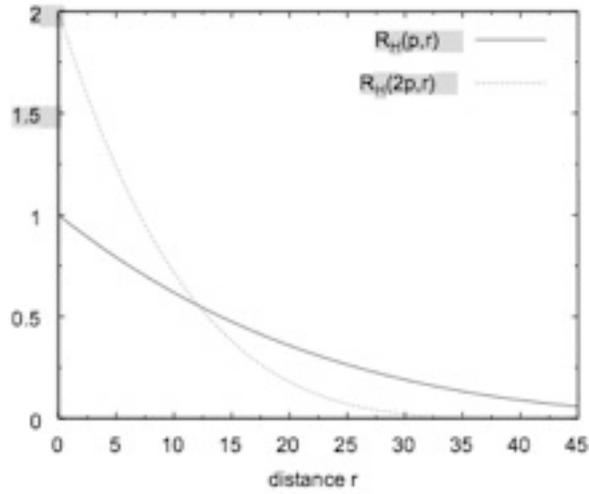


Figure 6. 5. Rent curve R_H with respect to the distance from the city center, at equilibrium. The different curves correspond to transportation prices p and $2p$, modeled by GUSDORF and HALLEGATE (2007). Note also the predictions for “slumburbia” and new farmland as rents decline in the higher distances.

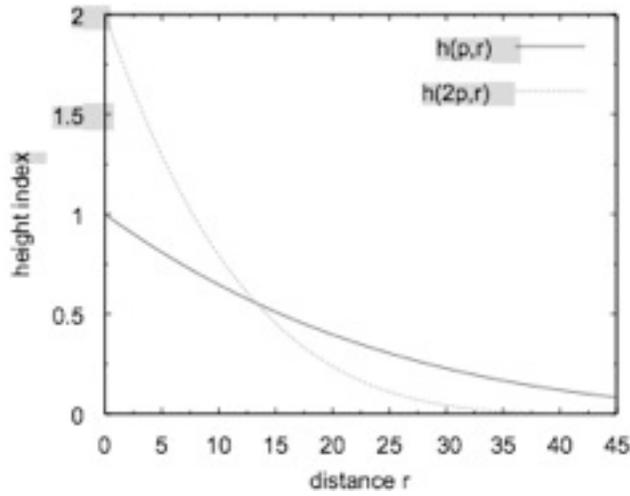


Figure 6.6. Building height curves as function of distance from the center. Landowners react to higher rent levels and invest in higher buildings close to the CBD. *Source:* Modeled by GUSDORF and HALLEGATE (2007).

Political ecologists can note the way the models explicitly link resource consumption to locational conflict and inequality in the city, confirming in new ways the intermixing of resource conflict, power, and social inequality. While some economic and social justice-oriented researchers have begun to branch out to consider the distributional effects of carbon taxes and oil shocks (CCPA, 2008; Gusdorf et al., 2008), there is a need to discover the geography of such influences as well as empirical studies to link them to the gentrification processes. Such work is limited by the relative recency of the 2007–2008 oil shocks, the limited application of carbon taxes (such as the *British Columbia Carbon Tax Act*, 2008), and the time lag expected for their results on urban space (Gusdorf and Hallegate, 2007). Moreover, while consumption is central to the bid rent/rent-gap theories, the formal treatment of utility requires additional research into gentrification discourses, practices, and modes of self-understanding in relation to environment and consumption. Changes to consumer utility can be led by changes in resources costs, new ethical concerns over resource use, or both. As discussions of real estate marketing in Vancouver will show, condominiums increasingly are sold through the appeal of living close to where one works, combining environmental altruism, reduced commuting time, and central city distinction.

6.4 Ecological Gentrification in Vancouver

Vancouver combines New Urbanist developments, widespread environmental awareness, and crises of affordability (Punter, 2005). As such, the Onni Garden represents more than merely a site in which political ecology and gentrification dimensions can be synthesized. Vancouver's eco-gentrification features new ways in which gentrifiers are motivated to reinhabit the central city, new ways in which governments plan urban revitalization projects, and new forms of “discursive construction” of condominiums as “green.”

Vancouver was initially laid out in the early 20th century in a gridiron street pattern, to be filled with single-family housing and commercial land use on main streets. The exceptions were a small business-oriented downtown area and industrial lands lining False Creek (immediately south of the CBD) and scattered in a few other locations such as along the Fraser River farther south. By the 1960s, higher-density apartments were built in the West End (of the downtown peninsula), and by the 1970s some neighborhoods of the old inner core such as Kitsilano were

undergoing gentrification, reflecting increased interest (and rising land values) within the inner central city. By the late 1980s, the industrial areas south of downtown and around False Creek were available for residential development, with residential property values reflecting their location close to the city center. Vancouver saw a concentrated re-visioning and reconstruction of its downtown area during the 1990s in a mix of government-led rezoning but privately financed process of residential condominium development. Generally these urban projects were driven by concerns for urban renewal and coping with large brownfield sites, but by the 1990s they were also defended on the basis of environmental considerations (Punter, 2005).

During the 1990s these developments were increasingly incorporated into the growing environmental and urban regeneration agenda. Planning policies and documents such as the *Living First Strategy* (1980s), *Clouds of Change* (1990), *CityPlan* (1995), and the *Liveable Region Strategic Plan* (1996) gave a Smart Growth-style orientation to the developments, stressing that environmental goals could be achieved by increasing residential densities in the downtown area (Lees and Demeritt, 1998; Punter, 2005; Kear, 2007). Although rarely sold to prospective homeowners this way, high-rise condominium living gradually came to be equated with sustainability (Beasley, 2006). As Trevor Boddy (2002), the *Vancouver Sun*'s architectural critic and advocate for the "Vancouver Achievement" (Punter, 2005), put it: "Because of this private-public commitment to urban values, downtown Vancouver now boasts the highest residential population densities on the continent, and we are now the green city to watch, in every sense" (Boddy, 2002, p. B8; see the Vancouver density map in Fig. 6.7).

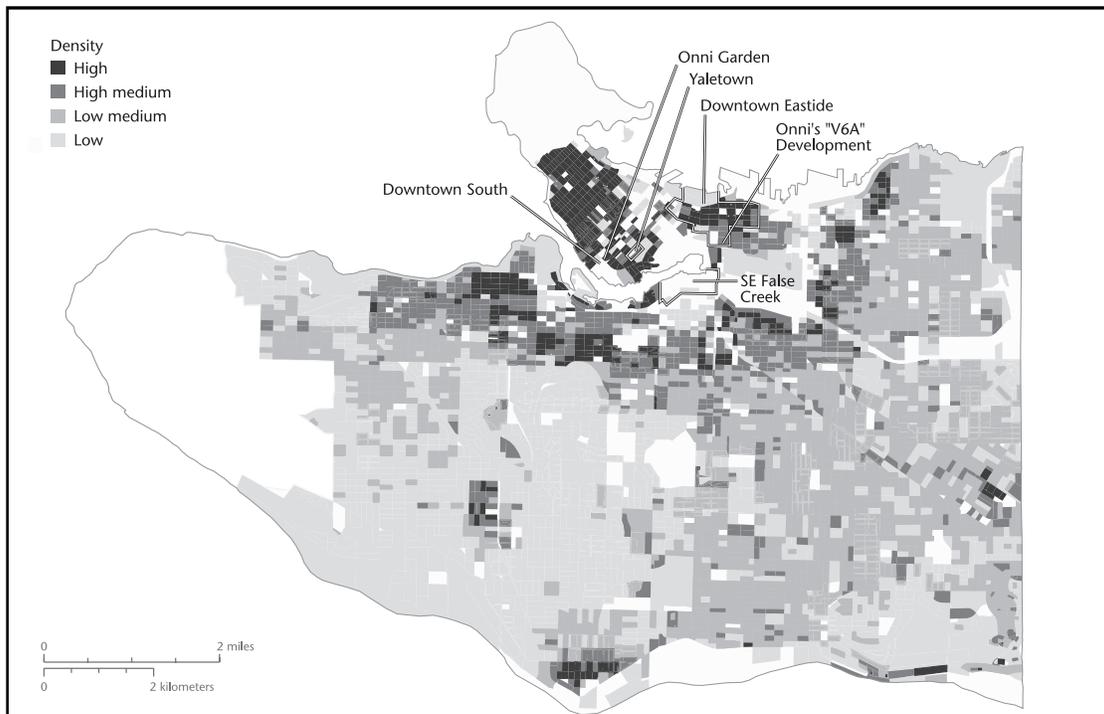


Figure 6. 7. Density map of the City of Vancouver, based on materials provided by the EcoDensity initiative (www.vancouver-ecodensity.ca). While the density categories from low to high are not formally defined, *low density* generally refers to single-family housing of approximately 8 dwelling units per acre, *low medium density* to slightly denser single-family housing, *high medium density* to three-story apartments, and *high density* to high rises of more than 10 stories. See also Figures 6.1 and 6.8 for images of high-density apartments in Vancouver’s core.

The gentrification of Vancouver’s central core is also well documented and has been ongoing for a number of decades (Mills, 1988; Ley, 1996; Danyluk and Ley, 2007). Restructuring has led to the inner city becoming “an economic, social, political and ideological space dominated by the new middle class” (Kear, 2007, p. 327). It is widely acknowledged that increased housing prices in the 1990s were the result of international capital flows and Vancouver’s “urban amenity premium”—that is, a very clean, safe, and well-serviced metropolis with Cascadian mild temperatures, ocean and mountain views, and lots of outdoor activities (Punter, 2005). Increasing prices, land scarcity, and the fact that most new construction was in the form of apartment buildings meant that middle-class standards had shifted from owning single-family houses in the city to either condominiums or moving to the suburbs. From 2001 through 2007 the Vancouver market faced dramatic shifts, with prices roughly doubling, a standard two-bedroom condominium in the downtown or west side moving up from an average of \$260,000 to \$650,000, and rentals in the same areas more than doubling from \$1,000 to

\$2,200 per month. This period also saw a building boom, but new housing stock was predominantly high-end condominiums, and from 1991 to 2006 the share of housing provided by rentals decreased from 59% to 52%, suggesting a citywide shift in housing demographics (Lee et al., 2008). In 2007, the city initiated a new visioning process around the concept of “Eco-Density,” which attempted to expand Smart Growth– and New Urbanist–style density increases into areas beyond downtown to address problems of housing affordability. While changing the public face of gentrification processes, these new developments raised questions as to how extensively environmental features were causally related to shifts in rent-gaps or increases in gentrification.

6.4.1. Vancouver's New Urban Developments

Many of Vancouver’s new urban developments since the mid-1990s have engendered environmental discourses, with significant effects for the physical and discursive forms of new housing and its inhabitants. Developed from the mid-1990s onward, the Downtown South area where the Onni Garden lies features former industrial sites converted into high-density residential uses, with attention to streetscapes, livability, amenities, and access to public transit. Low-rise industrial spaces were demolished and replaced by rows of buildings in Vancouver’s signature architectural style: “Vancouverism” describes a narrow condominium tower surrounded by rows of three-story townhomes, meant to maximize views of Vancouver’s distant mountains, preserve streetscapes, and provide an urban feel reminiscent of Manhattan or Hong Kong (Bogdanowicz, 2006).

Vancouver’s new developments drew significantly from New Urbanist planning principles and give an environmental edge to the yearning for a return to walkable cities, urban villages, neighborhood feel, and buildings that connect to the street (Punter, 2005). The process cleansed and upgraded the surroundings, both trading on and domesticating the area’s gritty past. Government planners attempted to protect social housing, either through requirements that low-cost housing be replaced or with affordable housing quotas—in Vancouver 20% must be set aside by developers for potential (and not always realized) nonmarket housing development by government or nonprofit organizations (City of Vancouver Housing Centre, 2005). Over time a

“statistical gentrification” set in as the ratio of working-class and poor to professionals and the wealthy shifted, fulfilling city government’s hope for dilution of poverty and upscaling of the area. Rhetorics of nature were modified into languages of safety, health, and cleanliness as a gentrified streetscape was favored over peep shows and bondage wear shops (Lees and Demeritt, 1998), and the area’s history of industrial labor and resource exploitation were either erased or ironically re-presented with the pathos of distance (Hagerman, 2007, discussing similar projects in Portland, Oregon). While the area still has homeless drop-in centers, and coin-operated peep show booths, apartments now start at over \$500 per square foot (Realtylink, 2008).

A new round of politics and consultations emerged in the late 1990s around a city - owned brownfield development site—the South East False Creek lands—located about 2 km east of Onni Gardens. In many cases, local environmentalists opposed extending the downtown visions on sustainability grounds—opposing high-rise apartments on the basis of their resource intensity (Bula, 1997). A new sustainable community was planned as an alternative to the downtown model yet retaining many features of density, cleanliness, and modernity. The site was also chosen for the athlete’s village of the 2010 Winter Olympics, which could thereby incorporate “significant legacies of sustainable development and nonmarket housing” based on helping to build the (already standard) 20% set- aside for nonmarket housing (Vancouver 2010 Bid Corporation, Vol. 2, p. 184). In 2004, the city chose to restructure the development, seeking to build a sustainable community by paying for amenities from returns on the sale of city-owned land. On a self-financing basis, the project would incorporate one-third market, one-third middle-income, and one-third low-income housing, with expanded community services such as five child care centers. However, a change of city councils in 2005 resulted in the city dropping many of the affordable housing (social sustainability) aspects of the project (the planned subsidy of \$20 million, plus three of the child care centers) and instead seeking to recoup profits for the city’s property endowment fund (Kear, 2007). The city subsequently sold the lands to a developer in a lucrative (\$193 million) real estate deal (Bula and Lee, 2006). By 2007 marketers for the new “Millennium Water” development, as the area became called, were selling “Vancouver’s Last Waterfront Community,” boasting its modernist architecture, European-style sidewalks and cafés, green roofs, sustainability characteristics, and its triple bottom line for community,

environment, and economy—“design that reminds you of nature’s beauty” and prices starting at over \$500,000 for a one-bedroom apartment. The site also featured a new island for False Creek, “Habitat Compensation Island,” which reconstructs inter-tidal ecologies. An avenue is named for Walter Hardwick, a University of British Columbia professor and Vancouver City Council member who helped initiate the conversion of False Creek and the Liveable Region Strategy. This both institutionalized and gave legitimacy to the development as an interpretation of sustainable urban form (Millennium Water, 2008).

In this same time frame, the upgrading process extended off the land into the waters of False Creek, enlisting cleanliness and orderly aquatic use in the further gentrification of local ecologies. A small community of persons living on boats—“water squatters” or “live-aboards,” depending on one’s side of the gentrification debate—were evicted from False Creek’s waters in 2006 (O’Connor, 2006; Fig.6. 8). For 10 years, conflicts had been building as the live-aboards conflicted with increased use of the area for yacht moorage, recreational boating, the Concord Pacific–funded Dragon Boat Festival, and the unsightliness (and nuisance) of a nongentrified presence. An engineering report cited

equitable uses... increasing congestion in False Creek, lack of space for transient visitors, difficulties in manouevring and navigating, boats dragging anchor and drifting into docks and other vessels, lack of anchor lights, noise, garbage accumulation, direct sewage discharge, unacceptable public behaviour, perceived “free” housing/moorage, and poor conditions of some vessels (both aesthetics and sinking hazard). (Harris, 2001)

From the mid-1990s onward the city had negotiated to buy mooring rights from the province and negotiate necessary legislative changes from the federal government. Only in 2006 did Transport Canada authorize a new restriction, the first of its kind in Canada, on the anchoring of boats in non-navigational channels.



Figure 6.8 False Creek squatter's boat. August 22, 2006. *Source:* Qole Perjorian/Alan Bruce (www.flickr.com/people/qole).

Once an industrial waterway, False Creek (a salt water inlet ringing the southern end of Vancouver's downtown peninsula) had already been almost totally transformed into a space of leisure and the new regulations consolidated the process. The neighboring Concord Pacific lands had been designed and marketed in Hong Kong to accentuate the *feng shui* attributes of the inlet (Punter, 2005). This encouraged an emergent new ideal of False Creek as a park-like, nature and tourism destination, following a discursive tradition political ecologists have identified whereby parks (Braun, 2002) and ecotourism destinations (Waitt and Cook, 2007) are constructed as independent from and free of working communities. Arthur Brock, director of the False Creek Property Owners' Association and a vocal opponent of the live-aboards, made clear the connection: "If people were parking RVs or campers in Stanley Park, they would be removed" (cited in Anderson and Hunter, 2004, p. A3). For Adrian Gordy, a captain of a large

charter yacht using the inlet, the conflicts were clear: “It’s ugly. For my business, it’s all about the beauty—the aesthetics, the beautiful water ... and you see this and it’s ugly” (cited in Salinas, 2006, p. S1). The local health authority took coliform counts, and found them twice as high as acceptable levels at swimming beaches. While the eastern end of the inlet is not used for swimming, authority officials did note that it is used by kayakers and dragon boat racers: “You can get some accidental submersion ... You can get spray kicking up from the water” (cited in Anderson and Hunter, 2004, p. A3). While the city’s justification rested largely on environmental concerns and the needs of recreational users, the local and national press were keen to note the displacement involved in the plans, the resentment of boaters at commercial marinas directed at the live-aboards free riding, the demise of the “live-aboard life” (Claxton, 2005), and the live-aboards’ own claims to be leading sustainable lifestyles: Robin Casey, a live-aboard in False Creek in 2005 and 2006 remarked, “I would say we’re polluting less, as far as our footprint goes” (Salinas, 2006, p. S1).

Both regional universities had also been involved through the 1990s in projects to cash in on endowment lands. These also involved extensive public consultations, rendering the projects open to critique by environmentally minded staff, students, and the wider community. While the University of British Columbia is located on Point Grey to the west of the central core, and Simon Fraser University on a small mountain about 10 kilometers to the east, both represent some of the larger greenfield redevelopments in the region, and in UBC’s case the largest commuting and work node outside the city center. By 2008 anyone with sufficient funds could buy into the results of community visioning processes “to build more compact and intensified, environmentally friendly live-work communit[ies]” (UBC University Town, 2008), or “healthy well designed neighbourhoods ... expected to become an international showcase for innovative and creative approaches to sustainable planning and new urban development”(SFU, 2008). However, estimates of the UBC workforce suggested only 11% could afford a standard condo (at \$724,000) and only 2% a townhouse (at \$1.2 million) at market rates in the area, and that unionized staff could not afford to buy at all (Frankish, 2008).

6.4.2 Consumption Culture and Values

The Onni Garden—“created to encourage downtown Vancouver residents to participate in environmental initiatives” (Fig. 6.1)—is just one way in which Vancouver’s citizens are subject to the constant messaging of green consumption. In this section I draw on public campaigns, marketing techniques, and personal observations to suggest an emergent confluence of gentrification and green consumption. While suggestive of a new breed of “eco-gentrifiers,” ethnographic and other empirical research techniques (beyond the scope of this paper) are needed to clarify how residents in these areas are motivated by environmental discourses. Green consumption initiatives in Vancouver in the spring of 2008 included: Two competing stadium-sized green consumption fairs held within a three-month period (Green Living, 2008; EPIC, 2008), both receiving institutional support from automobile and media companies, governments, business organizations, and nonprofit environmental organizations; a constant flow of newspaper articles; “green living” magazine supplements; and environmental-organization campaigns such as the David Suzuki Foundation’s “Nature Challenge” that features “Green living made easy” (David Suzuki Foundation, 2008). The City of Vancouver, for its part, ran a program entitled “One Day Vancouver,” devoted to climate change education and public outreach. This educational program was designed around daily lifestyle changes that individuals could make on an incremental basis (“one day at a time”) and featured advertisements in stores and restaurants throughout the city. As such, it stressed that “it’s about individual actions that each of us can take” and that “the key to change is taking small steps ... to reduce energy use, at home and on the road, to make Vancouver the cleanest, greenest, healthiest city in the world” (One Day Vancouver, 2008). Citizen-consumers were thus implored to maintain proper tire pressure in their cars and turn down thermostats at night. If the citizen-consumer could maintain interest through to Earth Day (April 22), s/he could also participate in 30 Days of Sustainability “featuring more exciting and engaging events to help you integrate sustainability into your life” (30 Days of Sustainability, 2008), sponsored by, among others, *Granville*, “a magazine devoted to sustainable living in Vancouver” (Granville, 2008).

Environmental discourses were used to sell the Concord Pacific and Yaletown projects in the 1990s to a limited degree, with the strongest emphasis on being close to the city center and living in walkable “liveable neighborhoods.” More overtly, the South East False Creek and university developments utilized environmental discourse in the planning processes, and these became part of the sales pitch. Increasingly, private developers deployed similar language. These included the upscale Pomaria tower (Pomaria, 2008) and “the Beasley” named after Larry Beasley, the city planner who had overseen Vancouver’s main new urbanist experiments in the 1990s and where “a life of luxury at the heart of the world’s most liveable city awaits” (The Beasley, 2008). Bob Rennie is Vancouver’s foremost condominium marketer, pioneer of the same-day advanced sale sellout on entire residential towers and marketer for Millennium Water. He argued before Vancouver’s pro-development Urban Development Institute in May 2007: “Green is going to sell condos...its our new lemon fresh” (cited in Ford, 2007, p. A45). In the same presentation he transposed the individualized sustainable consumption mantra into corporate social responsibility for property developers: “instead of talking about going green or whether goals can be achieved, let’s just start by doing our part to achieve them” (ibid.).

The Vancouver model of dense urban developments as fundamentally growth and preference-oriented required a mix of appeal to, and construction of, consumer understandings both of the urban environment and also of consumers’ role in environmental transformation. On the one hand, consumer buy-in and the appeal to professional-class lifestyle aspirations become inseparable. On the other, thanks to Larry Beasley, Bob Rennie, and others, “condo living was rebranded from a squalid lowbrow compromise into a *prêt-à-porter* downtown cocktail party, complete with those granite countertops and stainless steel appliances” (Bridge, 2007, p. 44). This was done through careful integration of architectural and landscape design, city planning, marketing, and discursive constructions of desirability.

Political ecologists of consumption have noted the ways in which ethical and environmental goods carry imaginaries of place as well as embody, create, and reflect “political ecological” or “geographical” imaginaries (Cook et al., 2004) as part of their “cultural and economic surpluses for consumers” (Bryant and Goodman, 2004, p. 348). The celebration of the

“green” aspects of downtown living allow the larger-scale political projects and visions of the urban environment to enter individual consumer consciousness. These imaginaries of nature in the city helps explain these neighborhoods as clean and orderly environments and the role gentrifiers can play in urban socio-natural transformation. Loretta Lees and David Demeritt have labeled “Sim City” for describing Vancouver’s Downtown South developments—a comprehensive package of cleanliness, orderliness, civility, and newness that restyles the city as a work in progress and as capturing new environmental values, and which exists in binary opposition to “Sin City,” the sleazy past of urban decay and its accoutrements of unemployment and sex shops (Lees and Demeritt, 1998). Many new developments retain the outward appearance of—and disciplinary mechanisms to enforce—“an image of ecology, leisure and liveability, shaped around the consumption preferences of professionals in a service economy” (Kear, 2007, p. 327).

The merging of cultures of green consumption, limited supplies and high prices of Vancouver condominiums, and new forms of green marketing suggest dynamics of a “green positionality” at play. In Vancouver’s downtown walkable-livable world, condominium marketers such as Bob Rennie readily capitalize on positionality: “It’s a lifestyle contest ... whoever gets home to his book, his TV, his frying pan or his workout first wins” (quoted in Montgomery, 2006, p. 46). Retail spaces of gentrified neighborhoods reflect the consumption practices and identities of gentrifiers (Ley, 1996; Bridge and Dowling, 2001). Vancouver’s gentrified neighborhoods such as Kitsilano and Yaletown thus feature upscale organic supermarkets such as Capers (now owned by Whole Foods) and Choices, a locally owned competitor, and restaurants such as Bishop’s that feature locally sourced organic French cuisine.

For the most part, the Yaletown, Concord Pacific Place, South East False Creek, and university developments have occurred on brownfield or greenfield sites, and rather than evicting or pricing out sizable populations fit into the more peripheral class of gentrification through exclusionary displacement. However, as the need to expand forced developers into newer neighborhoods and away from the “low-hanging fruit” of green and brownfield sites (Bridge, 2007, p. 45), the densification of Vancouver’s inner core took on increasingly conflictual aspects,

suggesting further links between sustainable consumption and gentrification. Marketing therefore needed to shift to tropes of pioneering and authenticity as it became increasingly obvious that new condominium buyers were of a different class and would potentially displace area residents. This is why the Onni Group of Companies in Vancouver stressed that purchases should “move east,” because the intended buyers previously resided in the more affluent western districts of the city and were now pioneering eastward. The new area features “authentic urban living” (Onni, 2008), symbolized by ads with fortune cookies (Fig. 6.3) inasmuch as the development is in historical Chinatown within the Downtown Eastside. Just around the corner from Onni’s V6A site on Main and Union streets (Fig.6.3) sat “Ginger,” another upscale condo project whose ads ambiguously testify to the area’s poverty: “There is no pretense here, just vivid streetscapes ... that will leave you feeling like a well seasoned traveller” (Ginger, 2008; for other such ads in the area see Lees et al., 2007, p. 269). Alternatively, community groups in the area carried out surveys of residents in 2008, with over two- thirds of respondents saying they did not want new private condos in the neighborhood and that they thought such condos would increase poor bashing (Pedersen and Swanson, 2008, p. 12).

6.4.3 Smart Growth and Eco-Density

The dense condominium developments of downtown Vancouver were not mandated by Smart Growth principles, but the “Vancouver Achievement” did broadly comply with the vision of walkable neighborhoods, with many nearby stores and restaurants, and close to the CBD’s white-collar office jobs. However, this applied only to the downtown core (see density map, Fig. 6.7) and by 2006 the brownfield sites had largely been used up. Whereas the wider region displayed some aspects of Smart Growth–style planning—the City of Vancouver itself had no freeways, and the metropolitan region was constrained by reserves of agricultural land—much of Vancouver and its suburbs retained the traditional North American single-family housing and front yard esthetic. By 2006, housing affordability had become a significant political issue throughout the metropolis. Vancouver’s forays into “Eco-Density” were guided by a strong commitment to condominium densification and Smart Growth concerns as a potential solution to affordability issues. Although still an unfinished project, this illustrates how gentrification is just

around the corner from efforts to distribute intensification in Smart Growth–inspired urban development governance.

Mayor Sam Sullivan initiated the process in 2006, claiming that “we know that high-density living is actually really good for the environment” (Kwong, 2006, p. S3). Brent Toderian, Vancouver’s director of planning, used the term “resilient liveability,” defining EcoDensity as “development that acknowledges global warming and peak oil” that will allow Vancouver to “weather the storms that are coming, better than any other city” (Bridge, 2007, p. 45). It also draws strongly on the bid-rent model. As one columnist described the first introduction of Vancouver’s EcoDensity Initiative: “To accommodate more people, the mayor’s answer is building apartment buildings to help make housing more affordable. If you create more supply, his theory goes, the price of real estate goes down” (Mason, 2006, p. S1). The draft plans transformed this and argued only that increased supply would decrease house price increases, and that emphasis would be on creating diversity of housing types to provide more housing options. The initial plan called for selective expansion of high-rises in some areas, more low-rise apartment buildings on main streets throughout the city, and infill housing—larger houses with suites, and smaller secondary housing with adjacent back lines (“granny houses” or “laneway housing”) throughout the city’s predominantly single-family neighborhoods (EcoDensity, 2008).

Although largely a series of planning exercises and public consultations, the plan was divided into a framework charter on the one hand, and a series of zoning changes and planning details on the other. The charter was passed unanimously in Council in June 2008, and acknowledges that “climate change, environmental stress, resource depletion, food security challenges and rising costs-of-living are seriously threatening Vancouver’s environment, economy, livability and long term sustainability” (EcoDensity Charter, 2008, Fact 3), and that “Vancouver’s ecological and carbon footprints indicate that we are consuming too many resources and emitting too many greenhouse gases to sustain our lifestyles” (Fact 5). The general principles fit into Smart Growth and New Urbanist planning modes, aiming to “densify and manage change in ways that constantly enhance and reinforce a city of walkable, complete neighbourhoods” (Commitment III, c). However, the larger EcoDensity plan has undergone a

series of revisions and public consultations (three drafts in two years), and met widespread concerns. The result was that the Charter was passed accompanied only by specific measures relating to tying approval of zoning changes to increased green building standards (EcoDensity Initial Actions, 2008), and it was left to Council to revise and reconsider the remaining substantive commitments to densification.

The initial framing of the exercise in terms of affordability and density brought two main forms of opposition to the widely attended and watched consultation processes. There was widespread concern “that not all the new housing is going to be more condos for the rich” (Bula, 2008, p. B1), that “liveability” includes a range of social democratic policies ranging from public goods such as parks and community centers to principles of equity and social justice (VSPN, 2008), and that achieving affordability would require more than allowing developers to build what they desired—very likely expensive condos—but a more robust package of tax incentives, public subsidies, and low-cost housing initiatives (Lee et. al., 2008). More likely to have stalled the process were repeated concerns that Yaletown, Concord Pacific Place, and the Downtown South areas would be a template expanded throughout the city, and it put into jeopardy the existing heritage values and streetscape (read selling price) in the city’s well-off Westside single-family neighborhoods (C. Smith, 2008). Public policy analysts also noted that the plan continued sharp inequalities in the distribution of density among already class-segregated neighborhoods (Lee et. al., 2008). Even though the West End had densities of 88 persons per hectare, and medium-built areas such as Kitsilano and Grandview 30 and 26 per hectare, respectively, much of the Westside was at 8 persons per hectare (Lee et. al., 2008; see also Fig. 6.7). In this way the delays in adoption and implementation of the plan suggest that the pre-existing city planning exercises had already largely worked out a stalemate position between developers, no-growth homeowners, and social justice advocates: most regional growth had been occurring in Vancouver’s suburbs and renewed environmental concern had not significantly tipped that balance.

While to date still primarily a planning exercise and an adopted charter document, EcoDensity also brought ecology and gentrification together into explicit government policy. The

initial plans included buried provisions for allowing a number of new high condominium towers in the Downtown Eastside. Property values in that area, including single-room occupancies, doubled between 2005 and 2008, creating incentives for owners to sell or convert their properties. The area was estimated to have lost over 400 low-income units between December 2007 and March 2008, with another 4,000 low-income residents at risk of displacement or homelessness (Lee et. al., 2008). This suggests a city strategy of steering densification into poorer neighborhoods both to facilitate pre-existing drives toward gentrification and because residents are largely powerless to oppose it. Local residents saw it as a new wave of gentrification in the area under the cover of citywide environmental initiatives (CCAP. 2008).

6.5 Conclusion

Political ecologies of gentrification involve tracing the powers of government planners, real estate developers, consumers, and social organizations as they act in relation to urban ecologies and discourses of the environment. Tracing the effects of such discourses on gentrification, and how gentrification utilizes such discourses, contributes to showing how environmental discourses and policies involve issues of distribution, power, and inequality. The Onni Garden, and the emergence of apartment-tower neighborhoods around it, link to and capture various aspects of how ecological discourses, planning policies, and consumption practices are related to gentrification. Increasingly, urban revitalization and third-wave gentrification, from governments down to developers and homebuyers, make use of discourses of the environment and in doing so transform urban environments. This can include shifts from former industrial waterways to recreational yacht moorage, with the accompanying cleaning up of the water and organizing of boat lanes, or a developer's provision of a community garden and its soil cover rather than a parking lot made of cement for holding land on speculation.

The idea of the poor rendered homeless so that urban professionals can feel altruistic about riding their bicycles to work is obscene, but not far from the "sustainable" class conflicts of Vancouver. A political ecology of gentrification can help to explain the conceptual frameworks that have made this current state of affairs publicly acceptable. Because industrial production is now almost entirely far removed from city centers in North America, urban sustainability

measures effectively bracket production concerns and work to ignore the productive capacities (and hardships) of service workers and the poor who cannot themselves afford to “work, live, and play” in the same neighborhood (Krueger and Savage, 2007). The consumption perspective works to reinscribe individualized responses and not collective decision-making (Maniates, 2002). The combination of individualized consumer response to environmental problems, advanced capitalist urban housing strategies, and the rollback of social housing programs work together to reinforce gentrification. These are far from the visions of participatory, radical, and often soil-covered and overgrown “green urban worlds” of activists or of collective ecological citizenship that would engage participatory deliberations to embed the economy in values of ecology and society (Wolch, 2007).

Studying the political ecologies of gentrification is ultimately a critical project, enjoining us to confront the dilemmas of reconciling our practices and customs of urban living with values of social justice and ecology. Because gentrification is so often part of urban entrepreneurial governance, “such strategies—perhaps conducted in the name of greening the entrepreneurial city—might in effect discipline the poor, the elderly, ethnic minorities, and the socially marginalized and displace or exclude them from areas of the city undergoing so-called environmental improvements” (Jonas and While, 2007, p. 145). Alternatively, renewed enchantment with city life *can* be a part of progressive environmental change, but requires us to adopt a critical attitude toward, and challenge the social inequities of, the gentrification and urban revitalization that play on this re-enchantment. This involves, in part, moving beyond abstractions like “Smart Growth” and “densification” to examine the details of particular projects and processes to see if they embody our myriad social and ecological values.

7. Sustainability-As-Density and the Return of the Social: The Case of Vancouver, British Columbia.

7.1 Introduction

Urban planning in North America and Europe is commonly pursued with ‘sustainability’ as a goal. While ‘sustainability’ is interpreted in many ways (Mebratu, 1998) one now predominant interpretation in urban planning promotes dense urban neighbourhoods, social mixing, non-automobile forms of transit and regulates the outward sprawl of cities (Hall, 1996; Gunder, 2006). The result is a series of proposals such as Smart Growth which stress how zoning changes, regional planning tools and property and development tax incentives could channel new property development in more environmentally benign directions: The emphasis is placed on physical design and zoning changes where the state can alter the conditions whereby growth occurs (Pratt, 1996). Densification and proximity to transit and daily amenities are duly promoted often under the rubric of ‘walkability’; the idea that neighbourhoods should support residents in walking (and taking transit) to accomplish daily tasks (Jabareen, 2006; Roseland, 2005; Brown, 2006).

However, this vision of sustainability and the case examples of densification it drew on were intertwined with further trends in the 1990s of government retrenchment and declining social justice concerns (Gunder, 2006). A particular interpretation of urban sustainability came to prevail--one that stressed the built urban form but which effectively sidelined issues of inequality in cities. In this paper we¹³ apply an urban political ecology lens to this planning model-- what we call ‘sustainability-as-density’--in order to highlight the ways in which it carries with it a range of meanings of ‘the social’ and thereby comes to have social effects. In particular, we focus on processes in Vancouver, Canada, whereby residential neighbourhoods are increasingly subject to densification pressures. We measure social effects pointing to gentrification, interpret cultural representations which suggest a class bias in the idea of

¹³ The plural is retained here reflecting the usage from the published piece.

‘walkable’ neighbourhoods and trace an emergent politics that challenges the sustainability-as-density model.

We draw on Vancouver as a case study as it is widely cited and celebrated as an early adopter of densification policies (Punter, 2003) yet also faces a crisis of housing affordability (Skaburskis and Moos, 2008; Bunting et. al., 2004). Since the 1970s, densification initiatives in Vancouver have largely focused on former industrial lands. This practice, as re-zoning policy, not only facilitated wide scale inner-city de-industrialization but also sparked increasing housing affordability and environmental concerns. Through the 1970s to 1990s densification planning was predominantly focused on building residences above stores, and brownfield sites near the downtown core (South False Creek (1970s), the former Expo ‘86 lands (now Concord Pacific Place), and Yaletown (1990s). By the mid 2000s these were nearing completion, and strong development interests lamented shrinking land supplies and pushed densification planning into existing neighbourhoods (Hutton, 2004). The result was widespread concern that gentrification pressures -- long simmering in Vancouver (Mills, 1988, Ley 1996) -- were resulting in the displacement of the poor, working class and ethnic communities from inner city neighbourhoods undergoing densification (Calvez and Ives, 2008; Gurran, 2008; Blomley, 2004; Lees et. al., 2007). Noting these socio-spatial conflicts, we trace how sustainability-as-density has faced increased opposition from residents, community groups and social activists concerned with gentrification and housing affordability.

We pursue these links through a mixed method approach rooted in urban political ecology. We begin this analysis first with a brief overview of the key literature in urban political ecology. Second, we provide a quantitative analysis at the metropolitan scale for Vancouver which links densification to gentrification. Third, we explore an emerging ‘cultural trend’ in the ‘densification to gentrification’ issue. Fourth, we narrate how a history of planning initiatives and a culture of housing activism, especially since the 1970s, have shaped the contours of the densification processes in Vancouver, and we consider one recent neighbourhood initiative.

In describing these trends we use the term ‘return of the social’. Freudian psychoanalysts speak of the ‘return of the repressed’, noting that "repressed elements...tend to

reappear, which they do in the form of a compromise” (Quinodoz, 2002, p. 11). Original international framing documents such as *Our Common Future* (1987) and *Agenda 21* (1992) clearly implied attention to social sustainability as one of the ‘three pillars’ of sustainability. Here social sustainability could be understood as policy aimed at securing, for all, the prerequisites of a good life (such as a minimum income, employment or education) as well social justice concerns such as distribution of economic goods, equality of opportunity and participation in planning processes. They also implied the need for research on the social dynamics of environmental and sustainability policies (Littig and Grießler, 2005). However, planning theory in the 1990s and 2000s using ‘sustainability’ language emphasised densification of the built form, and actual plans and policies done on this basis were in many cases focused on zoning, land use and transportation issues (Hall, 1996). When the social appears in cities’ actual sustainability policies it mostly takes the compromised form of quality –of-life concerns such as environmental amenities that make a place ‘attractive’ for certain communities (Portney, 2003, Pearsall, 2010; Holden, 2011). We thus invoke a return of the social in two senses: First, our work examines the shifting social demographics and latent cultural values in sustainability planning and in neighbourhoods that seemingly reflect such values. Second, we trace counter currents whereby concepts of the social return. Vancouver thus also serves as a case example of how some planners, civil society groups and political parties have sought to include issues of social sustainability to forge imaginaries of alternative urban growth trajectories (Holden, 2011). At the same time, it provides examples of neighbourhood densification processes which give insight into the significant social effects and political opposition that sustainability-as-density may occasion. In seeking an empirical exploration of such effects we turn to urban political ecology and its emphasis on the ways that urban environments-- and the policies that shape them-- are always already interwoven with the social.

7.2 Urban Political Ecology as a Mixed Method Approach

Political ecology explores the dynamic interrelationship of social and ecosystem processes unencumbered by binary oppositions of society and nature (Robbins, 2004). Urban political ecologists have researched urban inequalities, governance mechanisms, discourses of

nature, and the political economy of urban sustainability policy (Keil, 2003, 2006, 2007). This richness of urban political ecology offers a valuable lens with which to view neighbourhood change. Apart from seeing neighbourhoods as simply composed of real estate markets and their zoning regulation, urban political ecology points to the fact that neighbourhoods are also, all at the same time: a locus of the “constantly shifting dialectic between society and land-based resources” (Swyngedouw and Heynen, 2003, p. 908)--in this case, housing and the land rents of landlords and real estate markets; landscapes subject to social conflicts and competing aesthetics (Walker and Fortmann, 2003); and objects of consumption inscribed by imaginaries of nature (Bryant and Goodman, 2004).

We are interested in the critical examination of how densification processes issue in social inequalities and conflict as “the underlying economic, political and cultural processes inherent to urban landscape production, urban change tends to be spatially differentiated and highly uneven” (Swyngedouw and Heynen, 2003, p. 910). Indeed, cities involve material flows, human/non-human relationships, and power regimes that comprise “socio-nature”-- the discursively and materially constructed systems, simultaneously social and biological, that we inhabit (Heynen et. al., 2006). This suggests analyzing sustainability policies, not as abstract doctrine, but in terms of how they involve, or work alongside, the aims, strategies, and forms of self-understanding of different social groups and power balances (Swyngedouw and Heynen, 2003; Domene and Saura, 2005). Political ecology leads us to assess the shifting relationships between environmental policy, social values and urban inequality. It questions the long-term conceptual stability and practical viability of forms of urban sustainability policy that are in denial about social concerns. In this way, we look to political ecology to support a mixed method approach that combines quantitative, cultural and critical policy approaches.

We draw from the quantitative tradition in urban studies and incorporate it into urban political ecology. Such critical quantification seeks to provide “rigorous but strategic research” towards revealing urban inequalities in access to land and living space (Hackworth, 2005; DeFilippis and Wyly, 2008; Wyly, 2009). Thus, critical quantitative analysis shares with urban political ecology a fundamental concern with “distributional and systemic inequities in the

socioeconomic order” (Keil, 2003, p. 726). Traditionally, such work has considered the spatial dynamics of cities in terms of neighbourhood composition and real estate markets with an eye to the impacts on urban wealth, capital flows, and uneven geographies. We are particularly interested in quantitative work on gentrification in virtue of its ability to trace neighbourhood demographic changes (Meligrana and Skaburskis, 2005). Issues of neighbourhood composition, density, housing size, travel distance and modality are increasingly understood as having effects on urban metabolic flows (such as water and fossil fuel use). Likewise, attempts to regulate such flows may also issue in neighbourhood change and gentrification (Quastel, 2009).

Practitioners (and advocates for) the quantitative tradition are resolute that such work provides the possibilities for mixed method research which combines social theory and spatial analysis (Kwan, 2004; Barnes, 2009; Schwanen and Kwan, 2009; Wyly, 2009). Both quantitative urban geography and urban political ecology share roots in materialist social science (Heynen, Kaika and Swyngedouw 2006; Lees et. al. 2007). Since Marx’s original contributions this tradition has combined critical social theory with mathematics and quantitative methodology (Barnes, 2009). These approaches allow for statistical analysis of neighbourhood composition to be added to the list of quantitative methodologies already used in urban political ecology and which have been used to “tease out who gains from and who pays for, who benefits from and who suffers from particular processes of socioenvironmental change” (Swyngedouw and Heynen, 2003, p. 910). Studies in urban political ecology now commonly use quantitative methods to show environmental injustices (Domene and Saura. 2005; Heynen et al 2006; Landry and Chakraborty, 2009; Buzelli and Jerett, 2007; Pelling, 2003). We thus examine the relationship between gentrification indicators and neighbourhood scores on a “Walkability Index” calculated using WalkScore (2009). This Internet based application combines measurement of point distances from any North American address to the nearby stores, restaurants, parks, schools and other amenities and can be used as a proxy for the kinds of ‘complete communities’ central to contemporary urban sustainability policies.

We also address neighbourhoods as political ecologies of consumption. Within the sociology of consumption, researchers (such as Pierre Bourdieu) have stressed the concept of

“positional goods” -- consumer items that work to display class position and cultural ‘distinction’. Drawing on this tradition, recent gentrification research shows how middle- and upper-class homeowners make use of the symbolic aspects of their homes to display their class position or to gain affiliation with the cultural capital of artists or creative workers (Jager, 1986; Bridge, 2001; Ley, 2003). We are interested in how urban sustainability concepts like walkability reflect new forms of distinction. Here we follow political ecologists who discuss how consumer goods involve imaginaries of places and ecologies and rework tropes of ‘nature’. Bryant and Goodman, for instance, emphasise that commodities come with packaging and advertising that “‘speak’ to consumers in particular ways through specific political ecology narratives” (2004, p. 348), and are carefully calculated attempt to appeal to a burgeoning ‘alternative’ and ‘green’ market. Walker and Fortmann (2003) discuss how in Nevada County, California, gentrifying newcomers espousing environmentalist values view the landscape as an aesthetic good -- as ‘view shed’ or ‘rural quality’. This landscape itself becomes incorporated into consumption politics and spurs non-resource based forms of economic development (such as tourism or software development). In a similar vein, we approach ‘walkable’ neighbourhoods as new sites of consumption thought through tropes of urban environmentalism that obscure these areas underlying social dynamics.

Urban political ecology also suggests taking a reflexive and critical approach to policy, drawing on work that has “critically shadowed the rising movement of New Urbanism and Smart Growth” (Keil, 2003, p. 730). So called ‘critical sustainability studies’ engage with the origination, and development of sustainability policy and with the effects of its application in urban contexts. They apply political economy themes to trace how sustainability planning works alongside urban growth machines and the interests of developers, rising social inequality and the retrenchment of the social welfare state, and middle class quests for living space (for examples see Gibbs, 1997; Raco, 2005; Keil, 2007; Gibbs and Krueger, 2007; Jones and While, 2007; Evans and Jones, 2008; Pearsall, 2010; Shaw, 2013). In the next section we elaborate these approaches through explaining in more detail sustainability-as-density.

7.3 Sustainability-as-Density

Sustainability developed through global environmental discourse as an interdisciplinary approach seeking reconciliation between economic, social and environmental values (Bernstein, 2001). Sustainability-as-density emerged as an effort to create a working model of sustainability for cities: Urban planning education and official discourse coalesced around a concept of sustainability as a spatial planning and zoning design framework -- one built around codified principles of walkable, mixed, complete communities, preservation of green zones and jobs close to housing (Newman and Kenworthy, 1999; Planning for Sustainability, 2006; Gurran, 2008). This was largely based on the observation that the inhabitants of Australian and North American cities consumed much more fossil fuel based energy for transport than their European counterparts, leading to the policy goal of creating cities that were denser and more compact and so featured more walking, cycling and public transit and lower automobile use (Hall, 1996; Ewing et al., 2008). This reflected a long-standing tradition in planning whereby “the focus is, and always has been, on the built environment of cities and towns” (Hodge and Gordon, 2008, at p. 141). As Gunder (2006) notes, this focus also gave new justification to the planning profession.

Analysts of the political economy of actual sustainability policies find that sustainability policies become worked into and help facilitate in novel ways the capitalist growth dynamics of cities. Such policies differ from simple free markets in urban land, and “have become centrist rallying points” and so “subject to blistering critiques from libertarians, from conservative think tanks, and from free-market urbanists” (Peck, 2011, p. 906). Instead, they involve the state in coordinating redevelopment in what has been labelled a ‘sustainability fix’ (While et. al., 2004): urban space is cleaned-up, and cities are marketed as clean and liveable as coalitions of governments and planners seek to balance environmental pressure with the need to find new forms of urban growth (see also Temenos and McCann, 2012). A number of case studies show sustainability policies adopted as part of efforts by entrepreneurial cities to attract in-movers, reflecting the desire to both reap the environmental and growth benefits of a shift towards non-polluting ‘new economy’ industries (such as software development) (Jonas and While, 2007). As

such, sustainability planning actively contributes to, rather than simply exist alongside, growing urban inequality as it contributes to rising house prices and social exclusion associated with the new economy (Gibbs and Krueger, 2007; Jones and While, 2007; Evans and Jones, 2008). Considerable evidence suggests that dense and walkable central city redevelopments are marketed to urban elites and lead to the subsequent take-over of former working class districts by the “the new middle” class of quaternary sector and university educated gentrifiers (Ley, 1996; Lees and Demeritt, 1998; Godschalk, 2004; Dale and Newmann, 2009). In so far as sustainability initiatives were located in the centre of the city and were growth oriented, they coincided with-- and at times helped exacerbate--increasing land values and gentrification (Quastel, 2009). Much of this work has focused on social change in sustainability driven brownfield redevelopments (Lees and Demeritt, 1998; Gibbs and Kreuger, 2007; Hagerman, 2007; Jonas and While, 2007; Kear, 2007; Krueger and Savage, 2007; Shaw, 2013) and at the level of the city region (Krueger, 2007; Krueger and Savage, 2007; Bullard, 2007). In this paper, we are interested in extending this analysis further into densification processes of existing residential neighbourhoods in Vancouver.

A number of sustainability theorists increasingly seek to distance themselves from the narrow sustainability-as-density approach. Instead, they seek to re-incorporate social sustainability concerns such as issues of equity, participatory processes and provisions of basic needs (Agyeman et. al., 2002). In this way, sustainability is presented as more than a predefined set of prescribed planning frameworks, but as an “integrative ideal” (Holden, 2006; see also Robinson, 2004). Sustainability is fashioned as the search for creative solutions for ensuring, and measuring, a wide range of environmental, economic and social values (Gibson et. al., 2005). This includes functional definitions of ‘social sustainability’ at the urban scale that includes themes of quality of life, equity, inclusion, access to services, employment and the spaces of the city, and participatory processes (Stren and Polèse, 2000; for a review see Holden, 2011). Smart Growth organisations, including those in British Columbia, have been more than willing to acknowledge the need for planning policies for the provisions of social and affordable housing (Curran and Wake, 2008; Ingram et. al., 2009; Litman, 2010; Smart Growth America, 2010). Some cities now include social and quality of life indicators as part of their planning practices

and sustainability policies. Governing bodies and foundations in the Vancouver region issued periodic reports assessing the region's performance on sustainability indicators (Holden, 2006; Vancouver Foundation, 2008; Metro Vancouver, 2009; Fraser Basin Council 2010). Vancouver has been given a "D-" ratings on affordable housing (Vancouver Foundation 2008, p. 10; see also Fraser Basin Council, 2010, p. 30; Metro Vancouver, 2009. p.27).¹⁴ However, these conceptual shifts do not remove the political compromises involved in applying sustainability policies. We thus emphasise the various forces in Vancouver including political parties, planning departments, sustainability organisations and citizens groups that seek, in uneven ways, to incorporate concerns about social housing and gentrification into densification planning.

7.4 Measuring Changing Neighbourhoods

In this section, we analyse the temporal changes in the socio-economic characteristics of neighbourhoods to draw out the differences that walkability makes, using the Walkability Index¹⁵. We analyse changing neighbourhoods, roughly operationalized by census tract boundaries, between the 1981 and the most recent 2006 Statistics Canada censuses. We measure changes in managerial, professional and other quaternary sector occupations and university education -- these are simple but established metrics for gentrification as a process of social upgrading (Meligrana and Skaburskis, 2005) and class transformation (Ley, 1996). Although gentrification occurred in Vancouver since the 1960s (Ley, 1980), we use the 1981 census as a base year since it marks a point before widespread densification and the expansion of transit infrastructure (McGee, 2001; Harcourt and Cameron, 2007). We then correlate the changes in the socio-economic composition of census tracts with measures of sustainability-as-density: walkability, distance to transit corridors and dwelling density. The analysis considers the Vancouver census metropolitan area (CMA), with the City of Vancouver as its central municipality.

¹⁴ However, these social indicators are not widely adopted: Pearsall and Pierce (2010) find that across the United States they are seldom adopted, and where they have been they generally do not address systematic urban inequalities or account for neighbourhood variation

¹⁵ The walkability index was calculated for the address at the centre of each census tract. For census tracts with low population densities, the index was calculated at the centre of the largest agglomeration of residential lands rather than the centre of the tract.

Following Meligrana and Skaburskis (2005), we used principal component analysis (“PCA”) to analyse matched census tract data from the two different census years—in our case we matched the 1981 and 2006 data (also see Andrey & Jones, 2008). PCA is widely used in urban geographic research to study socio-economic change and correlation of variables (Ley, 1988; Wyly, 1999). PCA transforms variables into new sets of uncorrelated components (Jolliffe, 2002). Our PCA included variables that capture a number of dimensions of contemporary urban change measured by occupational categories, household characteristics and immigration status. The variables measure change in the tracts between the 1981 and 2006 censuses (expressed as a ratio). Due to changes in variable definitions over time, occupational variables are grouped into broader categories that identify workers in similar kinds of jobs.

Table 7.1 shows the first three PCA components. The first component captured 25 percent of the original variation, and it contains elements of the gentrification process. The component shows high scores for changes in ‘management, business or finance occupations’, ‘social science, education, government and art occupations’, the population 25 to 34 years of age and university education. It scores low on changes in the proportion of non-family households. The second component identifies the increases in ‘sales and service occupations’, ‘trades, manufacturing and construction occupations’, average children per household and immigration. The third component also identifies elements of gentrification, again scoring high on the ‘social science, education, government and art occupations’ and university education and scoring low on the average number of children. But it also shows high scores for increases in non-family households, ‘sales and service occupations’ and ‘trades, manufacturing and construction occupations’.

Table 7.1: Principal Component Analysis of Vancouver Census Tracts

Ratio of Variables 2006 to 1981	Principal Components		
	1	2	3
Management, business or finance occupations	0.452	-0.081	0.130
Social science, education, government, art occupations	0.391	-0.242	0.303
Sales and service occupations	-0.019	0.462	0.350
Trades, manufacturing, construction occupations	-0.284	0.305	0.330
Primary sector occupations	-0.238	0.045	0.017
Non-family households	-0.356	-0.115	0.496
Population 25 to 34 years of age	0.430	0.030	0.093
Average number of children per household	0.122	0.368	-0.553
Population 15 years and older university educated	0.423	0.311	0.313
Population immigrants	0.011	0.617	-0.031
Eigenvalue	2.535	1.783	1.318
Proportion	0.254	0.178	0.132

Source: Authors' calculations using Statistics Canada census tract data (1981, 2006).

Notes: Data for census metropolitan area using 1981 boundaries; N=243; Unrotated principal components with eigenvalue > 1 are shown.

Table 7.2 shows the outcome of a series of linear regressions that relate the components to the walkability, dwelling density (housing units per square kilometre) and proximity to transit corridors (kilometres to nearest rapid transit stop¹⁶) for the Vancouver CMA. A walkability map for the Vancouver CMA by census tracts shows the urban centre and the transit corridors to be most walkable (Figure 7.1). Unsurprisingly, the geography of walkability is also closely associated with dwelling density, as concentrations of people allow for amenities to be more closely clustered (Skaburskis and Moos, 2010). In Table 2, the distance and walkability variables are measured in three different forms (linear, logarithmic and second order polynomial), which is a useful way to see the functional form of the relationship between urban change and the urban spatial structure (also see Hackworth, 2005). Figures 6.2, 6.3 and 6.4 show the scatter plots with the best-fit line for the regression with the highest r-squared value—in other words, the regression best predicting the relationship between the component measuring socio-economic change and the spatial variables.

¹⁶ We include in rapid transit Vancouver's elevated light-rail transit system (the SkyTrain), the express bus lines, the West Coast Express commuter rail and a ferry system (TransLink, 2010).

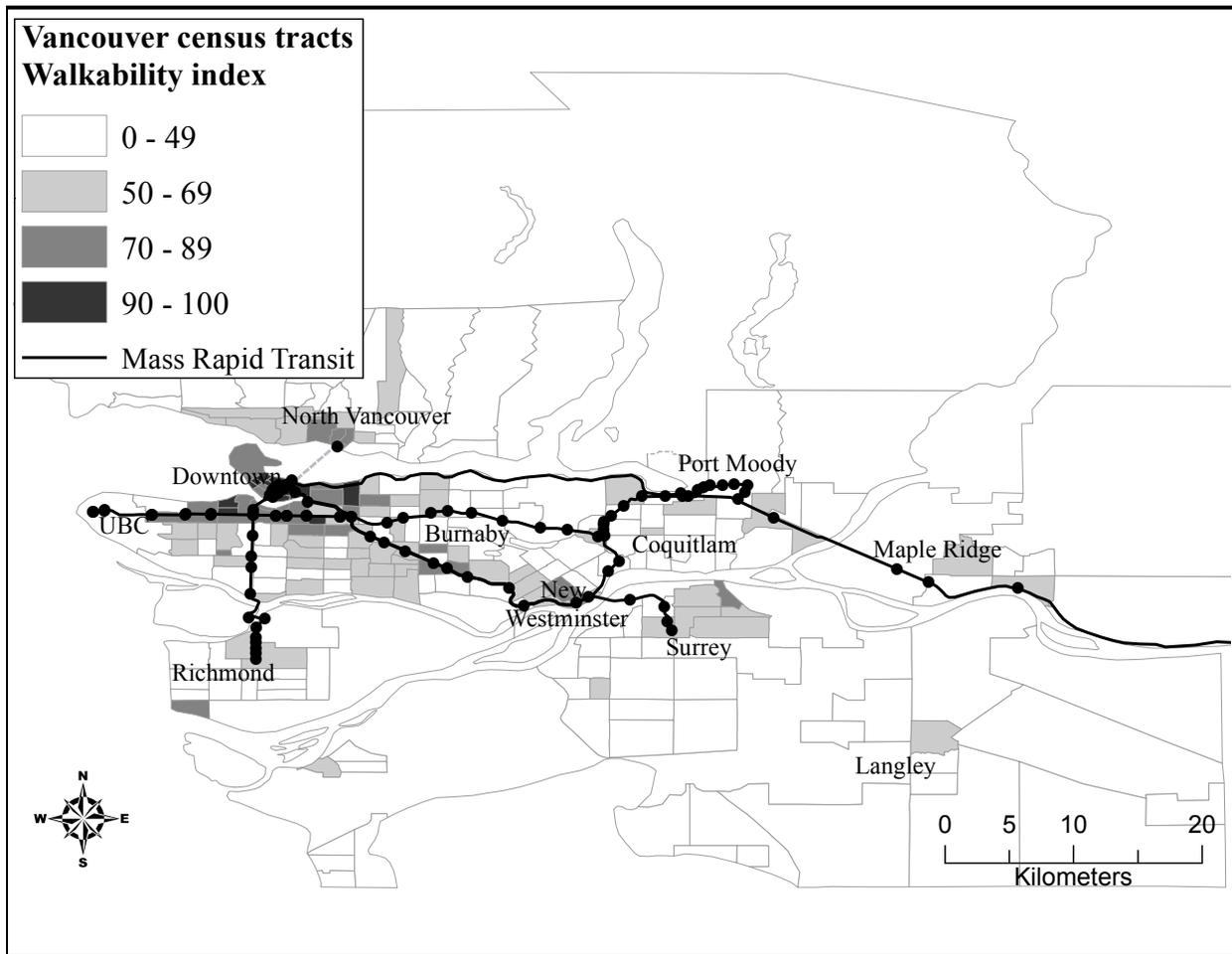


Figure 7.1. Walkability Index by Census Tract, Vancouver CMA Source: Map created using Statistics Canada census base maps, DMTI Inc. spatial data, TransLink reference maps and WalkScore (2009).

The regression results, and scatterplots, show that higher walkability and dwelling density and proximity to rapid transit are evidently associated with the kinds of socio-economic changes characteristic of gentrification as measured by the first component. The linear functional form yields the largest r-squared value with the first component as the dependent variable and walkability as the independent variable, whereas the natural log and the 2nd order polynomial show the largest r-squared for the distance to transit and dwelling density variables respectively. The positive, and statistically significant, coefficients for the walkability and density variables indicate that the socio-economic status of a neighbourhood, as measured by the first component, would tend to have increased more from 1981 to 2006 in higher density and walkable areas. The negative, and statistically significant, coefficients for the distance to transit variable show that the socio-economic changes associated with gentrification have been less likely in neighbourhoods

further away from transit. The statistically significant coefficients also indicate that the second component is associated with proximity to transit and neighbourhoods with higher walkability. However, the low r-squared values suggest that the indicators of sustainability-as-density poorly explain the presence of those in sales and service and manual occupations, households with children and immigrants, as measured by the second PCA component. The third component, also containing measures of gentrification, actually shows a negative association with the walkability index and dwelling density.

These findings are explained by reference to some history. The higher density neighbourhoods that are more walkable and closer to transit were traditionally those of working class residents. As Meligrana and Skaburskis (2005) have shown (using PCA) gentrification dramatically increased the social status of these areas, and increasingly also along the transit corridors extending into the inner suburbs. The density gains are associated with increases in land prices and the development of Vancouver's housing market in the form of high-rise condominium towers in the central city and near rapid transit corridors (Olds, 2001; Hutton, 2004). The housing stock in neighbourhoods that are walkable, dense and close to transit has thus become more suitable to the dual-earners in higher-order occupations than the non-family households in sales and service, and manual occupations—visible in the relationships found in the data here (i.e. the first component). Increases in 'social science and arts' occupations in the third component, along with 'service and manual' occupations, points to the gentrification of working class districts, which in the case of Vancouver would tend to be neighbourhoods of medium and lower density housing. This helps explain why the third component that also includes elements associated with gentrification does not show as evident an association with the sustainability attributes as the first component. Interestingly the component identifying the increases in the immigrant population does show an association with walkability and proximity to transit, the sustainability-as-density proxies still explain little of the presence of this component despite the fact that immigrants are among the heaviest users of public transit (Heisz and Schellenberg, 2004). It points to the importance of factors beside built form, perhaps cultural norms and also income, in determining actual transit use.

Table 7.2: Regression Coefficients and R-squared Values

	Principal components					
	1		2		3	
<i>Linear</i>	Coeff.		Coeff.		Coeff.	
Walkability	.037	***	-.003		-.014	***
Constant	-1.738	***	.157		.662	***
R-Squared	.269		.003		.075	
Distance to transit	-.139	***	-.058	**	.025	
Constant	.578	***	.242	*	-.105	
R-Squared	.177		.044		.011	
Dwelling density	2.0E-04	***	-3.8E-05		-1.2E-04	***
Constant	-.377	**	.072		.233	**
R-Squared	.124		.007		.091	
<i>Logarithmic</i>						
ln(Walkability)	1.299	***	-.036		-.474	***
Constant	-4.852	***	.154		1.772	**
R-Squared	.201		2.0E-04		.052	
ln(Distance to transit)	-.838	***	-.191	*	.126	
Constant	.745	***	.169		-.112	
R-Squared	.302		.022		.013	
ln(Dwelling Density)	.511	***	.102		-.164	**
Constant	-3.512	***	-.699		1.127	**
R-Squared	.169		.010		.034	
<i>Polynomial</i>						
Walkability	.006		.054	***	.007	
Walkability^2	.0003	*	-.001	***	-2.2E-04	
Constant	-1.150	**	-.952	**	.253	
R-Squared	.283		.076		.089	
Distance to transit	-.417	***	-.028		.065	
Distance to transit^2	.015	***	-.002		-.002	
Constant	1.121	***	.182		-.183	
R-Squared	.265		.046		.015	
Dwelling density	.001	***	1.2E-04		-.0003	***
Dwelling Density^2	-3.0E-08	***	-1.0E-08	*	8.5E-09	*
Constant	-.882	***	-.102		.377	**
R-Squared	.229		.024		.108	
Source: Authors' calculations using Statistics Canada Census Tract Data (1981, 2006) and WalkScore (2009).						
Notes: CMA=Census metropolitan area; N=243. Linear regression of principal component (dependent) against linear, logarithmic (ln) and 2nd order polynomial transformations of walkability, distance to transit and dwelling density as independent variables. Logarithmic function excludes tracts with walkability scores of zero (6 tracts). ***p<0.0001, **p<0.01, *p<0.05.						

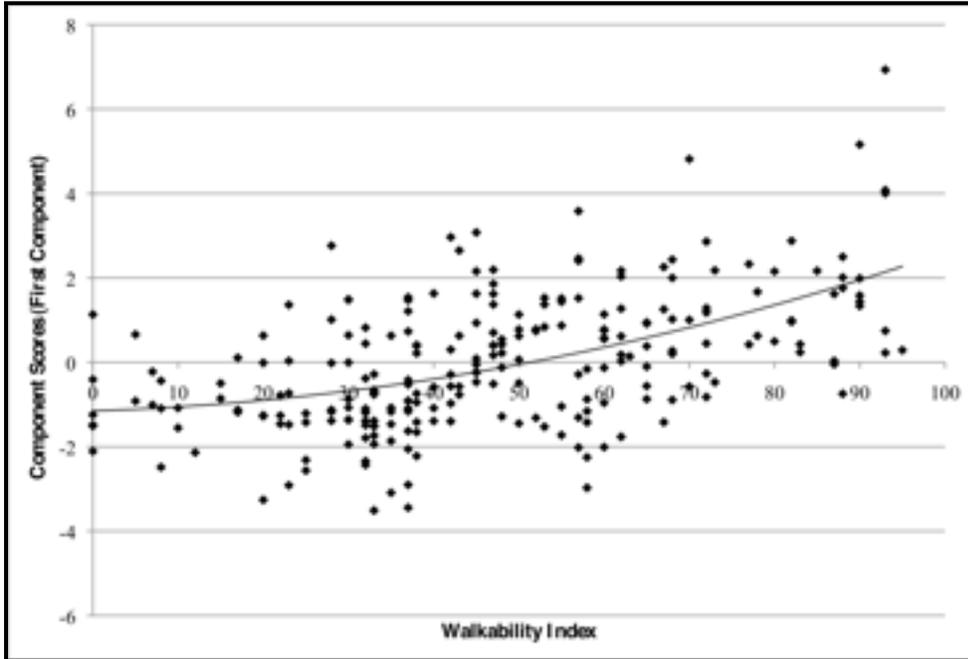


Figure 7.2 Correlation of change in social status and walkability in Vancouver Source: Markus Moos' calculations using Statistics Canada census tract data (1981, 2006) and WalkScore (2009). Notes: Census tract data for Vancouver census metropolitan area using 1981 boundary. Higher scores denote increasing social status as measured by changes in occupation.

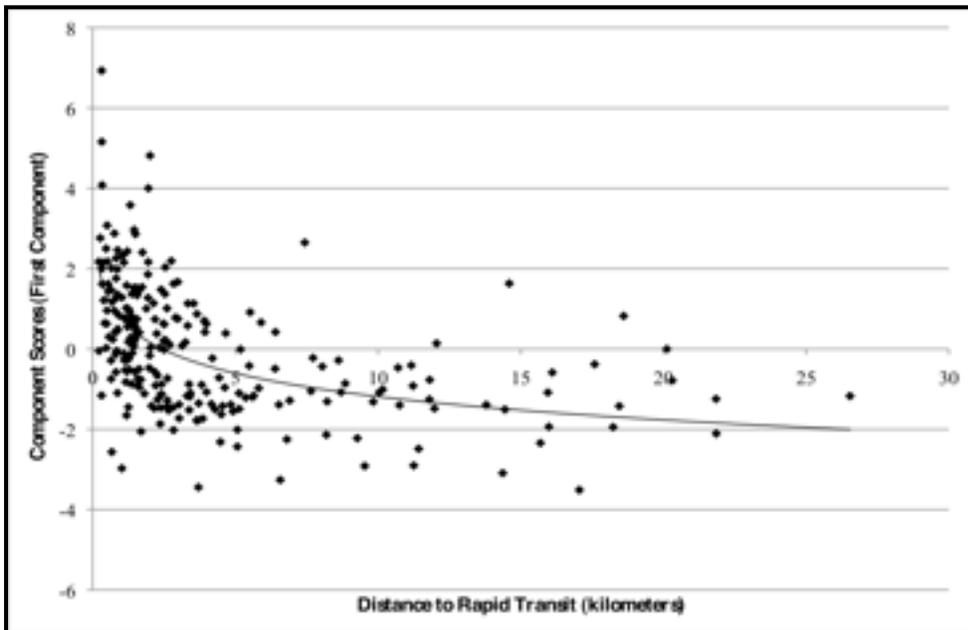


Figure 7.3. Correlation of change in social status and distance to rapid transit in Vancouver. Source: Markus Moos' calculations using Statistics Canada census tract data (1981, 2006). Notes: Census tract data for Vancouver census metropolitan area using 1981 boundary. Higher scores denote increasing social status as measured by changes in occupation

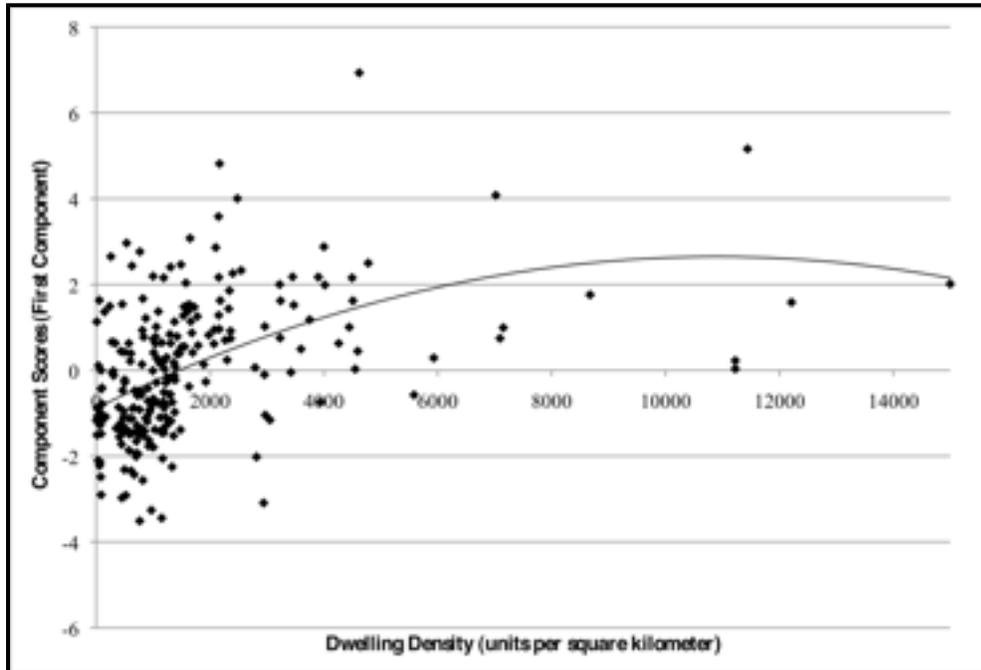


Figure 7.4 Correlation of change in social status and dwelling density in Vancouver. Source: Markus Moos' calculations using Statistics Canada census tract data (1981, 2006). Notes: Census tract data for Vancouver census metropolitan area using 1981 boundary. Higher scores denote increasing social status as measured by changes in occupation.

7.5 Walkability as Cultural Construction

We interpret neighbourhood changes as a particular post-modern and post-industrial ethos that are, in one sense, defined by their opposition to the suburbs (Ley, 1996; Fishman, 2005). At least since the early 1990s the mixture of de-industrialization, densification and new urbanist style has inscribed walkable neighbourhoods with rhetorics of nature (Lees and Demeritt, 1998). The added imperative that such neighbourhoods offer environmental improvement creates an ethical gloss, that is, “a powerful inducement for middle-class consumers to ‘do the right thing’”(Bryant and Goodman, 2004, p. 354). Real estate developers and urban planners continue to link “a quest for consumer self-realization to the ‘meaningful’ practice’ of environmental benign lifestyles” (ibid, p. 354) as “harvesting nature for a psychic yield has become a defining middle-class pastime” (Price 1995, p. 190, quoted in Bryant and Goodman, 2004, p. 354). Based on discourse analysis of advertisements for new projects and sustainability policy documents we

find the recurrence of Jane Jacob's (1961) new urbanism but restyled as novel ways to (ethically) consume neighbourhoods.

Jacobs highlighted connections between zones of historic preservation, urban parks, dynamic meeting places and heterogeneous neighbourhoods arguing that they act as bulwarks against the homogeneity characteristic of modern planning. Moreover, an important part of this vision was the conscious production of 'people-places', networks of pedestrian corridors and public transportation – essential elements intended to help re-valorize a new urban conviviality defined by mobility and density. Yet, this was an ideal, an antidote to Le Corbusier's auto-centric yet "vertical-garden city" that placed sidewalks, pedestrian corridors and footpaths among the most vital instruments of a new urban liveability (Jacobs, 1961, p.22). In short, Jane Jacobs initiated a project to reclaim the urban center for the pedestrian.

Walkability thus becomes a keyword for a reversal of modernism's urban monstrosities: public spaces overtaken by automobiles; long-distance, traffic choked commutes; homogeneous suburbs, and alienation from political process. The city, in this case, is re-imagined as a network of villages constituted as such by the craft-like attention its residents (rather than specialists) pay to place-based (and cooperatively organized) urban design. This process positions residents as citizens and neighbours and offers the lifestyle improvements of the 'well designed' place. We thus sense in such anti-modernist village conception the "landscape of distinctiveness of the gentrified neighbourhood" (Mills, 1988, p. 186). However cultural capital accrues here not in the form of affinity with artists (Ley, 2003) but through personal enactment of sustainable urban lifestyles. The 'social' returns here not as values of social justice, but as forms of sociality that contribute to a collage of lifestyle, aesthetics, identity, a sense of place and the formation of beneficial social networks (Colantonio, 2008).

Embedded in this planning discourse is a focus on promoting a sense of diversity. Far from the functional homogeneity of single-use places characteristic of modern cities, many current urban strategies seek to revitalize inner-urban areas by fostering collage-like environments in dense zones. Such initiatives have been described as 'hetero-zones' (Boyer, 1990; Lees, 2003: 621) or 'live-work-play' spaces as their design seeks multi-functionality

through a combination of economic, spatial and cultural attributes. The connections between themes of centrality and diversity in local urban places also carry with them a distinction based upon a spatialized relationship with cultural and ethnic ‘others’. In direct contrast from the cultural and spatial standardization characteristically portrayed of the classic suburban subdivision, and the portrayal of the inner-city as a pathologized ghetto, the postmodern city is routinely repackaged as a landscape of cultural harmony where multiculturalism and cosmopolitanism are sought after as key elements in a socially sustainable life (Lynch and Ley, 2010).

Advertising campaigns produced by developers and real-estate marketing firms shows explicit connections with Jacobs’ progressive visions of urban liveability. Across Vancouver, for instance, the continued expansion of new condominium construction has intensified the value of marketing and branding message which claim a sense of ‘sustainability’ often through interwoven discourses of environmental or ‘green’ quality and accessibility to a centre. In Kitsilano, for example, a new 5-storey boutique style condominium called *Lumen* features haute couture interior designs, state-of-the-art finishes like ‘Italian inspired rift-cut oak cabinetry’, but also geothermal heating and intelligent metering -- elements the developer says enable these homes to “respect the earth” and “exist in harmony with the environment” (Bucci, 2011). But in addition to these technological and design innovations, *Lumen* is also aggressively branded as *a centre*, a hub for quality urban living (Figure 7.5). This analysis need not go too far: the hub and spoke imagery are potent symbolic links to a discrete urban landscape where one’s needs of shopping, viewing, playing and living, a supposed totality of urban life, are all attainable by being in the centre, that is, by living in a *Lumen* condo.



Figure 7.5. Advertisement, Lumen, Vancouver. Source: Developers' advertisement campaign run in Georgia Straight newspaper, Vancouver, in 2010.

But this is only one of many *centres* in the city. Below we discuss city efforts to redesign the East Vancouver Norquay Village area. One of its centrepieces--the recent development of *2300 Kingsway* by the Wall Group -- proclaims to be a hub, “the perfect locale for accessing the city’s best” features. Like Lumen, this development merges environmental design, through the work of a “world famous sustainable architecture team” and LEED standard construction, with discourses of centrality, expressed in simple temporal and spatial terms depicting accessibility to “culturally diverse” neighbourhoods, local green spaces, and, boutique shops and restaurants along Norquay Village. The branding narrative culminates in a veneer of ethical sustainability, for *2300 Kingsway* offers consumers not just a view, location and reasonable price, but also an

opportunity to experience and live in a place where, as the developer puts it, “green living comes alive”.

These developments thus transform ‘the social’. Accessibility, expressed through walkability and functional transit connections, is one among several attributes that enable a reflexive and conscious production and display of distinct urban identity. Proximity is a class-based badge sutured not on the sleeves of residents but instead on the very landscape where they live and consume. The result is that walkability meshes easily with the construction of the ‘consumer city’ - a focus on the provision of attractive and diverse consumer opportunities as a means to lure and retain a capital intensive new middle-, or creative-, class with a cosmopolitanism identity (Ley, 2004; Binnie et al., 2006).

7.6 Sustainability-as-Density in Planning Practice

Planning for, and managing growth has been a central part of the ‘Vancouver model’ with a number of key developments: the rejection of freeways in the late 1960s; the creation of an Agricultural Land Reserve (ALR) (1972) protecting agricultural land, and, later, acting as an urban growth boundary; the formation of region-wide development plans (1972) which are periodically updated and given muscle through provincial “Growth Strategies” laws; the channelling of regional growth around rapid transit; and an emphasis on environmental goals and compact transit-oriented urban designs (Young, 2000; Fox, 2010). While many cities in eastern North America (such as New York) and Western Europe (such as Paris or Berlin) feature older centres, Vancouver’s growth occurred primarily during the automobile age. However, unlike many cities in Western North America, a significant portion of new urban growth was channelled into high-density development mimicking older city centres.

Vancouver’s planning tradition also differs in important respects from a bare concern with densification: Vancouver’s planning tradition was based on a shared social vision held by new generation of planners, politicians, and activist citizenry that opposed the modernist urban planning of the 1960s. In its place, these actors fought for a ‘liveable’ city, which included social welfare and environmental values; an inclusive community constructed and maintained through

public participation (Ley, 1980). Especially important in the 1970s, this new vision worked with a relatively strong national level social welfare state-- the federal housing strategy was effectively creating non-market housing for large percentages of the population, supplanting private ownership with cooperatives (Hulchanski and Shapcott, 2004). For instance, in the False Creek development--an important early example of inner city brownfield development in support of 'liveability'--over fifty percent of units were targeted for lower income people in order to reflect city-wide statistics on income distribution (MacAfee, 2011). CityPlan (1995) -- both in the process of its creation and in its prescriptions for future planning -- placed great emphasis on densification but also public participation and social housing (City of Vancouver, 1995). An important result of this participatory process was that it made explicit reference to several key 'livability' items at the same time as it avoided language of sustainability for fear of disengaging the public (MacAfee, 2011). Thus, the process highlighted provisions that encourage lower and modest income families opportunities to live in the city, new avenues to subsidized housing, and incentives to encourage developers to construct affordable market housing.

By the 1990s issues of state support for housing were causing deep divisions in the City of Vancouver as the federal government discontinued both subsidies to social housing and transfer payments to the provinces (Hulchanski and Shapcott, 2004). The pro-development Non-Partisan Association (NPA) has generally adopted sustainability-as-density logics, while the leftist Committee of Progressive Electors (COPE), and centrist Vision Vancouver (now in power), have sought to include values of social sustainability. The build-out of downtown Vancouver (during NPA rule) was characterized by high-rise condominium towers, reflecting an early adoption in the 1990s of the sustainability as density model. While social activists were dismayed by the relatively low set aside of twenty percent of land for social housing, this rate reflected planners worries that no more be set aside than provincial or federal governments could fund (MacAfee, 2011). In fact, by 2011 only thirteen percent had been built (Bula, 2011).

For the sizeable brownfield developments at South East False Creek, NPA governments initially adopted plans that would replicate the downtown density model. But when COPE (later split into COPE and Vision) came to power in 2002 they put in place an extended public

consultation process and the idea of the area being a model sustainable community featuring a mix of incomes, and European influenced mid-rise building style. The city would take advantage of the fact that it owned property and had a large property endowment fund to pursue redistributive policies. By providing the land for free, the profits from the sale of high-end residences could be used to provide low-income and subsidised middle-income housing. When the NPA returned to power in 2005 provision of social amenities and social housing were downscaled but not densification or energy efficiency aspects (Kear, 2007). In the end, the City sold the lands to the highest bidding private developer, resulting in the “Millennium Water” development, a project marketed as ‘sustainable’ but priced well beyond the reach of most professional salaries in the city and with reduced social housing units (Quastel, 2009).

Likewise, the EcoDensity Initiative (2006 to 2009) was intended by NPA mayor Sam Sullivan to extend densification into already built (and mostly low rise) neighbourhoods outside the central core. Here the claim was that “strategic, well-managed density, design and land use” could improve liveability, environmental performance and housing affordability (EcoDensity Charter). City staff had been eager to expand zoning regulations to allow experimentation, such as diverse housing types (e.g. secondary suites, duplexes, lane-way suites), and increases of building size in specific residential areas (City of Vancouver planners, interview). However, the local media reported that Mayor Sam Sullivan expected the initiative to drive down land prices through increasing supply (see Mason, 2006, p. S1). Planners did not hold this position, however, as estimates suggest that without zoning changes space still existed for 70,000 more people in the city and “developers don’t build to overcapacity” (City of Vancouver planners, interview).

There were a lot of public consultations “two years of workshops, community meetings, public forums and fairs, hundreds of participants, and seven nights of public hearings” (City of Vancouver, 2010a, p. 3) at which the city found that “many people are still not sure how EcoDensity can help improve affordability” (p. 9). The governing NPA was widely viewed as a pro-developer party, and most new build condominiums in the city were marketed to affluent homebuyers. Public consultations were dominated by a concern that EcoDensity would simply mean more condominiums for the rich and those in professional occupations in small households

paying high per unit prices (Bula, 2008; City of Vancouver 2010b; City of Vancouver planners, personal interview). There was also a widespread sentiment that residents in predominantly single-family areas did not want their lifestyle affected (Bula, 2008). Planners found that “planning for new density that complements and is compatible with established lower-density neighbourhoods was a key challenge for the EcoDensity process - a challenge made even more difficult by the reluctance of many city residents to embrace new density” (City of Vancouver, 2010a, p. 13). There was considerable public perception that the Initiative was “Sam Sullivan’s EcoDensity brand” (Kimmitt, 2007), and he did apply for a trademark using his own name before announcing the initiative to the public (Toronto Star, 2007; Vancouver Sun, 2008). Sullivan’s ownership of the issue appeared to disregard a city tradition whereby sustainability initiatives were achieved despite a fundamentally conservative residential population through extensive public consultation (City of Vancouver planners, interviews). While a city strike for three months in 2007 did not help speed the process, after 2 years EcoDensity only had a general statement of principles which, by and large, matched general concerns about sustainability. Additionally, initial actions were taken on lane-way housing, creating ‘microsuites’ in existing apartments, and allowing basement suites.

The EcoDensity Initiative was quietly dropped after Vision Vancouver swept to power in November 2008. Significantly, the new mayor Gregor Robertson had a strong environmentalist reputation and support, but this was based on his prior experience as an entrepreneur in the organic food industry, not with any specific expertise in urban environmental policy. Some of the individual EcoDensity actions, such as requirements to link rezoning applications to greener building standards, have passed the new council (City of Vancouver, 2009a). Staff repackaged the initiative in the Summary Report in the guise of a learning process and past initiative, emphasizing it as a project in community consultation--reflecting in part what was learnt from consultations--that “there needs to be ample community involvement in decision-making” (City of Vancouver, 2010a, p. 9) and that “addressing affordability is a key challenge to the long term sustainability of the city, its economic resiliency, and its ability to house a diverse workforce” (p. 5).

EcoDensity was replaced with a robust “green economy” visioning process that more radically departs from the sustainability-as-density model: the “Greenest Capital Action Team”(“GCAT”) called for the City to become the “greenest city in the world” (City of Vancouver, 2010b). GCAT was spearheaded by Robertson and Andrea Reimer--a former wilderness conservation campaigner. She distances herself from sustainability discourse, arguing that the concept of a ‘green economy’ involves a different constituency and greater popular appeal (Reimer, interview, 2011). The Action Team was co-ordinated by David Boyd, a prominent environmental lawyer and author of sweeping critiques of lax Canadian environmental law (Boyd, 2003, 2004, 2011). His environmentalism was a mixture of liberalism, pragmatism and faith in regulatory institutions, favouring a broad array of indicators and regulations to address issues ranging from forest policy to carbon emissions, but without a strong emphasis on urban densification. Moreover, the GCAT team included a broad diversity of advisers with expertise in various forms of sustainability--from the business world, clean tech and energy, and including David Suzuki, a prominent environmentalist¹⁷. The visioning statement, called “Vancouver 2020: A Bright Green Future” did call for “a compact, efficient city” but as only one element in the broader goals of the elimination of dependence on fossil fuels, achieving a “one planet ecological footprint’ and ‘Mak-[ing] walking, cycling, and public transit preferred transportation options”. Densification is deferred to an “Integrated Greenest City Plan” that will “use a systems approach to create an over-arching vision and structure that shows low carbon energy opportunities, viable sustainable transportation routes and nodes, potential for expanding green spaces, employment nodes, and appropriate housing density” (City of Vancouver 2010c, p. 24). In the short term, plans now focus on bike paths, community gardens and composting.

Vision’s centrist politics has also led to extensive work in housing policy. While much of this is directed at emergency beds for the homeless (City of Vancouver, 2009b), it also includes explicit densification initiatives-- relaxed height and density requirements for

¹⁷ Business representatives included Robert Safrata, CEO of a courier company, Linda Coady, the vice president for sustainability at the Vancouver Olympics, Tamara Vrooman, the CEO of a large Vancouver based credit union; and Mossadiq Umedaly, with a history in energy and electricity as chairman of BC Hydro, the local electricity monopoly, and with a history in power electronics; David Suzuki is trained as a biologist in his writings (and television shows) draw heavily on ecology and ‘biocentric’ themes.

developers who promise to provide rental-only towers, (the Short Term Incentives for Rentals (STIR) program), zoning regulation requiring one-for-one replacement of demolished rental units in redevelopment projects, and continuing planners earlier push for legalizing basement suites and laneway houses (City of Vancouver Housing Centre, 2010; City of Vancouver, 2011). While both its housing and environment policies point towards the possibilities for including a wider swath of values, the Robertson/Vision administration is limited in doing so by strong doses of political pragmatism and the desire to tread lightly on the contentious areas of taxes and significant land use change.

7.7 ‘Creating People Places’

The Norquay Village Neighbourhood Centre Plan, a project approved in November 2010, demonstrates, perhaps more than most, the inherent conflicts between gentrification and social justice concerns, neighbourhood level densification, and the ways in which public consultation shifted planning from a simple sustainability-as-density model (Figure 7.6). In this case, the project involves transforming an older working class and immigrant area in East Vancouver through the demolition of local affordable housing stock (e.g., mid-century bungalows and ‘Vancouver Special’ single-family houses) and the aesthetic revitalization of the Kingsway corridor, a key commuter thoroughway. This is a direct implementation of CityPlan, which had identified the need to expand housing and residences, while transforming main roads into “high streets”. Community visioning processes conducted in most sectors of the city had confirmed widespread citizen (not to mention planner) support for this idea. By 2002, a ‘terms of reference’ had been set for planning processes around such Neighbourhood Centres (City of Vancouver, 2002). These terms gave no explicit directions concerning affordable housing or neighbourhood composition beyond a general requirement to discuss “housing needs, challenges and opportunities” (p. 9). This was clearly intended as an exercise in land-use zoning. However, extensive public consultations were envisioned, including design charettes, working groups and open houses.

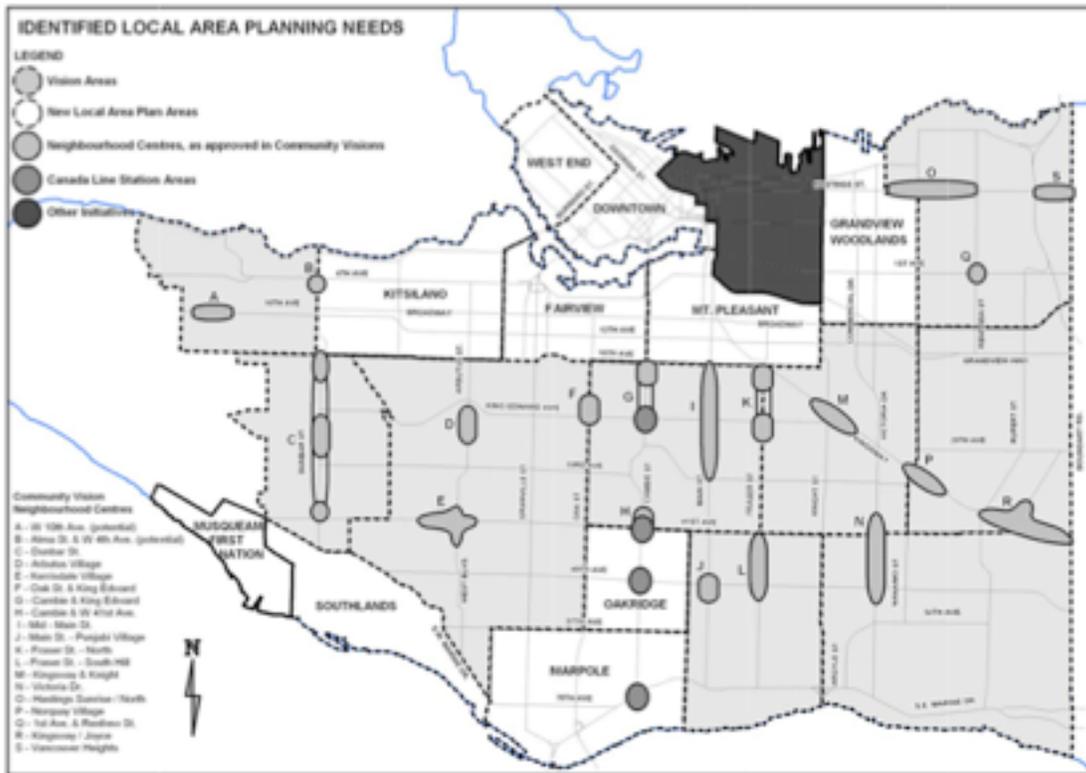


Figure 7.6. City of Vancouver, Local Area Planning Needs, showing location of Norquay Village (P). Source: City of Vancouver, 2010. Available publicly at vancouver.ca/commsvcs/planning/neighcentres/pdf/localarea.pdf

By 2004 the “Community Vision” for the East Vancouver area around Kingsway (Collingwood-Renfrew) had identified the Norquay area as such a centre, and by 2006 was approved to the subject of a Neighbourhood Centre planning process (City of Vancouver, 2010c). The area was newly coined as a “Village” by the city to help facilitate its being redesigned as a walkable neighbourhood, with the “Work Program” envisioning row houses, infill houses, laneway houses and mid-rise wood frame apartments contemplated (City of Vancouver, 2006). No explicit directions included equity concerns such as retaining rentals, zoning for (much less building) social housing or gentrification effects, although the emphasis on infill is clearly meant to minimise displacement of current houses (and their owners). The resulting plan was approved by council in November 2010 (see Figure 7.7).

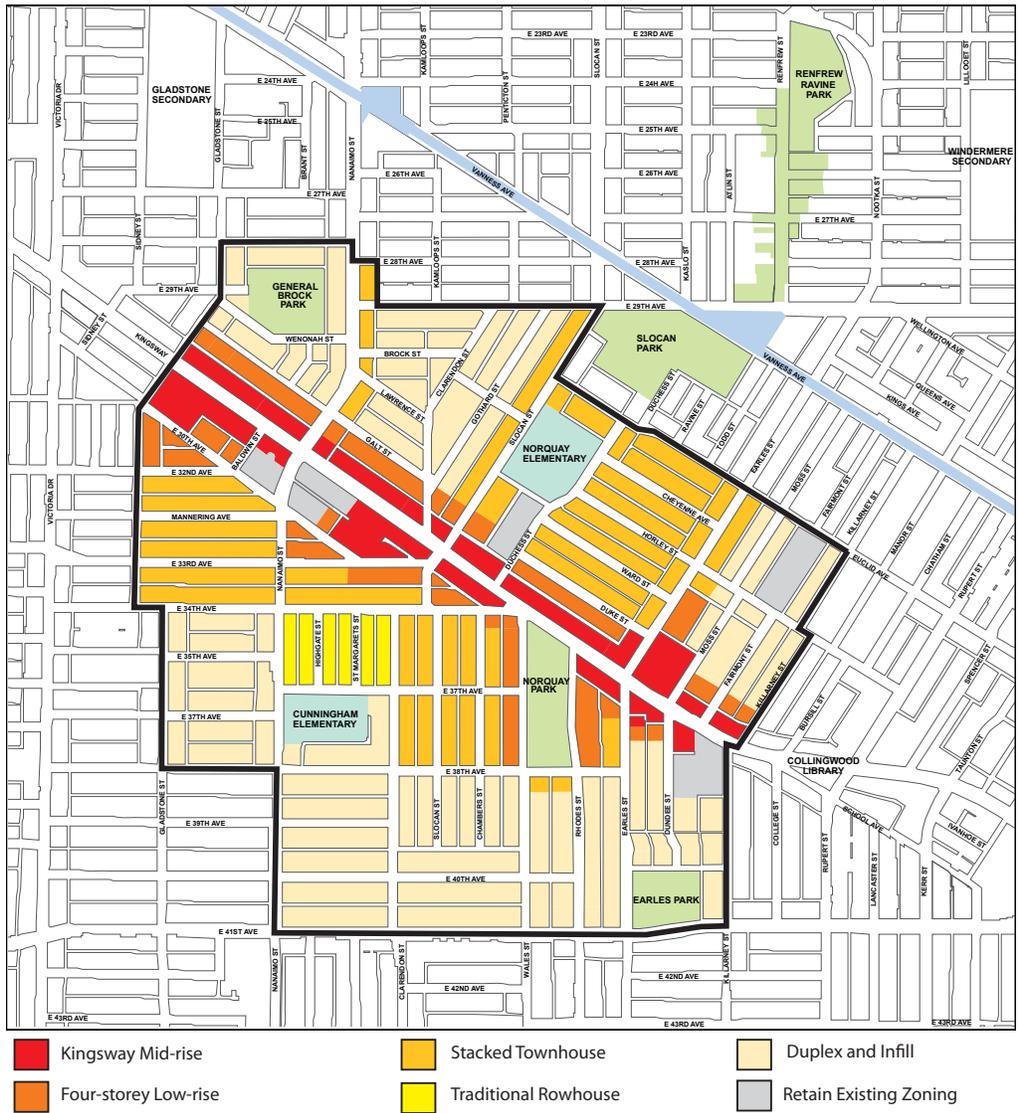


Figure 7.7: City of Vancouver, Norquay Village Housing Types. Source: City of Vancouver, 2010. Available publicly at vancouver.ca/commsvcs/planning/neighcentres/norquay/pdf/NVNCPlan.pdf

There is a notable increase in the ambitions for densification with triplexes, suites and midrise office and condominium buildings beyond what was envisioned in the 2006 work plan. Reflecting the Greenest City Initiative, there is added emphasis on energy efficiency, with rezoning applications for higher buildings on Kingsway conforming to LEED standards and row-houses and ‘stacked townhouses’ creating efficiencies through shared walls. More contentious,

but not so much as to stop City Council approval, was raising proposed height limits along Kingsway from 8 to 10 stories. In a prescription taken straight from the pages of Neil Smith's 'rent gap' thesis, property market analysts suggested that increased density to 3.8 floor space ratio and height up to ten stories would be needed "to make rezoning and redevelopment financially attractive"; the problem was that moving from low-rise wood frame to concrete construction created higher costs. Only at the increased densities would land become sufficiently profitable and allow the city to impose public amenity fees (Rossi, 2010; City of Vancouver, 2010c).

The consultations in 2007 gained considerable media attention for the level of anger expressed, as the process was seen by some residents as intermingled with the EcoDensity Initiative; and because, independent of the official public participation process, rezoning allowed a 22-story condominium tower in the area that raised concerns regarding building scale (Kimmett, 2007; also see Shepherd, 2010). Initial zoning changes in an adjacent neighbourhood created, by the City's own estimate, increases in property taxes ranging from \$250 to \$1,400 per year (City of Vancouver 2007). While a majority of the area residents were homeowners, the possible effects on the one third of residents who rented were used to support allegations of gentrification (Jones, 2010). Many homeowners, though, were also worried about the "wisdom of reducing green space" and one newspaper article featured a neighbourhood family that "eats and shares produce from their gardens all summer long with no need to get fruits and vegetables from the grocery store" (Rossi, 2007).

Planners resorted to repeated community consultation. By 2010 the city's Director of Planning reported the planning process had been "unusually challenged" and involved numerous design charettes, open houses community meetings, formation of working groups and outreach to ethnic communities. City of Vancouver planners confirmed that public consultations operated to help steer them through the multiple minefields of landscape change and affordability concerns (City of Vancouver planners, interview).

We emphasize the way this community planning process involved the 'return of the social' in a number of guises. First, there is the extensive public consultation that responded to an

increasing politicization of the planning process. Second, there are the ‘social networks’ theories of new urbanism and the public realm, whereby Kingsway is transformed “from a barrier to a heart and a place that supported informal socialization and creating a distinctive identity for the neighbourhood” (City of Vancouver 2010c, p. 5). This clearly seeks to redesign the area to appeal to middle class residents who are increasingly moving eastward in search of housing, and ‘places’, they can afford (Ley and Dobson, 2008). Third, we also see explicit reference to social equity and affordability concerns not contemplated in earlier planning documents nor within traditional sustainability-as-density planning. “More affordable home ownership options” are now central objectives, with infill, row-houses and low to mid-rise apartments styled as “increasing opportunities and access to entry-level ownership while retaining rental options (including secondary suites in all proposed new housing types)” (City of Vancouver, 2010c, p. 8). The plan envisions (but has no detailed provisions for) the adoption of mechanisms to expand diversity of housing types, market rental housing and non-market housing to assist in the accommodation of a wide range of households.

7.8 Discussion and Conclusions

While Vancouver is widely touted for the virtues of the sustainability-as-density model, it in fact shows considerable problems with the model. First, densification in Vancouver is linked to gentrification and its class politics. Together, rising housing prices in central areas and a cultural and policy turn that connect urbanity with environmental ideals have reinforced relationships between walkability, density, proximity to transit with increasing social status. However, the predominance of home-owners in many of Vancouver’s densifying neighbourhoods also suggests there is considerable level of support. The ‘losers’ are more likely to be renters and potential in-movers rather than current homeowners. Densification has a class-based dimension.¹⁸

¹⁸ In addition to class, there are inter-generational and demographic dimensions in that current homeowners and smaller households benefit at the expense of in-movers, the young entering housing markets and families with children (Moos, 2012).

Second, the city's planning traditions were rarely voiced in terms of sustainability but instead reflected longer traditions of liberal politics set in motion in the 1970s. While politicians, planners and citizens routinely used key concepts of livability, walkability and densification these were rarely voiced as sustainability, and were not designed to meet contemporary challenges such as significantly reducing carbon emissions. Moreover, they were embedded in wider social movements-- such as civic engagement for citizens and public participation for planners. Third, there have been consistent, but uneven pressures in the city for densification initiatives to be met with social housing provision. In the 1970s, densification occurred in a context of federal housing strategies and substantial city-owned land on brownfield sites. By the 1990s densification initiatives had to grapple with the increasingly free market nature of urban housing in Canada, thus effectively excluding many social concerns.

But blame cannot be placed on planners alone, for they are caught by a division of governmental powers (Filion, 1997) whereby social housing concerns are predominantly under federal and provincial control. Social democratic trends at the City level are now only scarcely replicated in higher levels of government. While there are pressures to downscale responsibilities, these are not met by concurrent powers to increase the tax base (Holden, 2012). No city political party feels it has the ability to advocate for dramatic expropriation powers, to shift densification initiatives into wealthier (and less dense) neighbourhoods or to stop housing market speculation and foreign ownership. Thus, planners cannot easily adjust policies to address gentrification and affordability issues.

By the late 2000s, the city embarked, rhetorically and in practice, in a new turn. The adoption of a Housing and Homelessness Strategy reflect widespread concern over homeless and affordable housing (City of Vancouver, 2011a, City of Vancouver, 2011c, Howell, 2011). By selling off lands for intensification and promoting infill and housing-mix, the strategy appears largely dependent on, rather than seeking to change, underlying property and densification dynamics. In prioritizing housing for the homeless and the city's poorest, the strategy reflects a 'basic needs' rather than distributive justice approach (Burton, 2000). While justified as a way of triaging limited funds, its clear current strategies will not compensate for the large projected gaps

in the city for rental housing (Sinoski, 2011). Practically no attention is paid to the larger issues of neighbourhood change and class dynamics.

Further, we suggest that full inclusion of the social in sustainability planning will require more than shifts in practice: What is needed is a shift from the research agenda that positioned sustainability as predominantly a question of urban form. Prescriptions of sustainability-as-density are generally derived from research that isolates built form and transport variables from the socio-economic context of the city (Pratt, 1996; Jarvis, 2003). In contrast, a political ecology lens requires us to ask about the interconnections and reciprocal relations between the built form and the social. As such, we have sought to show how quantified research, suitably contextualized, can indicate general trends in the way that the social and the built form are connected. Density is not only ‘necessary but not sufficient’, as planners now so often proclaim. Rather, it is at the core of a process of cultural and economic urban restructuring leading to the gentrification and revalorization of walkable and transit accessible spaces. If such spaces become exclusive enclaves for the well-off the results may be not only spatial injustice in the city: They may be of limited environmental benefit if other households are simply displaced to lower density suburbs or if environmental improvement becomes widely seen as a vehicle for promoting class based values and privilege.

8. Conclusion: The Network Fix

8.1 Review of the Thesis so Far

This thesis has concerned the problematic of sustainable commodities and contestation over the terms of how they are regulated. As the introduction indicated, sustainable commodities do something new -- they create vertical regulation that covers a network and links consumption and production in an effort to offer environmental and social protections. They do so in ways that traditional state law and regulation have not, foregrounding processes behind products, the role of consumers in maintaining commodity systems, the materiality of networks and their relationships to nature. This regulation can work across borders, use regulatory techniques available to cities, or harness consumers in an effort to reshape entire networks. Chapter 2 canvassed different ways of understanding commodities/networks and suggests that as complex socio-technical complexes, networks involved relationships between firms, consumers, civil society, the state and nature. A geographical political economy suggests a focus on processes of capital investment, value creation, division of labour and global uneven development. It asks that networks be seen as shaped by and shaping contexts such as cities and nation states, and contribute to (as well as being changed by) rescaling processes. The regulation of network changes through shifts in public policy and politics. This creates a series of theoretical problems for traditional theories of regulation, and chapter 3 canvassed approaches in the Regulation Approach, governance, governmentality and neo-Gramscianism.

The case studies explored conflicts over regulation, considering the many different voices at play and the ways in which commodification processes shift over time and in the name of environmental and social improvement. For the purposes of this concluding chapter I wish to emphasize the way each of the case studies can be directly compared as examples of institutional transformations that transfer power and authority and simultaneously involve forms of remaking regulatory space. This chapter thus explores the way commodification processes are transformed through new institutions and organizations that re-order networks.

To begin I offer a short re-description to help contextualize the case studies in this broader argument. The dolphin-safe tuna case study featured efforts to remake the global tuna network. The small San Francisco, California based environmental organization Earth Island Institute worked to publicize dolphin deaths from tuna trawlers on the high seas. In a relatively short time span in the early 1990s they were able to organize consumer boycotts and jeopardize the main tuna distributors in the United States market. The negotiated outcome was the dolphin-safe labeling law and its accompanying certification system. This label and certification system became a regulatory apparatus that governed the global tuna network. The Alcan-Bauxite case study involved efforts to extend human rights and sustainability concerns over the long reach of overseas bauxite investment and production. In the late 1990s Alcan, Inc. of Canada entered into a foreign direct investment agreement to build a bauxite mine in Kashipur, Orissa. However, conditions in Kashipur proved chaotic and at times violent, disrupting the lands and livelihoods of tribal villages, leading to protest and, at one point, a police massacre. Alcan formally withdrew in 2007 and cited sustainability concerns. This suggested its codes of conduct and sustainability policies had come to function as regulation, both requiring Alcan to answer civil society concern but also providing it leverage in how it would do so.

The two studies of sustainability and housing in Vancouver show more traditional regulation, reflecting a long tradition of urban planning to handle environmental externalities such as excessive sprawl and automobile pollution. However, we can also emphasize the way such planning involves a form of vertical regulation that reshapes how houses are built (production) and the end product for consumers (consumption). While Vancouver and the broader metropolitan region had long drawn on spatial planning traditions, through the early 1990s sustainability emerged as a core policy theme. The City adopted Smart Growth style policies that focused on the creation of high density housing on the downtown peninsula. In the 2000s, this model's relative success contributed to rapidly escalating prices, crises of affordability and gentrification. The city responded with a series of initiatives that would expand densification beyond the inner core but increasingly found the need to find a resolution for conflicting demands for urban growth, the lifestyle concerns of residents, local and global

environmental pollution concerns, the needs for living space for citizens and workers, and the values of place and community threatened by gentrification.

In this conclusion I want to revisit Ngai-Ling Sum's and Bob Jessop's Strategic Relational Approach and Cultural Political Economy. I suggest it provides a theoretical explanation for these transformations.

8.2 Introducing the Fix

As mentioned in the introduction, and further explored in Chapter 3, Sum and Jessop's Cultural Political Economy can be extended to provide a distinct neo-Gramscian theorization of production and consumption networks. Production and consumption networks can be analyzed as dispositives -- meeting points of discourses, institutions and practices. In horizontal regulation state action works to incidentally transform networks, creating at times a chaotic and often obscure mode of ordering, in vertical regulation there is a reflexive process in which networks are rethought and remade. Here, regulation works to define modes of ordering in networks, and includes allocating the relative roles of states, firms, civil society and consumers in designing networks. Regulation thus reshapes how commodities are formed and the broader systems of production and consumption that are part of the flow of 'things' into markets, that is, how to commodify. In this concluding chapter I want to explore that approach through focusing on the idea of a 'fix'.

Many geographical political economists have used the idea of a spatial fix and institutional fix to describe the ways in which state institutions work to facilitate ongoing capitalist reproduction in the face of crises or threats. In this work, identifying a 'fix' serves a double purpose. One is to focus, for research purposes, on the dynamic changes over space and time in the mutual relationship between regulatory institutions and capitalist processes. Another is to offer a theory of that process--and generally geographical political economists have suggests an economic analysis of state regulatory action. Alternatively, Sum and Jessop maintain the language of a fix (and an interest in studying the relationship of economic change to regulatory change) but offer a different theorization. For Sum and Jessop, fixes are 'cultural' in the sense

that they work from discursively constituted imaginaries that provide for ways of combining economic concerns and extra-economic values and which seek resonance from diverse societal groups. The term ‘fix’ remains apropos because it signals that repair work is being done and that a degree of stability is restored to either quell or delay for a time contradictions and crises.

A *network fix*, I suggest, is a regulatory compromise that significantly changes or creates new institutions and organizations for a production and consumption network: Fixes incorporate diverse strategic projects and imaginaries to resolve, for a limited time, crises, contradictions and dilemmas endemic to networks. Identifying a network fix involves showing how a particular network faces crises, and how institutions and organizations emerge or are reworked to resolve that crisis. The result is a transformation of commodification processes. While Jessop’s Strategic Relational Approach focuses on strategic projects for the state and imaginaries for the economy, the network fix considers how such broader projects, as well as more localized and specific ones, issue in projects and imaginaries for networks and the institutions and organizations that regulation them. Network fixes may transform the actors that participate in networks and their regulation, such as the state, firms, consumers and civil society. They may also create new types of organizations (such as alliances between environmental organizations and industry for certification) and institutions (such as rules for certification). While networks embody relationships between consumption, production and nature, a network fix highlights that *networks* are also made the object of political attention, transformed through *regulation* and the process changes regulatory space. This can include rescaling -- such as through the delegation from the national scale to the urban. However, networks also cut across scales, and the emergence of network specific regulation may at times be better described as ‘respatialization’. As will be further elaborated, sustainability can be one type of strategic project that can inform a network fix. Sustainable commodities thus represent a particular type of network fix.

In what follows I contextualize Jessop’s reworking of the idea of a fix within his broader Strategic Relational Approach (8.3). Jessop (together with Neil Brenner and Martin Jones) also suggests a framework for incorporating networks (not just production and consumption networks but others as well) into spatial dialectics in ways that work with, but expand literature on

rescaling (8.4). A number of geographers have worked from David Harvey's account of a spatial fix and institutional fix to offer ideas of a 'sustainability fix', an 'ecological fix', and an 'eco-scalar fix'. I argue that these approaches can be creatively reworked to help understand network fixes (8.5). Returning to the case studies I show how they can be understood as examples of fixes (8.6). Thinking of them as fixes helps draw out how these cases are unified in terms of underlying crises and the ways networks have been transformed to respond to crisis (part 8.7). To conclude the thesis I suggest how analysis of network fixes can play an important role in the broader project of theorizing eco-social transformation. The case studies involve very modest efforts at change and fall far short of adequate responses to the problematizations and politics engendered by current ecological and social crises. However, as central to our metabolic relations with nature, networks need to be transformed and understanding transition processes requires attention to the roles of imaginaries and regulatory institutions that shape networks (8.8).

8.3 Spatial-Temporal and Institutional Fixes

Geographers use of the 'fix' can largely be attributed to David Harvey. He developed the idea of a spatial fix to describe forms of spatial reorganization and geographical expansion that serve to manage and compensate for crisis tendencies in accumulation (Harvey, 1982 [2006]). Jessop borrows from this to elaborate a notion of a spatio-temporal fix but makes some significant changes. Jessop distances himself from David Harvey's economism, arguing that it misses an "explicit concern with the explanatory limitations of economic categories" and overlooks the ways economic laws are "always profoundly political" (Jessop, 2006, p. 161). Harvey's account requires augmentation with an account of the state (with its own logics and rationalities of rule) and its constitutive role in the economy. Jessop starts with the Regulation Approach and its notion of a "social fix" as a relatively durable structural coherence created by the ways an overall mode of regulation works together with an economic system (or accumulation regime) (Jessop, 2002a, p. 48-51). As many geographers have shown, the Regulation Approach framework might be extended to sub-national regulation in areas such as mining (Bridge, 2000, Kreuger, 2002) or forestry (McManus, 2002, Prudham, 2005, also for

water see Gandy, 1997, not explicitly Regulationist but drawing on Jessop's 1992 regulationist account of post-Fordism). Those studies, in turn, while not named as such, can be seen as concerned with resource and environmental regulation of (at least the production end of) production and consumption networks. While some of those studies found the need to also supplement Regulationism with accounts of social movements and the state (see 3.2 above), Sum and Jessop make a similar move. They retain the idea of a fix, but separate it from economic readings that would overlook the role of diverse state logics and social movements.

Sum and Jessop's most recent articulation of fixes describe them as having both spatio-temporal and institutional dimensions simultaneously and as providing a temporary, partial and relatively stable solution to problems of social and economic order (Sum and Jessop, 2013, p. 247). Sum and Jessop argue that there are distinct dimensions to a fix, and one can be analyzed as involving simultaneously an institutional fix, a spatio-temporal fix and a semantic fix. As will be further explained below (at 8.4) the multi-scalar nature of the current order means fixes can occur at multiple scales. A broad social fix is possible but improbable, and fixes may occur at subsidiary levels -- "in some cases, a series of organizational fixes" (p. 247). This supports the idea that a fix may occur with respect to a particular commodity/network. The fix extends a neo-Gramscian account of regulation in production and consumption networks (as discussed in Chapter 3, sec. 3.5 and 3.6). As Sum and Jessop note, "concepts of discursive, social, institutional and spatio-temporal fixes" are "a new approach to the historical bloc" (Sum and Jessop, 2013, p. 200). Gramsci had introduced this concept to link material institutions to ideology in a reciprocal relationship that played out as plans for the economy (Sum and Jessop, 2013, p. 1999). Fixes also can be said to have hegemonic effects, in that they "suture the identities, interests, emotions and values of key sectors of subordinate classes and other subaltern groups into a hegemonic vision and embed this in institutions and policies -- leading in turn to their translation into common sense" (Sum and Jessop, 2013, p. 201).

Sum and Jessop use a processual account to explain fixes. An initial stage of 'problematization' indicates that at least some groups have identified a dilemma, contradiction or crisis in need of repair, if even because the current order conflicts with their values and interests.

Such problematization may be guided by, or help guide the formation of economic (or ecological) imaginaries, and it is possible for a wide variety of competing imaginaries to emerge. Fixes involve the selection, retention and, over time, sedimentation as preferred options transform institutions and regulations and become normalized as part of economic, state, and regulatory practice. A fix offers resolution for a geographically and temporally circumscribed space and period.

Sum and Jessop include in this processual account the idea that fixes can end in failure. Central to Jessop's Strategic Relational Approach is the idea that projects are necessarily incomplete, and that capitalist contradictions are never fully resolved. As a result, fixes may fail in a number of different ways. Jessop's original formulation of his state theory recognized projects may face some degrees of "interstitial, residual, marginal, irrelevant, recalcitrant and contradictory elements" (Jessop, 1990, p. 5). Projects may choose to simply exclude rather than accommodate certain voices, and further forms of recalcitrance and resistance may only emerge once projects are implemented. This ensures that fixes are impermanent, and engender resistance as well as limited degrees of consensus. In formulating CPE, Sum and Jessop rephrase this problematic in terms of the problem of 'complexity reduction'. CPE aims "explore how complexity is reduced (but not thereby mastered) through sense- and meaning-making (semiosis) and through limiting compossible social relations (structuration)." (Sum and Jessop, 2013, p. 3). Sum and Jessop understand imaginaries as "specific entry-points and standpoints to reduce complexity and make it calculable" (p. 3) and which risk becoming over simplistic. The real world "pre-exists current efforts at complexity reduction" (p. 3) and so there is a real risk of not only over simplification but also the creation of spin off effects. As such, "attempts at complexity reduction may increase overall complexity; and the efforts of some forces (or systems) to reduce complexity may increase it for other forces (or systems)" (p. 3). Sum and Jessop further restate the "the inevitable fragility and provisional nature of these fixes" (Sum and Jessop, 2013, p. 213) that arise in part from the "limits to control that lie less in plebeian instincts of rebellion than in the material resistances to control that are rooted in the social relations being controlled. These include, above all, those features of the social world that are not envisaged, let alone

encompassed, in any given project” (p. 213). Failures may set into motion new cycles of crisis and response (Sum and Jessop, 2013, p. 220-4).

Projects may ultimately fail to live up to their promise. This further sense in which failure is possible can be gleaned from Jessop’s analysis of market failure and the failures of other modes of coordination in *The Future of The Capitalist State* (pp. 216-245, and also discusses in Chapter 3, sec. 3.3). Markets can be said to fail in so far as they do not achieve goals that reflect widely accepted norms of the public interest such as degrees of income equality. Failure can also be found in particular state actions such as efforts to force companies to implement pollution control technology or to establish a system of welfare payments to the poor. In the latter case, state failure reflects the inability of the state to accomplish the goals it set for itself. Jessop suggests both tests can apply (e.g. public interest and state’s own objectives) for heterarchy or governance-style arrangements (characteristic of certification and codes of conduct) as well as meta-governance (or the process whereby states and other societal actors choose preferred forms of coordination). We can see the choice of these modes of coordination as an important part of spatio-temporal and institutional fixes, and so can evaluate fixes on whether they accord with widely held and reflectively justifiable concepts of the public interest and whether they succeed on their own terms.

While writers who follow the SRA have not up to now considered the particular problematic of production and consumption networks, the notion of a fix can be extended to cover such networks. Within the multi-scalar and multi-spatial international order, local regulatory compromises are not determined top down by higher scales and their dominant ideology. Local fixes may occur even where there is no national or global level fix. Rather they offer sui generis responses, evolving within contexts that are shaped and constrained, but not determined by, past action and higher scales (Jessop, 2001, Jessop, 2002b). Compromises can extend to not only decisions of the juridical legal state but the broader ‘*stato integrale*’. Sum and Jessop now use the term “*régulation-cum-governance*” to reflect the increasing use of public-private agreements as extensions of traditional government functions (Sum and Jessop, 2013, p. 238, also see Jessop, 2002a, p. 216-242). These draw on the roles of consumers, civil societies

and firms as some of the social forces that can shape the state or, in other guises (such as governance forms of coordination) otherwise regulate economic spheres. A particular local state action concerning housing, the formation of a certification system or the adoption of codes of conduct as a form of supply chain management can all be variants of a fix.

8.4 Socio-Spatial Dialectics

Fixes have a spatial dimension. Jessop works with Neil Brenner's idea of state rescaling, making this central to his account of the shifts from the heyday of Atlantic Fordism (and the national Keynesian state) to the current, more chaotic period characterized by "the absence of any primary scale on which the structured coherence of capital accumulation and social reproduction can currently be secured" (Jessop, 2002a, p. 172). In this way, Jessop incorporates into his work the socio-spatial dialectics of geographical political economy. As discussed in Chapter 2 (at 2.2.2) this views scale as socially constructed, and points to material structures (such as freeways or airports) and organizations (such as the World Trade Organization) as the active components in processes of rescaling. Jessop, with Brenner, thus recognizes that the national state has decreased in relative importance and been replaced by a greater role for cities and international institutions. The preponderance of geographic work has focused on processes of rescaling but Jessop (together with Brenner and Martin Jones) has suggested that rescaling is only one type of possible feature of the social construction of space (Jessop et. al., 2008). This further helps specify the ways networks might be transformed, and the role of network fixes. Jessop, Brenner and Jones' Territories, Scales, Places and Networks framework ('TPSN') recognizes that not all transformations to networks fit into the rubric of rescaling. Networks (not only production networks but also a host of inter state, civil society, think tank and business organizational forms) may be considered as a distinct type of spatial configuration not reducible to but standing beside territories, places and scales as a possible mode of geographic ordering.

The TPSN framework can be understood as a response to an extensive debate in geography concerning the social construction and politics of scale (for a short review see 4.2/ Baird and Quastel 2011, p. 341). While geographical political economists had emphasized that scale was socially constructed, at the same time they confirmed that scale was an important

explanatory category. However, many theorists of scale argued that actor-network ontologies render scale no longer a useful concept. The TPSN framework offers a response, arguing that scale continues to be a useful concept, but one that needs to be supplemented with accounts of further types of spatialization. They thus argue that geographers have long been interested in *place*, and *territory* but also have recognized that these cannot be treated as fixed containers but instead need to be thought of as “relationally constituted, polyvalent processes embedded in broader sets of social relations” (Jessop et. al., 2008, p. 390) Just as place needed to be understood in terms of global divisions of labour or flows of commodities and capital, territory (or the geography of statehood) needed to be understood in the broader nexus of the working of sovereignty in the world system. Likewise, scales needed to be understood in terms of their relationship to network geographies. For Jessop and his co-authors a central concern is that geographic concern with place, territory or scale runs in parallel without “exploring the mutually constitutive relations among those categories” (p. 391).

Jessop and his co-authors thus argue against ‘one dimensionalism’ -- the “the trap of conflating a part (territory, place, scale, or networks) with the whole (the totality of sociospatial organization)” (p. 391) Scale-centricism should be avoided lest scale become understood as the primary basis around which sociospatial relations are organized. Alternatively, network-centrism arises where researchers one-sidedly focuses on the horizontal, rhizomatic and frictionless space of flows without recognizing the social structures and spatialities that shape and are shaped by networks. Abandoning scale in favour of a ‘flat ontology’ creates such network-centricism and thereby throws out the baby with the bathwater -- it ignores a political economy of how global markets and neoliberalism have shifted territorial states in the name of overturning a rigid belief in territorial hierarchies such as urban, regional or national. Scales are the product of processes of social construction and reproduction and are subject to modification, transformation and rupture (Brenner, 2001). Networks are simultaneously scaled and territorialized and the oft used term ‘glocal’ illustrates how they ‘fold’ scales by showing the interaction of diverse locales in the network (Brenner, 1998; Swyngedouw, 2004b). The TPSN framework provides a multi-spatial account in which different spatialities can intersect, with movement from one to another. It identifies territories, places, scales and networks as the fundamental types of spatialities and

suggests researchers can start with any one type as a useful entry point. From there, analysis can expand to consider how different spatialities are combined (Jessop et. al., 2008; Jessop 2012a). Jessop and his co-authors generalize what Eric Sheppard has described as the ‘socio-spatial dialectic’ that runs through geographical political economy (see 2.2.2) . For instance, Doreen Massey’s idea of the spatial division of labour involves the way an actor-network (such as a vertically integrated but globally organized firm) needs to be understood in terms of, and is shaped by place (local labour markets).

Sum and Jessop’s CPE extends this multi-spatial perspective to fixes. Jessop’s work in the 1990s had involved analysis of the scalar nature of fixes -- one of his central claims concerned the way under Fordism and Keynesianism the national scale was the primary locus of regulation. CPE now includes a future oriented approach which seeks to map diverse imaginaries and the ways they identify and would seek to resolve dilemmas, and the range of possible ways fixes might be achieved. Sum and Jessop include spatialization as one of the dimensions of such possible fixes (Sum and Jessop, 2013, p. 250). The spatial transformations occasioned by fixes may not be simply scalar (e.g. shifting regulation from the national to urban scale) but may be multi-spatial. This implies that networks (along with scales, places and territories) can be a terrain on which institutional fixes can unfold. A multi-spatial fix can involve the simultaneous transformations to the institutions (and socio-technical components) of a production and consumption network and the spatial ordering of its regulation. This can involve, among many possibilities, that of switching from a territorial based state apparatus to a network based apparatus (as in CSR or certification), or combining thematic transformations (and associated leverage points for intervention) in how a network is governed (such as from social to environmental regulation in housing) with rescaling of state regulation (from the national to the urban).

8.5 Rethinking Sustainability, Ecological and Eco-Scalar Fixes

Just as Jessop does not throw out but alters Harvey’s account of a fix, the Strategic Relational Approach points to reinterpreting diverse literature in resource geographies and urban studies that invokes the ‘fix’. Diverse research invokes the ideas of ‘sustainability fix’,

‘ecological fix’ and ‘eco-scalar fix’ and the meaning of each of these concepts is elaborated below. These draw on Harvey’s account and thereby ignore or unfairly discount the diversity of non-economic interests and complex state logics and discourses that shape regulation. However, Jessop’s method of articulation suggest theories that appear to be simplistic or mistaken can also be charitably read as one-sided, prompting the reader to interrogate whether they might serve as entry points to more complex and sophisticated theorizing (Jessop, 1990, p. 11). Indeed, network fixes are complicated because networks, as socio-technical market complexes are themselves complex assemblages and because fixes are complex processes that occur over time and involve many participants. In what follows I suggest each of the ‘sustainability fix’, ‘ecological fix’ and ‘eco-scalar fix’ might be creatively reinterpreted to fit within Jessop’s broader, non-economistic concept of the fix and be applied to commodities/networks. I suggest each of these approaches, as originally formulated might be seen as *aspects* and *entry points* for understanding network fixes. As will be explained in the following, network fixes have *geographical-material*, *institutional*, *discursive*, *socio-natural* and *multi-spatial* dimensions.

Geographical-material fixes. Global production and consumption networks have always been in the background of capitalism. Long-distance supplies such as for silver, wheat, sugar or coffee not only predated nineteenth century industrialization but also provided the proving grounds for capitalist social organizations, mercantilist and colonialist foreign policies and the formation of modern state structures in much of the Global South (Glassman, 2011). These not only embodied metabolic flows-- extracting resources and nutrients in a system of uneven ecological exchange (Jorgenson and Kick, 2003; Rice, 2007) -- they also at times sought to repair ecologies (as where guano importation in the late nineteenth century was used to overcome a potentially disastrous problem of soil depletion in Europe)(Foster, 2000, p. 154-6). Networks have thus been at the core of *geographical-material fixes*, e.g. physical and spatial transformations to the economy and its resource flows as well as being subject to such fixes, e.g. extending further outward to find resources or increasing material throughput so as to increase profits.

Institutional fixes. That production and consumption networks face contradictions, failures and regulatory dilemmas and state response is also not new. Since nineteenth century cities, sub-national governments and nation-states have transformed networks such as water (Swyngedouw, 2004a) or electricity (Hughes, 1983) through forms of municipal socialism, nationalization, monopoly regulation and other regulatory institutions and organizations. Recalling the discussion in chapter 1 and 3 concerning horizontal and vertical regulation, we can note that *both* types create institutional fixes to deal with public interest values and market failures. However, horizontal regulations do so as part of economy wide management, and vertical regulation foregrounds networks. Often vertical regulation is justified because of the idiosyncratic features of particular networks (such as the biophysical flow nature of water or the instantaneous transmission of electricity). In areas such as water and electricity regulation it is common to see paradigm shifts over time, and shifts towards neoliberal regulatory experiments have been high profile examples of network crisis and fixes (for water reform in England and Wales see Bakker, 2003, for electricity reform in Ontario see Swift and Stewart, 2004).

Discursive dimensions. CPE emphasizes the role of imaginaries and broader strategic projects in shaping economies, and this can be extended to efforts to remake networks. It can thus draw on, but reinterpret literature on the sustainability fix. This draws on Harvey and the Regulation Approach to show how sustainability policies remake urban form, drawing on case studies from cities such as Manchester, Leeds and Vancouver or resort towns such as Whistler (While et. al., 2004; Jonas et. al., 2007; Kear, 2007; Temenos and McCann, 2012, but see also Rosol, 2013 for a neo-Gramscian reinterpretation). We might note the emphasis here on the *search* for a fix and the fact that much sustainability policy seeks to twin economic growth with environmental improvement (While et. al., 2004). While this mirrors much of Regulation Approach theorizing about the central role of accumulation, it too easily leads to the assumption that there is some necessity for environmental regulatory compromise to comply with economic precepts. It thus leads to a confusion about a discourse (such as the belief in ‘win win’ environment-economy strategies) and the ascription of underlying systemic drives and ‘Regulatory’ functions (as discussed in chapter 3, sec. 3.2). However, sustainability as a

paradigm can surely be seen as one imaginary that has come to remake diverse terrains including cities and production and consumption networks.

Remaking nature. Literature on the ‘ecological fix’ (Castree, 2008; Bakker, 2009) concerns the way institutional change transforms nature, often to withdraw protective laws to further enable profit-oriented market-mediated extraction, exploitation and commodification of resources. Again, drawing on Harvey but also filtered through ecological Marxists such as O’Connor and Ted Benton, an ecological fix “degrade[s] the conditions of production and enable[s] greater profit to be extracted” (Cohen and Bakker, 2014, p.131). While some of this work does emphasize the role of environmental discourses, institutional change and the role of the state in organizing and responding to crisis, I suggest this work can best be read for its emphasis on the *relationship* between institutional re-ordering and the impacts on, and co-production of, socio-nature. Drawing on Jessop’s multi-dimensional and variable idea of a fix, an ecological fix might be given a broad interpretation to include regulatory compromises that deliberately reform, remove or create new institutions and organizations for regulating nature-society relations. While this sacrifices the specificity of Cohen and Bakker’s definition above, it captures the way capitalistic tendencies towards environmental degradation might also be met by societal counter-tendencies and policy discourses that explicitly seek to advance environmental protection. Results may thus be positive or negative, or ambiguously prioritize some ecological values to the detriment of others.

Respatialization. Literature on the eco-scalar fix seeks to add a spatial component to the ecological fix. It draws on a now large literature on rescaling and the environment which considers the conjunction of concerns about the changing role of the state, the greater role of citizens and private sector actors and the role of ecological systems such as watersheds, bioregions or forests within that process (for a recent review see Cohen and McCarthy, 2014). This literature’s use of ‘fix’ borrows from Harvey but emphasizes how re-scaling is often linked to institutional change and the discursive construction and political delineation of putatively natural entities, such as “the watershed” or “the community”. Treating these concepts discursively can help to show how these terms serve to naturalize metaphors (and so

misrepresent them as corresponding to pre-existing entities of the natural world) and to explore the political nature of their use (Cohen and Bakker, 2014, Cohen and McCarthy, 2014). The resulting outcomes work to aid certain resource extraction interests or involve weakening protective environmental legislation. For instance, while the watershed has often been held up as the appropriate scale for water management, in Alberta, Canada, the concept of the watershed took on political significance, and its shift was driven in part by industrial interests in some watersheds (such as those with tar sands mining) which favoured the greater control over management decisions they would thereby gain (Cohen and Bakker, 2014). In much of this work there is a concern that downward scalar shifts not be seen as necessarily empowering. Downward rescaling may coincide with forms of deregulation or downloading of responsibilities and bring a diminished capacity or reduced budgets for handling market forces that operate at greater scales. In the alternative, higher orders of government (such as national states) may be unwilling to let go of their power (Norman and Bakker, 2009). Putative rescaling may thus be a charade (Cohen and Bakker, 2014).

Following the TPSN framework, we can extend the range of such fixes from that of scale to multiple spatialities. A spatial perspective should recognize the broad variety of ways regulatory institutions and organizations undergo spatial transformations to address socio-ecological concerns, including those which reflect frustration with traditional scales, the ‘nested Russian dolls’ of scalar ontologies and state juridical frameworks. This also can help disentangle changes between the regulatory roles of different orders of government (often described as rescaling) and transformations in how physical spaces such as forests or watersheds are regulated. As Cohen and McCarthy (2014) have recently noted, there is a need to “differentiate between rescaling to an already existing jurisdiction (for example, a municipality) and rescaling to a physical space for which no electoral authority exists” (p. 7). Rather than posit a ‘scaling out’ we may ask ‘to what’ and find scale (and rescaling) can be a forced metaphor, that there is a *re-spatialization* to, among other things, networks. While in many cases analysis can proceed through viewing scale as ‘performative’, that is, looking at “when, whether and how actors behave as though scales exist” (Kaiser and Nikiforova, 2008, p. 542, cited in Cohen and McCarthy, 2014, p. 2), this should not be to the exclusion of when, whether and how actors

behave as though *other spatialities*, including networks, exist. Further, (and which the case studies explore and which will be further elaborated below,) it may be precisely the transformation of new spaces that gives such efforts not simply the taint of deregulation through scaling down but the veneer of offering progressive improvement through extending regulation to new frontiers.

We might think of production and consumption networks as one among many forms of socio-nature that both work within scales but also escape scalar constraints. Water has often been recognized as an eco-social network (Swyngedouw, 2004a) that can be rescaled (Swyngedouw, 2007), and cross-jurisdictional lines (Norman and Bakker, 2009; Norman et. al., 2012). Likewise, production and consumption networks might be taken as central to a ‘second nature’ (Smith, 1996, Harvey, 1993) of global capitalist production that creates urban and global space and combines metabolic flows and ecological crisis. Historically some commodities/networks preceded many states (e.g cotton and sugar preceded Third World independence) and some networks now seemingly transcend the regulatory capacities of many states. Networks may be the object of a *multi-spatial fix* in which they are subject to deeply political decision-making, including the ideological construction of environmental improvement. Networks are made an object of discursive and social construction, and regulatory institutions, organizations, state spaces, the biophysical and social organization of networks and natures are transformed. The transformation of networks can work to change territories, places and scales as well as to create a distinct regulatory space. We can analytically separate out the question of the ways networks are coordinated and regulated from the issue of in which jurisdictions and by which governments this occurs. This allows us to gain traction on the multifarious relationships (and co-production) between regulatory institutions (which may involve national, sub-national, and city governments, international agreements, or alternatively, non-state forms such as firm self-management or NGO-industry alliances), the objects of regulation and processes of respatialization.

8.6 Three Types of Network Fixes

As will now be explained, each of Tuna-Dolphin, Alcan in Orissa, and Smart Growth in Vancouver can be analyzed as forms of network fix. In analyzing the case studies as fixes, I identify 13 relevant dimensions, and these are formalized in Table 1. I thus consider:

- (i) the sub-type of network fix, such as certification, corporate social responsibility or urban sustainability;
- (ii) problematization -- how the network comes to be an object of political contestation;
- (iii) economic v. extra-economic-- how such contestation relates to underlying conflicts generated by the dependence of capitalist economies on a non-economic substratum (such as nature or the lifeworld);

Each of the five aspects to a fix--

- (iv) geographical-material fix (as discussed in sec. 8.5),
- (v) socio-natural fix (as discussed in sec. 8.5),
- (vi) institutional fix (as discussed in sec. 8.5),
- (vii) discursive fix (e.g. the role of discursive paradigms in shaping the fix, as discussed in sec. 8.5),
- (viii) multi-spatial fix (as discussed in sec. 8.5);

And as series of further features common to these fixes

- (ix) naturalizing ecological spaces -- drawing on Cohen and Bakker's (2014) observation of how nature and scale are collided, and ecological concepts manipulated to create naturalized referents,

- (x) nodal intervention -- because networks are complex and interventions necessarily happen at specific points in the network,
- (xi) variation -- this picks up on Sum and Jessop's hypothesis that there are contested imaginaries at play,
- (xii) resistance-- fixes also face reaction from diverse social groups not originally consulted or who find themselves in opposition once effects are realized, and
- (xiii) failures -- Jessop's multi-spatial fix allows that there might be both successes and failures to these fixes. Even where institutions and organizations get off the ground and function for a period of time, they may fail to fully address what many people would still consider to be crises, or they may fail to realize state objectives or to approximate widely held ideals of the public interest.

In what follows I explain how each of the case studies can be analyzed in terms of this multi-dimensional and processual account of fixes. . I begin by reading Table 1 by column (vertically), to show how each case study is an example of a fix. In subsequent sections I reading Table 1 by row to emphasize generalizations that emerge from the case studies.

Table 8.1: Three Network Fixes

	Tuna Dolphin	Alcan in Orissa	Smart Growth Vancouver
<i>type of fix</i>	certification fix	CSR fix	urban sustainability fix
<i>problematization</i>	dolphin deaths revealed by Earth Island	rights abuses publicized by human rights networks	Urban planners, Smart Growth ENGOS foreground sprawl's externalities, public concerns about affordability in press, consultation processes
<i>economic v. extra-economic</i>	the free play of a charismatic species in its natural habitat, wantonly being killed for profit/ food production	tribal subsistence agriculture, rights to consent, political participation and bodily integrity being violated for bauxite production	needs for land for agriculture and food provisioning, a climate as waste sink and basis for ecosystem survival, the city as living space and source of enjoyment, and housing as a basic need
<i>geographical-material</i>	expansion of fishing into high seas of Indian Ocean and Western Pacific	expansion of Alcan's bauxite sources to Orissa	expansion of housing in Vancouver, leading to densification and high and mid rise condos
<i>socio-natural</i>	continued tuna exploitation, minimization of dolphin deaths	bauxite mine on tribal territories, farmland expropriation, water and land despoliation and carbon emissions	continued sprawl but some densification, transformations of urban landscapes, some increase in transit, walking, biking share of transportation
<i>institutional</i>	certification system	corporate social responsibility, code of conduct	zoning law changes, new Building Code
<i>discursive</i>	animal rights	sustainability, human rights,	urban sustainability, green economy, livability
<i>multi-spatial</i>	network specific certification system overcomes lawless high seas	firm specific code of conduct covering investment and supply chains, compensates for weak Indian enforcement	the spatial array of housing (on consumption side), shift from national and sub-national Keynesian welfare state style social housing provision to urban spatial planning
<i>naturalizing ecological spaces</i>	the ethical consumer	the responsible firm 'linked to the planet'	complete communities
<i>nodal intervention</i>	EII's consumer pressure campaign directed at distribution companies, retailers, consumers,	shareholder activism, protests around annual general meetings leading firm (Alcan) to take unilateral decision to divest	zoning changes shape where developers can build; developers market green condos to buyers (consumers); new building codes target new construction
<i>variation</i>	Thai- EII affiliate with social green view,	human rights standards, tort liability in Canadian courts; shareholder activists for revised consent process	social sustainability vision of increased social housing, greater amenity contributions
<i>resistance</i>	U.S government and ENGOS in Panama Declaration; vegetarians	solidarity demands to end project and respect indigenous right	ant-gentrification activism calls to end high rises, abandon planning process
<i>failures</i>	neglect of social values of stakeholder participation and fishers livelihoods	no reparations, little to no stakeholder participation in firm management or drafting of codes, ongoing massive resource extraction and pollution	ongoing sprawl, and automobile based emissions, gentrification, affordable housing crisis, homelessness

8.6.1 The Certification Fix

Certification systems such as dolphin-safe tuna are clear examples of network fixes which combine institutional change with respatialization. While attracting only some consumers and so being tied to markets, they differ from the simple laissez faire imaginary of contract and property law ordering. They are designed to provide standards states are unwilling on their own or through international agreement to enshrine as hard law, and circumvent the international trade law system. (There is a widespread worry that the WTO will rule against regulation with extra-territorial effects, including mandatory labelling requirements-- Tollefson et. al., 2008, p. 259). In the absence of sufficient horizontal regulation (that might cover resource extraction and methods of production), a new type of vertical regulatory system is created -- network participants such as conscientious consumers and responsible companies agree to abide by principles in contract and certification ensures production accords with such principles. In what follows I show how the tuna dolphin case study serves as an example of a network fix. Terms are italicized to signal where reference is made to processes and dimensions of the network fix, and are also listed in Table 1.

The large scale exploitation of Tuna in the Eastern Tropical Pacific begun in the 1930s, with the development of refrigeration technologies that would allow U.S. boats to stay out at sea longer in search of yellowfin tuna, effectively expanding their *geographic reach* to find new *material* resources. However, dolphin and yellowfin swim together, and the by-catch of dolphin became *problematized* by the late 1960s. American environmentalism had focused on charismatic species in campaigns such as ‘save the whales’ and dolphins were portrayed through this discursive lens. Here was a charismatic species in its natural habitat -- source of human joy and interspecies companionship -- wantonly being killed to create a profitable commodity and so prioritize *exchange value*. The *Marine Mammal Protection Act* (1972) ostensibly *fixed* the issue, but through a complex and contradictory marine management program. This sought to reduce dolphin deaths to a sustainable level (analogous to sustained yield in fisheries) as well as to, over time, incorporate advanced fishing technologies with a goal of reducing dolphin deaths to zero. However, by the late 1980s this goal remained elusive and the 1984 amendments to the MMPA

allowed 20,500 dolphin deaths annually (Robbins et. al., 2010, chapter 12). By the late 1980s the geographic reach of high-seas tuna fishing had expanded into the Indian Ocean and Western Pacific, a *geographical and material transformation* of the industry in the search for resources that meant much of the tuna in American stores was caught outside the MMPA framework.

As the popularity of Sam la Budde's video in 1988 showed, the MMPA also *failed* to address core American environmental-ethical concerns (*extra-economic use values*) about violent ocean environments as they were articulated and advanced by Earth Island Institute ("EII"). EII thus *re-problematized* the issue, and used consumer outrage and a popular boycott which affected distributor's market share and bottom line, creating a potential crisis for profits and survival of the industry. Earth Island Institute (EII) and its certification system worked from a knowledge of, and sought a new regulatory system that was aimed, at the *discursively constituted* goals of animal rights protection as well reflecting the new *spatialities* of the global tuna network. It would bypass and have greater geographic scope than the negotiated agreement between the United States and Latin American countries for the Eastern Tropical Pacific (the Agreement on the International Dolphin Conservation Program, "AIDCP"). It would take advantage of *key leverage points or 'nodes'* in the network including ethical consumers and their moral concern, and distribution companies and retailers that worked with imaginaries of their consumers. The certification system trades on the willingness of the United States to give regulatory protection to the label as an example of an emerging voluntaristic, market-oriented form of environmental protection.

By working on the conduct of key distributors, EII could create a system that follows the thing while also drawing on the network's relationship to place -- open ocean ecosystems on one end and the increasing attention to, and so *naturalization of, consumers' environmental ethical concerns* in the United States and Europe on the other end. EII could bypass traditional state law and administration, substituting itself -- together with the distribution companies -- as the coordinating authority of enforcement (certification). The formal reliance on consumer choice would, at least for a while, also circumvent a range of trade cases and negotiated agreements between the US and Latin American states. In "Tuna-Dolphin I GATT"(1991) and "Tuna

Dolphin II GATT” (1992) the US ban on importing dolphin harming tuna was found to violate the General Agreement on Tariffs and Trade. While the panel reports were blocked by the US the result was that the US returned to negotiate the La Jolla Agreement (1992), the Panama Declaration (1995) and the 1998 Agreement on the International Dolphin Conservation Program (AIDCP), all in relation to the Eastern Tropical Pacific (Shaffer, 2013).

As a governance system certification faces *failures* vis-à-vis the public interest (Jessop, 2002a, p. 238-40). EII and the distribution companies engaged in a backdoor negotiated agreement at odds with the standards promulgated by not only states but also both large international environmental organizations and Thai grassroots groups. There was significant *variation* in proposals not only for how to regulate the tuna network in general but also for the details of the labelling and certification system. The EII certification system’s domination is maintained only because of the limited number of tuna distribution companies and the disproportionate share of North America and European markets, with their putatively concerned consumers. This market dominance means there is, in fact, very little consumer choice. The certification system fails to include processes to hear stakeholders or readjust the label under shifting circumstances. The results have been forms of *resistance* such as alternative regulatory proposals, a ‘battle of the labels’ and competition with the negotiated international agreement. Most fundamentally, but like many other certification systems, it offers a very narrow spectrum of control over the network and is earmarked for maintaining the integrity of a market oriented business venture that continues exploitive *socio-natural relations*. It does not address volumes of tuna consumption or link up with a comprehensive system for managing tuna stocks (or carbon emissions) as part of an integrative ecosystem wide regime (for similar critiques of Forest Stewardship Council wood see Klooster, 2010).

8.6.2 The CSR Fix

Corporate social responsibility also involves network fixes but rather than ‘follow the thing’, it follows the firm, which in turn, increasingly takes on responsibility for its supply chains. Like certification, CSR reflects governance or heterarchic coordination -- firms effectively enter into long term promises to their stakeholders to abide by a code of conduct.

Firms often now play the role of ‘corporate social watchdog’ in a system of ‘extended responsibility’ (Spence and Bouralski, 2012, p. 169): Serving as a nodal point of a broad array of stakeholders in relationship through the production and consumption network, they are “appointed by proxy by societal expectations” (Spence and Bouralksi, 2012, p. 171). CSR offers (very modest) improvement over the current territorial state system with its lack of international agreements that might create liability for corporations and the reluctance of Northern country legislatures or courts to create liability (Amnesty International, 2014). CSR is widely heralded as a way to fill ‘governance gaps’ as the emergent global market economy often lacks the framework of labour, environmental and human rights standards found in the ‘embedded liberalism’ that emerged in the Global North after the Second World War (Ruggie, 2003; (Aaronson and Higham, 2013). CSR draws on not only Keynesian economic liberalism (in Ruggie’s formulation) but also the *political* liberalism of rights discourse (on its difference from economic neoliberalism see Rawls, 2002, Williamson and O’Neil, 2009). The Alcan-Bauxite case can be used to show how CSR works as a network fix.

Orissa in the 1990s faced considerable pressure to open up to foreign direct investment and exploit its substantial mineral reserves, marking a reversal of a decades-old import substitution development model. This appeared a good fit for Alcan which needed bauxite or alumina for its Canadian smelters and which could also profit from the *geographical-material expansion* of its operations. However, Orissa’s bauxite reserves are in areas populated by tribal peoples who use the land for subsistence agriculture. By 2000, the proposed project at Kashipur had become deeply *problematized*. Villagers own *use* of their ancestral lands, including the protection of areas *held as sacred*, was to be overridden by aspirations for industrial development and corporate profits that would transform the landscape. The most basic of rights to protest, bodily integrity, life and consent were violated. Diverse global human rights networks and mining watchdog groups thus worked to *problematize* the issue, *phrasing it as one of violations of human rights* and engaged a growing corpus of concerned pension funds, shareholders and general publics.

Activism in Montreal in 2005 and 2006 explicitly sought to have Alcan apply its own corporate code of conduct and its final decision to leave in 2007 referenced sustainability concerns: While *Alcan held itself out as the natural entity* to take on responsibility for its links to the planet, it was only after significant protest that its codes of conduct appeared to take on a meaningful role. It came to serve as a regulatory framework that extends out from the national state, promises the conduct of conduct and recognizes human rights and sustainability concerns. Alcan itself served as the prime *node* in this network, with its status as a public shareholder company providing avenues for activists to target the firm and thereby shift its underlying action at a distance. However as a governance system it faces *failures*. It only marginally creates space for stakeholder intervention. Alcan remains in charge of deciding the terms of its code and when to act on it. Shareholder activists were able to pass a resolution that the consent process be revisited. However that was based on hard-fought evidence that consent was not obtained in a manner that reflected the bare necessities of Indian or Canadian law.

Alcan's code reflected only the most basic of civil rights found in the domestic laws of the Global North and undisputed therein by all but the most radically libertarian factions. Its sustainability policies relate to the content of its reports (such as for GHG emissions) and promises for incremental efficiency improvements that correspond to expected business as usual technology and process change. Terms such as sustainability become so flexibly interpreted that their application offers only the subtlest deflection from neoliberal ground-norms that sanctify almost all competitive activity. Civil society groups thus offered *variations* on how the network might be structured: Amnesty International called for an alternative regulatory system from that of CSR -- to wit, international business and human rights conventions, and, failing that, an extension of national corporate law and common law tort liabilities to cover the overseas actions of home state companies. Local solidarity groups in Montreal were less sanguine about the possibilities for Alcan to come around to human rights standards, they simply offered *resistance*: Alcan should leave India. While Alcan's decision to leave was in part caused by the confluence of NGO pressure and its own code of conduct, this decision also worked to exculpate Alcan (and its Canadian shareholders) as though it was sufficient to simply sever a bad relationship. This did nothing to stop the bauxite mine or frustrate the miners from finding markets for their

products. Alcan's decision to leave reveals the particular spatial mutations and limitations of this network fix. In following the firm CSR shapes firm involvement and not necessarily the bio-physical materialities and local impacts of networks. Ultimately, this particularly spatial configuration was linked to a clear governance failure: Alcan dodged the most basic of human rights norms, the rights of victims to compensation.

8.6.3 Revisiting the Urban Sustainability Fix

While the rhetoric of planners and politicians is that 'the city' is transformed by Smart Growth and urban sustainability, we can also drill down to see how these policies largely target housing as a commodity. As both charged with spatial planning and answerable to local citizens, city governments position themselves as the *natural entities* for sustainability planning, particularly empowered to both create and democratically represent 'complete communities' (for a review of criticism of 'community' see Cohen and McCarthy, 2014, p. 6). However, there is a distinct set of problems with cities as the prime mover for housing market reform: Cities are thematically constrained in their actions and lack nation-wide coordination over macro-economic policy or ways of controlling the inter-regional and inter-urban competition that ensues as cities pursue individualistic growth strategies. The result is piecemeal interventions guided by the unique powers the city does have -- directing spatial planning or drawing on the city's own land reserves -- rather than tax and spend powers which could create affordable housing on a large scale.

Vancouver has a long history of continuous growth through in migration (Hutton, 2011). The result has been an accompanying *socio-natural transformation*, as forests, swamps, and farms were replaced with the *geographical material expansion* of building foundations, parking lots and roads, an urban infrastructure that sinks capital skimmed from hinterland resource extraction, and the continuous *problematization* of suburban sprawl. Urban growth planning in Vancouver has been strongly linked to, but evolved with, shifting *discursive constructions* of environmental management, rooted in the ideals of regional containment to cope with externalities. This was pioneered by Patrick Geddes and Patrick Abercrombie and which expanded worldwide post-World War Two. By the 1970s in Vancouver it was expanded to

include “ more inclusive planning processes, and new social housing projects and public amenity provision, inspired in part by the election of progressive centre-left governments both at the provincial and federal levels, and by the prescriptive writings of Jane Jacobs” (Hutton, 2011, p. 242). By the 1990s documents such as *Clouds of Change* (1990), *CityPlan* (1995), and the *Liveable Region Strategic Plan* (1996) drew on sustainability discourses and attempted to balance *economic growth and expansion*, needs for land for agriculture and food provisioning (sedimented by the provincial government’s creation of containment boundaries through the Agricultural Land Reserve), climate change, the city as living space and source of enjoyment (e.g. *use value*), and rights to participation in decision-making by the public.

By the 2000s new forms of *problematization* emerged -- the recognition of widespread crisis of affordability, with even ownership of two-bedroom apartments in the city beyond the reach of most first-time middle-income earning buyers and new projects or densification plans in residential neighbourhoods faced an increasing array of protests and noisy crowds at public consultation meetings. Successive governments have tried different *variations* on the Smart Growth meme; progressive governments seek to use the city’s property and negotiating position to increase allocations of social housing set-asides (as COPE attempted for South East False Creek); more right wing governments have sought to relax limits on building height in the belief that more supply would decrease price (under Sam Sullivan’s NPA led EcoDensity); and centrist governments resort to a mix of pro-developer policies, public consultation and focused attention on homeless and select low income housing provision (under Gregor Robertson’s VISION council). However, the result has been widespread *failure* to adequately address the housing price crisis and VISION continues to face considerable protests and left-wing anti-gentrification inspired *resistance*.

It is important, however, to situate these changes in the context of the multi-jurisdictional nature of Canadian public-interest management of housing as a production and consumption network. The management of housing through markets is well entrenched in Canada, specifically governed in British Columbia through the *Property Law Act*. Further, the province’s *Strata Titles Act* (1966) created “statutory condominium” which “facilitates an increase in the density of

private interests by enhancing the capacity to subdivide land in three dimensions” (Harris, 2011, p. 696). Public interest values (and compensation for market failure) in managing housing networks might include a number of different access points, each of which can dynamically affect the network, but for which different orders of government have traditionally taken responsibility.

1. *Health and safety* concerns, often included in building codes and so shaping the final buildings, include sanitation, fire and building structure (city and province)
2. *Fairness* concerns relate to ideals of fair play in markets (such as disclosure of information, avoiding manipulative advertising and professional conduct) and is covered by laws for consumer protection, real estate transactions and real estate agent conduct (province)
3. *Economic development* concerns relate to jobs and stimulating effective demand through housing as a central component and large fraction of the industrial economy at times subject to recession and unemployment. From the 1930s to the 1980s the federal government used tax and spend levers to shape financing of housing, through mortgage support, direct grants for social housing and preferential tax treatment for rental housing investment. This was administered through long-term contractual commitments to the provinces that in turn managed low- and moderate-income public housing and encourage non-profit and co-operative housing programs. However through the 1990s the federal government gradually reduced its role, ending the federal co-operative housing program, not increasing budgets for social housing to match inflation, and mandating year over year decreases in funding for the Canadian Housing and Mortgage Corporation’s budget (Begin, 1999).
4. *Distributive justice and basic needs* concerns include universal access to affordable supply or, at minimum, basic needs provision and public redistribution of surplus profits arising through property sale and housing development. The federal government addressed these goals through the same measures as for economic development however

once the field was vacated by the federal government the provincial government did not pick up the slack.

5. *Place-based* concerns reflect how consumption shapes place -- housing contributes to overall city and neighbourhood design, workplace, entertainment and retail location, travel patterns and transit, shared and public amenities (such as gyms, swimming pools and meeting rooms), and access to services (such as groceries). Cities address this through zoning, neighborhood planning and recreation budgets.
6. *Environmental* concerns could extend to: the lifecycle of building materials and home appliances; the maintenance of trees, green space and parks and hydrological flows in private and public property; and issues of density and transportation as emphasized by Smart Growth advocates. The province has traditionally considered appliance and building codes but now the city advances environmentally motivated building codes and zoning guidelines.

The City's increased focus on housing regulation can be seen as part of an overall trend away from the primacy of the national state and towards a new importance for cities (Brenner, 1998; Jessop, 2002a). This can be seen as a process of neoliberalization and scaling down, given that cities cannot exercise the same leverage over markets as the federal government. However it also comprises a transformation of the network, including how it is regulated, what values are prioritized and its ecological relations. The city has introduced new environmental motivations, and these are calibrated to its available *levers* for network transformation, powers that can be exercised without the explicit cooperation (much less funding commitments) from other orders of government. As such, the City of Vancouver has used specific powers around re-zoning (CD1) to extract neighbourhood amenities and insist on aesthetically pleasing designs for large new projects. The city has also embarked on a series of measures to improve the environmental performance (especially around energy and water use, and air quality) of new buildings, through the *Green Building Strategy* (2005) and *Green Homes Program* (2008). However the preponderance of change has occurred through zoning law changes, usually within overall neighbourhood plans. Because the City is now seen as the primary network coordinator/

regulator it is answerable across a broad suite of public interest concerns -- most notably on issues of affordability which seem directly impacted by zoning policies. Addressing these concerns through competitive markets is all but impossible and the City neither has sufficient (politically acceptable) powers nor effective control of the housing network to achieve integrated network regulation.

8.7 The Explanatory Power of the Network Fix

The above discussion shows the applicability of the network fix. Each of the case studies is an example of such a fix, and each involves a sui generis settlement that ensures a distinct regulatory structure for the network. This section explores generalizations that extend across and can more broadly be inferred from the case studies and make up final conclusions of the thesis. These can be considered in terms of four types. First, following a more traditional comparative analysis, we can apply Table 1 above to show how process of capitalist expansion, problematization, formation of regulatory compromise and resistance are common to each case study. In this way the case studies support an empirically grounded account of the network fix. Second, the case studies also point to rethinking how a network involve politics and community, or a 'polis'. Third, CPE suggests reconsidering the ways the case studies are connected both as different forms of commodification and different interpretations of sustainability. This leads, fourth, to a discussion of how the case studies advance the CPE agenda.

The idea of a network fix operates at level of relative abstraction and generalization, while each of the case studies provides a greater level of concrete specificity. However, the fact that each case study can be characterized as a 'fix' implies commonalities. Each involves the expansion of capitalist market forces into new geographies (dolphin habitat in the oceans, indigenous lands rich in bauxite, and the sprawling city), forms of societal pushback and the formation of a new regulatory compromise. The new regulatory institutions that respond are specific to the networks at issue, and build on and reform the prior institutional apparatuses. Each case study involved forms of vertical regulation that attach to networks rather than retaining the traditional spatial and thematic restrictions of jurisdictions: As networks cross

borders, regulation follows; and as problems cut across different division of powers, responsibilities get reshuffled.

However, pushback only goes so far. Negotiation and compromise combines use and exchange value in the resolution of regulatory dilemmas. In each of the case studies, network specific institutions play a protective role in ensuring ongoing capitalist reproduction and the position of existing firms -- fishing distribution companies, mining companies and developers remain prime beneficiaries of the process. While this accords with the general orientation of neo-Gramscian approaches (as discussed at 3.5) CPE helps form a subtler analysis: Each of the emergent political institutions can be seen as not only aiding firms and profit maximization but are form determined condensation of the balance of forces that operate in and on the network. Networks are not simply putty in the hands of either capitalist firms or social movements. Civil society concerns are not simply deflected but are absorbed and accommodated in ways that show the agency of vocal citizens, activist groups and non-governmental organizations. The process does not only occur on the plane of 'interests' but takes the form of diverse forms of articulating the public interest. This occurs in negotiation over certification standards and the values to be included, what counts as responsibility in a network or how urban planning should be carried out. Sustainability operates to frame and guide this process.

Chapter 5 (Alcan-Bauxite) confirms the widely held view that first party certification (such as where a firm is not directly answerable to a higher authority) is weak and often self-serving (Schroeder, 2010). Here CPE suggests that this is in part also because it reflects the large imbalance of power between players. Alcan was a large integrated resource development and material processing firm with very little dependence on brand name recognition (and thus consumer legitimacy). On the other hand activists had few resources available. However, because the conflicts could be voiced as human rights concerns there was some ability to leverage widely held norms of political liberalism and provide a narrative of the network as suffering from a crisis of rights violations. At the same time Alcan was able to maintain its operations while paying lip service to those norms-- the Utkal project was not vital to its continued corporate well-being. Alternatively, the case study of third party certification (Chapter

4--Tuna-Dolphin) shows surprising stability and endurance. This reflects not so much the increased power of Earth Island Institute so much as that Earth Island was able to position itself as speaking for tuna consumers in the largest market -- the United States. The simple framing of 'dolphin-safe' was something that helped Earth Island as a small NGO with an oversized mandate and something the tuna canning companies could work with. Unlike the other cases, the City of Vancouver enjoys the exclusive monopoly on violence characteristic of the state. However, the City is not independent from developers and an active citizenry. Certainly policy has leaned in the interest of developers, but this is also because their interests can articulate with the 'sustainability-as-density' model of city planning in the public interest.

Each case can be characterized as reflecting a degree of societal pushback and stabilization around a compromise, but also further forms of resistance from social justice and solidarity groups--whether this be southern ENGOs contesting certification standards, solidarity organizations unwilling to believe mining companies will protect indigenous rights or citizen groups opposed to sustainability-led gentrification. This speaks not only to the fact that such groups are now present (even if at the margins) of the ethical complex that surrounds, influences and helps politicize production and consumption networks. It also speaks to how sustainability has been strategically interpreted to fit within, rather than to offer significant alterity to, dominant societal paradigms and institutions. Here we can restate the central conclusion of chapter 7 -- despite the explicit reference to the 'social' in broad articulations of sustainability doctrine, in application it appears in compromised and sublimated form. The result, however, is often unjust and inegalitarian outcomes, a failure of institutional settlements to meet widely held public interest values, and forms of social resistance. Sustainability discourses have either been flexibly adopted by powerful groups to help maintain the status quo (as in Alcan's CSR) or sought to advance the discourse through offering very modest reforms (as in Vancouver's planning). Without more explicit attention to social justice concerns -- and so thereby often offering significant proposals for change that might upset elite groups -- sustainability risks becoming simply one amongst many mobile policies that serve partisan interests rather than a basis for widespread mobilization for eco-social change.

CPE in conjunction with the case studies also suggests a deeper analysis of how a production and consumption network can become forms of political community or a ‘polis’ in which legal architectures (such as certification standards) create a binding ‘constitution’ (c.f. Tollefson et. al., 2008). CPE deepens that analysis through understanding that community not only in terms of the fact of shared norms or binding principles but as participants in a shared space. As each of the case studies show, as networks become problematized, they face contending imaginaries over modes of ordering, and the need for forms of collective resolution through political institutions. Networks become the meeting point for the views and political mobilization of diverse groups, whether this be ENGOs, activists, journalists, labour unions, and even firms and states. Political engagement is prior to, and part of what explains, the formation of institutions and organizations for regulation. It stems from societal reaction to the expansion of the capitalist economy, its dysfunctional relationship to people and nature and the belief that things can be done differently. Participants also bring interpretive freedom and seek novel modes of ordering. Network constitutions are not set in the ways liberal constitutions are often believed to be, and parties seek many ways of transforming them. As suggested in Chapter 5 political engagement also involves allocating roles, and these can be distributed to different actors in different contexts. Responsibility can fall on consumers as individuals, be transferred to firms and non-governmental organizations as forms of coordinating authorities or be allocated to traditional juridical-legal states. There may also continue to be a process of shared responsibility in which consumers, firms, states, and civil society each continue to exert political pressure even if in uneven ways. While all these actors are part of the broader *stato integrale*, the juridical state also retains a role as actor, not only through the minimal provision of enabling laws (such as property and contract and other market architectures) but through serving as a last resort in times of crisis and as a regulative ideal for more ideal forms of public interest intervention.

CPE also helps understand how the case studies are united by a process we can call *double variegation*. As discussed in Chapter 2, there is not a unitary commodity form. Such unity may have been approximated in the nineteenth century in much of Europe and North America when a formalist theory of property and contract law was coupled to belief in a minimalist state. As such, private law allowed for networks to be designed and managed by

private firms. However, over time there have developed many different legal architectures for commodities/networks. These architectures do not only share a common historical origin and retain private ownership and market exchange, but each, in their own way, facilitate and guide the process where by resources are extracted from nature, and harnessed into goods to secure returns on capital investment. Different commodities/networks also involve shifting relationships between the state, firms, civil society, consumers, nature and other elements. In each of the case studies had thus developed distinct frameworks even before the new push for environmental, sustainability and human rights standards that was the focus of study. CPE also emphasizes the backstory of sustainability discourses and their evolution, and branching over time and mutations as they are worked into actual policies. The shifts and transformations to sustainability doctrine create a further layer of variegation.

The case studies also suggest ways to advance cultural political economy analysis in new directions. The case studies show how commodification takes on specific forms, and involves specific conflicts between the economic and extra-economic, whether this be fishing and its entanglement with by-catch, mining and the displacement of indigenous peoples, or housing with pollution and sprawl. This specificity extends to the emergence of network specific institutions which reflexively transform commodification processes. The case studies consider the roles of specific actors, such as environmental organizations, activists, and ordinary citizens in formulating imaginaries and seeking to transform networks. The case studies show how *lo stato integrale* can take on new forms and extend into new spaces.

The case studies also suggest a broader theoretical extension of cultural political economy into nature-society relations. Jessop at times has considered political ecological themes (Jessop, 2007a; 2012b) but not in a systematic fashion. However, his approach is broadly compatible with geographical political economy which has increasingly branched out to consider questions concerning capitalism's use of nature (see Sec 2.2.2). Cultural political economy can be extended to study the many environmental discourses -- including sustainability -- that now seek to, or successfully transform, commodities/networks. The case studies can thus be seen as specifically concerned with the dynamics of capital-nature relations, and the ways processes of

problematization, politicization, and negotiation play out from within environmental discourses. This cannot simply be read off of more general political economy templates. In some cases -- such as with opposition to Alcan's bauxite mines from Montreal activists -- the network emerged as a unique site for solidaristic visions to be heard. This suggests that network politics is not simply a special case of more general political economic conflicts that play out at the national scale, but a different kind of political space in which new environmental-economic imaginaries can originate or first be able to gain a foothold.

Part of such a shift can also involve extending geographical political economy's engagement with Actor Network Theory (as described at 2.4) to cultural political economy. This involves showing how imaginaries seek to transform how commodities/networks relate to biophysical environments and use materials, how emergent institutions and organizations do make such changes and how nature and technology plays an active role in shaping regulatory outcomes. Sum and Jessop (2013) have used the concept of 'modes of ordering' to refer to efforts to reshape economies and this can be given specificity through examining particular configurations of production and consumption networks. CPE as a broadly social constructivist approach might be extended to the 'things' that networks create. In the case studies this can be seen most explicitly in the case of housing, where regulation plays a role in influencing architects and designers, with highly visible effects on building style. In this way, physical goods (and, by extension the material throughputs and processes behind products in networks) can be seen as themselves cultural political economic artifacts. The very landscape of cities and consumption spaces of the home can then be linked to broader political struggle.

8.8 Beyond the Case Studies: Towards Eco-Social Transformation

Going forward, there is a pressing need for transformation of production and consumption networks to cope with the now significant conflicts between growth-oriented capitalist societies and what ecosystem scientists now refer to as planetary boundaries -- not only in the carbon cycle, but biodiversity, ocean acidification, phosphorous and nitrogen cycles, freshwater use, and other areas (Rockström et. al., 2009). States have largely responded to ecological crisis with a 'weak ecological modernization' agenda that focuses on incremental

technology improvement and light regulation, relying for the most part on market forces. However, there are many models for eco-social transformation ranging from eco-socialism (Foster, 2009), to a move towards localized bioregional economies based on community self-reliance (Milani, 2000). The most prominent model in think tanks and academia appears to be that of a ‘sustainable society’ (c.f. Robinson, 1996), ‘sustainable transition’ (Raskin et. al. 2002, Speth, 2008) or ‘strong ecological modernization’ (Eckersley, 2004) -- essentially different names for a program that draws on the history of globally connected mixed economies and state regulation familiar from Keynesian and social democrat political economies but seeks to add greater roles for public participation, ecological values and non-material quality of life considerations. Indeed it is hard to imagine a future transformation which jumps directly from the current order into the realization of radical visions without at least some experimentation with these more reformist futures, based as they are on the model of an interventionist state coupled to a capitalist market. Jessop and Sum’s neo-Gramscian state theory provides a wide scope for the possibilities of both radical and reformist transformation. However, their theory of regulatory compromise suggests that to overcome path dependency and entrenched capitalist interest, alternatives must provide resonant narratives and be grounded in collective mobilization in order to shift the balance of societal forces.

The idea of transformed commodification may also provide an easier bridge between reformist and radical approaches. Some political economists have also suggested problems of distribution after the collapse of the Soviet Union may now be better served by socialized markets. As such it is not market prices per se (and by extension commodification) that are problematic, but rather “its erection into the rational principle structuring all spheres of social life” (Altvater, 1993, p. 255). If planning and markets are not opposites, the difference that matters is that of an “institutionally rich civil society” and forms of regulation that permit democratic participation and ‘institutional forms of ‘socialization of the market’”(Altvater, 1993, p. 255, also see Elson, 2000). Whether political action seeks a model of market reform or that of a socialized market the work of this thesis suggests a number of insights.

First, and most immediate to the thesis, the types of green neoliberal or ‘weak sustainability’ initiatives that made up the case studies show possibilities for transforming commodities/networks but they are not good examples of how to do it. Corporate social responsibility simply has no enforcement levers other than the slight risk to reputation that watchdog groups and environmental organizations can bring. As the case study on Alcan showed this can have regulatory impact, but not enough to replace state regulatory structures. As such it is incumbent on states to extend enforcement of basic rights protections beyond their borders. Recent case law in England and Ontario suggests courts are beginning to accept that view -- that courts should enforce a duty of care of companies over their subsidiaries where it is foreseeable that rights abuses may occur (*Guerrero v. Monterrico Metals*, 2009; *Choc v. Hudbay Minerals Inc.*, 2013). However, that is only the beginning of what needs to be a more robust and extensive process. Certification systems do provide space for new values to be recognized. However, they do rely on the self-selection of consumers to participate. Welfare economics have long believed that voluntary systems will be insufficient to address structural environmental problems (Paavola, 2001) and critical geographers have come to similar conclusions (Klooster, 2010). On the consumption side, consumers face disincentives to make sacrifices when others do not. On the environment side even if such systems can increase in size to qualitatively change much production, their scope is limited by market dynamics as consumers might switch out if prices get too high in relationship to competition. Also they cannot address overall volumes of consumption. Urban densification has emerged as a central plank of mainstream climate proposals and it is hard to envision that not being needed in some form. However, it is crucial that this be paired with attention to access to housing, gentrification, urban inequality and public participation in issues of neighbourhood design and aesthetics. Not only is this fundamental to a ‘just transition’, but its also fundamental to gaining social support for environmental transition.

Sustainability as a discourse and paradigm has becoming very problematic, plagued by ambiguities, strategic interpretations and co-option by elites and the status quo. Its ability to harness public support and guide collective mobilization is compromised. In some degree this has already taken the form of the ‘green economy’ as an alternative, notwithstanding that this new term replicates much of the same ambiguities and faces much the same problems of social

understanding and acceptance. Yet there is already a large degree of momentum and institutional infrastructure supporting sustainability (as in university, government and corporate departments). There has also been very good academic work oriented towards distilling sustainability into clear principles, including respect for social concerns such as human basic needs and public participation, and methodologies for making difficult trade-offs (c.f. Gibson et. al., 2005). Advocates need to recognize there is a need to choose between popular but meaningless *mush* and the political risks inherent in developing a sharpened discourse. The latter can help steer social transformation through providing normative principles to organize collective action and developing analytical tools of critique of existing institutions, policies and programs. However it then also risks speaking unwelcome truths to power and becoming more clearly recognizable as one amongst many accounts of the public interest. Such an improved discourse may also evolve away from sustainability's origins as a 'compromise of liberal environmentalism' (Bernstein, 2001). For instance, ecological crises have accelerated significantly since the 1980s, and there is a drastic need to revisit the easy assumption that solving them is compatible with prioritizing the growth of an international capitalist economy and firm level profitability.

Third, there is a need for not only economy wide 'horizontal' regulations (such as carbon taxes), but also further processes of direct changes to specific production and consumption networks. The experience in many sectors such as electricity has been that network-specific vertical regulation is also required. Indeed, the idea of networks as socio-technical market complexes with path dependency and momentum suggests the need for geographically and sectorally specific institutions and organizations. This helps explain also the findings of the Intergovernmental Panel on Climate Change, that for climate action "sector-specific policies have been more widely used than economy-wide policies", and that "administrative and political barriers may make economy-wide policies harder to design and implement" given "barriers or market failures specific to certain sectors" (IPCC, 2014, p. 31). As such, direct orders to close coal plants or renewable energy quotas for electricity systems are in fact much more common, and give less ambiguous results than economy-wide carbon taxes or cap and trade systems.

There is thus a pressing need for proactive regulation of specific production and consumption networks: Part of that process includes the formulation of, and contestation over, imaginaries for network dispositives. Network dispositives need not correspond to the broader macro-structural framework and even within the current conjuncture there are forms of state ownership, communitarianism and market regulation at play. It is thus incumbent to imagine what our future systems of production and consumption should look like, and design institutions for dialogue and the formation of agreement over the design of production and consumption networks. This is a starting point for economic democracy, allowing people to have a say in how their basic needs for water, energy, food and housing are met. Eco-social transformation cannot be treated as solely a technical issue of reaching scientifically established pollution reduction targets. Imaginaries for networks must include resonant narratives and be the possible object of collective mobilization.

Individual production and consumption networks cannot be treated in isolation from the broader economy and society and there is also a need to integrate changes to individual networks with overall visions for societal transformation. Some networks such as oil or electricity are also deeply interconnected with other infrastructure and goods, meaning that significant changes -- especially where price and quantities need to change -- involve society as a whole. One prominent modeling exercise for a zero-carbon Great Britain found there was not enough land to support replacing current liquid fuel use with biofuels. Even to maintain emergency vehicles and electric grid stability there would need to be a significant redirection of land use away from animal feed to biofuels. A restructured energy system (e.g. oil, gas and electricity networks) would require significant changes to lifestyle, urban design, food consumption (e.g. towards vegetarian diets), and by extension, types of jobs (Kemp, 2010). These point to the need for visioning processes both for particular networks and for the broader society they are to fit within. This work has begun under the rubric of the need for a sustainable society (Robinson, 1996), a Great Transition (Raskin et. al., 2002) a Green Economy (UNEP, 2011), and zero carbon futures (Teske, 2008; Kemp, 2010). While to date these have sought to calibrate broad economy-wide changes to particular sectors (such as for food transport, or energy) there has been very little focus on the *politics* of regulatory design and eco-social change in such sectors, and the

contestation of public-interest values such as issues of ownership, shares of distribution of surplus, or public participation. Some ecological imaginaries, such as bioregionalism and eco-communitarianism, often specify imaginaries for particular production and consumption networks, favouring, for instance, small scale renewable energy technologies that can be locally cited and owned and operated by those who use the power (Milani, 2000; McKibben, 2007). Both transforming networks and the broader society need to be thought through in terms of the possibilities for collective mobilization, lest the results be simply more of the ecological dominance of profit-oriented market mediated accumulation.

Finally, the transformation of networks includes consumption. A central thrust of liberal environmentalism has been to attempt to preserve consumer sovereignty and not disrupt the momentum and path dependency of Keynesian consumption norms. Central to the ideals of a 'win win' on environment and economy has been to ensure people can have, as Amory Lovins argues, "hot showers and cold beer" (Rocky Mountain Institute, 2014). The result has been that research and policy has focused on technological innovation and the design of incentive systems (such as subsidies and taxes) for production side change geared to preserving the enjoyment of services. However, there is a pressing need to 'confront' consumption (Princen et. al., 2002). This is not merely a question of 'demand management' -- seeking to offset costs of new infrastructure through consumption side technologies (such as better fridges or meters that tell electricity consumers variable time of use pricing). Neither need it be seen as a drive to avoid materialism and consumerism, as it was often addressed by the 1970s counterculture or adherents to voluntary simplicity. Rather the problem is that once long range environmental parameters such as carbon budgets are factored in the technology does not appear to be there (or even on the horizon) to accommodate anything close to the current usage of goods such as airplanes, suburban single family houses and steaks (Jackson 2009, Kemp, 2010, Maniates, 2010).

The result is the need to redesign production and consumption systems, with the obvious need to ensure basic needs, just distribution and public participation. Consumption needs to be made the object of democratic decision-making through processes of dialogue and mutual agreement rather than the current system of naturalizing individualized choice. Tracing the back

story of goods is a first step, and certification and other network regulation thus begins a process of fostering public attention on the design of these systems. Others, such as Elizabeth Shove, stress the social construction of consumption through tracing the historical development of norms around energy-intensive practices such as showering, laundering or room temperature (Shove, 2003). If we see consumption as an issue of regulation of specific production and consumption networks, we can also consider *political* models for transforming consumption. This looks to articulating visions for transforming production and consumption, processes for deliberation and dialogue and collective mobilization to effect socio-ecological transformation.

8.9 Conclusion

The thesis has sought to unpack regulatory change and eco-social conflict on the complex terrains that make up commodities/networks. It suggests that concerns with the process behind products are leading to a greater awareness of the ‘network’ nature of goods production. The language of production and consumption networks is thus not only an academic exercise but helps to pick out an emerging way in which consumers and activists are also linking production and consumption. The result is forms of vertical regulation that seeks to govern specific commodities/networks. The GPNs framework, eclectic as it has now become, introduces a wide range of potential innovations for understanding such systems through stressing the information flows, entanglements and dynamic processes of contestation that link production and consumption (2.3). Moving beyond that framework, a geographical political economy can stress the evolving role of capital and the state in shaping networks (2.2; 2.4), and political ecology can stress the dynamic relationships with nature of networks and their regulation (2.2; 2.4). Regulation is a way of structuring the relationships that make up production and consumption networks: It responds to struggles over the structure of these networks and the politics of their governance and reconfigures the roles of consumers, civil society, firms and the state. Referring back to Pashukanis’s problematic, regulation transforms the reciprocal relationships between state, law (and regulation), ownership, exchange, subjectivity and the ‘things’ central to commodification processes (2.6). Network regulation involves a process of negotiation and compromise that extends from production to consumption and is informed by diverse mobile

policies that imagine the network and the relative roles of participants (3.5, 3.6). Regulation balances profit-oriented market-mediated accumulation, the crises and contradictions it produces, and political mobilization that arises in response.(8.3). The network fix not only consolidates an institutional regime for a network but can also transform regulatory space, shifting regulation from other scales to networks (8.3; 8.4).

The thesis centrally interrogates the paradoxical idea of sustainable commodities. Four cases studies explored different types of sustainable commodities, considering certification of tuna (chapter 4), corporate responsibility over bauxite investment (chapter 5), inner city densification and gentrification (chapter 6) and neighbourhood change (chapter 7). This showed there are a variety of configurations of capitalist goods production--some 'greener' than others. The case studies each showed that capitalist production comes into conflict with nature and non-capitalist social processes, and is met by societal pushback. The result is processes of negotiation and compromise in which discourses of sustainability can play a guiding role.

The thesis does not celebrate sustainable capitalism or green neoliberalism. It even casts doubt on whether there is any movement in that direction beyond selected examples. Instead it points to analysis of these processes, including unpacking what makes such goods distinct and why they might appear attractive to politicians, consumers and activists. Transforming commodification can serve ends of retaining the legitimacy of threatened actors and production and consumption systems as much as leading to progressive change. The thesis points to significant ambiguity about these goods. They challenge entrenched assumptions that technologies, corporation conduct, markets and consumer goods are external immutable forces that cannot be changed through social action. But all that said, the green neoliberal experiments this thesis has considered represent only a small selection of possible social choices for how to restructure the relationships that our systems of provisioning embody. Significant questions linger as to its faith in the benevolence of capitalist firms, its neglect of social justice concerns, and its easy assertion of the compatibility of capitalist growth with resolving deep environmental crisis.

Most optimistically, these experiments also point towards imagining new models and practices for collectively re-organizing our systems of provisioning, including models for eco-social transformation. The outcome of such struggles need not necessarily result in forms of neoliberalism or outcomes particularly favourable to capital. While languages of sustainable commodities and sustainable design point to an ideal of a production and consumption network as the object of deliberative design the reality is also that participants face distributional conflict, discursive contestation and a backdrop of unwieldy and dynamic markets. This points not to the impossibility of eco-social transformation of networks, but to the fact that it is a deeply political process.

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