

Ecological Degradation and Population Demands:
Wicked problems and the rule of rules in Canada/America

by

Michael Large
Hon. B.Comm., Laurentian University, 1993
LL.B., Osgoode Hall Law School, 1996

A Thesis Submitted in Partial Fulfillment
of the Requirements for the Degree of

MASTER OF LAWS

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Supervisory Committee

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Dr. Karena Shaw, (School of Environmental Studies)
Co-Supervisor

Abstract

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Rooted in legal theory and environmental studies, this thesis aims to (re)define the ‘population problem’ and related regulatory resolutions in constructive and clear terms, within a broad concept of ‘law’. Green legal theory, wicked problem theory, and legal pluralism viewed from a wide-angle, first-person perspective, are applied together. To control birth rates and consumption demands in Canada/America, state-made laws are not central. We are ruled by rules: Certain law-like non-state rules aim to prod procreation and consumption ever-upward. Materially speaking, Can-American population numbers and consumption/waste form one inseparable factor relevant to global ecological degradation, and ‘legally’ speaking, specific religious doctrine amounts to ‘population-UP control’ and specific economic dogma ‘consumption-UP control’. Together, these material and ‘legal’ factors form a wicked problem called ‘population demands.’ This problem formulation points away from state-made resolutions. Instead, the author recommends deconstructing degrading rules from the bottom-up and, in relation to consumption-UP control, reforming social norms.

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And to Katherine Anne Large, daughter of Anne and Bill Large:

Thanks, Kate, for your norm-bending support and partnership.

Dedication

I dedicate this thesis to my nieces, Jordan and Amelia, and to my nephew, Nick. When deciding whether to create a(nother) child, may your reasons trump the rules.

Chapter 1 – Introduction: A (hypothetical) letter from a population-minded environmentalist to a law-and-society theorist

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September 1, 2009

c/o Lorinda Fraser
Graduate Assistant, Faculty of Law
University of Victoria
PO Box 1700, Station CSC
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Attention: Michael Large, LLM Candidate, UVic Law

RE: Porritt's 'p-word', in perspective

Further to our recent discussions, I am writing to you to provide direction in relation to your ongoing thesis work. It is your wish to narrow the scope of your inter-disciplinary research regarding population, the environment, and the law, and it is my wish that you write your thesis to serve as guidance to my unnamed population Foundation.¹

As discussed, the Foundation will take the position that population numbers² in developed countries are a factor (among many) relevant to global ecological degradation. The Foundation will attempt to raise greater public, and perhaps political, awareness regarding population-related environmental issues. I would like to engage a group of experts who have been studying these issues within various disciplines, including environmental studies, population studies, political science, anthropology, and economics. I also intend to seek funding support from existing environmental organizations. Consider the Foundation and its supporters to be your audience; you will be our law-and-society theorist. Population-minded environmentalists are those who already believe that population numbers pose a problem, or at least part of a problem, relevant to ecological degradation. We need guidance regarding how to discuss this

¹ This hypothetical letter was written by me, Michael Large, as if it was written by a population-minded environmentalist. It serves as a device for making certain scope decisions regarding my Master of Laws project, without aligning myself with any particular population-focused organization or individual. The letter is also an attempt to capture my thinking on this topic at roughly the mid-point of my research, without committing myself to those earlier ideas. I am hoping that this thesis will find an audience among NGOs concerned that population numbers, among other things, matter to ecological degradation.

² See the Appendix to this Chapter 1 for basic definitions of population-related terms. The footnotes in this Chapter 1 are written in my own voice, not in the voice of my hypothetical population-minded environmentalist.

problem clearly and constructively. Write your thesis in a way helpful to population experts and non-experts alike. Confront complexity, but in a way that is readily understandable.

I understand that, a year ago, you left your job as a business lawyer with the BC Government, and entered the Master of Laws program at UVic. You returned to school, in part, because of concerns regarding global ecological degradation. Your interest in population issues was triggered by three expert presentations on climate change³ that you attended over the two preceding years. No presenter made mention of population numbers as a factor relevant to ecological degradation.⁴ To you, this seemed like a serious oversight. At the conclusion of two of the presentations, audience members asked questions like: ‘Isn’t population the elephant in the room?’ and ‘If we reduce per capita greenhouse gas emissions over the coming years, but global population continues to grow, won’t progress on climate change be at least partly cancelled out?’ and ‘Is there any role for law to play when it comes to population growth?’ One presenter answered that any law or policy amounting to population control would violate international human rights laws.⁵ The other presenter answered that the US consumes a disproportionate share of fossil fuels relative to its share of global population; thus, the problem is really over-consumption, not over-population.⁶ You saw these answers as instructive but incomplete, as responsive yet evasive. With this experience but no expertise, you began your research regarding population, environment, and law.

After a year of work, your working theory, materially speaking, is that population numbers and consumption/waste⁷ form one inseparable factor relevant to global ecological degradation. Your working theory, legally speaking, is that specific non-state rules underlying our political economy aim to drive population and consumption in an ever-upward direction. You are finding the traditional ‘rule of law’⁸ approach to be too narrow. You will assert that people are governed by rules going well beyond state-made laws. You will take the position that we are ruled by rules in Canada/America.

In western society, it seems taboo to make public pronouncements on population and environment, together with politics or law, in the same breath.⁹ Take, for example, the

³ IPCC, 2007 (regarding climate change research).

⁴ I give a glimpse into these presentations to trace some events that sparked my interest in population-related issues. Space and memory do not permit balanced assessments, so the speakers remain anonymous here.

⁵ UN Universal Declaration of Human Rights, 1948:74. See Article 16: “Men and women of full age, without any limitation due to race, nationality or religion, have the right to marry and to found a family.”

⁶ MacGregor (2009) writes that: “Many greens are suspicious of the ‘are we too many?’ question because they believe that it is not human numbers that are important, but the relative consumption of natural resources and production of wastes and green house gasses” (at 9).

⁷ See the Appendix to this Chapter 1 for basic definitions of consumption/waste.

⁸ See Bingham (2010) for a recent treatment of this surprisingly complex concept.

⁹ Whitty (2010) claims that increases in food production late last century helped discredit pessimists predicting widespread famines and since then, the notion of ‘the population bomb’ has been taboo (at 2, para. 14 of online version). Daly (2006) “lament[s] the recent tendency of the environmental movement to court ‘political correctness’ by soft pedaling issues of population, migration, and globalization” (at 190). A

public passions recently raised by the former leader of the Sustainable Development Commission, in the UK. The Commission serves as a source of independent advice to the government on sustainability issues,¹⁰ and was chaired by Jonathon Porritt for most of the last decade.¹¹ This past February, a few months before stepping down as Chair, Mr. Porritt commented on the environmental impacts of continued population growth, primarily in his own corner of the world, but also in the context of global climate change. He suggested that couples who procreate more than two children are “creating an unbearable burden on the environment”.¹² To Mr. Porritt, population growth is a problem underlying global warming, and government policies aimed at improving access to contraception and abortion are a solution – even if improved family planning means shifting money away from curing illness.¹³ Porritt added that environmental organizations are refusing to confront population issues, because such issues are seen as too controversial.¹⁴ Nevertheless, he speculated that “we will work our way towards a position that says that having more than two children is irresponsible. It is the ghost at the table. We have all these big issues that everybody is looking at and then you don’t really hear anyone say the ‘p’ word”.¹⁵

Although many of Porritt’s claims are contestable, his claim to controversy is not.¹⁶ After *The Sunday Times* reported Porritt’s comments in an on-line article, hundreds of readers from the global North responded, many with criticism or condemnation, others with support or praise, still others with mixed reactions and emotions.¹⁷ Many readers interpreted Porritt’s comments as an implicit call for some form of population control in the global North. Perhaps it was this interpretation that prompted Alyssa from St. Paul, USA to write: “It would be great if the people who are constantly hyperventilating about carbon footprints would stop procreating. Keep it up, Mr. Porritt. Maybe all your cronies will soon follow suit.”¹⁸ Alyssa might be forgiven for wishing away

‘taboo’ topic may be considered off-limits to open discussion by virtue of a group’s social norms, enforced by sanctions like social shunning; more on norms and sanctions later.

¹⁰ Sustainable Development Commission, Press Release, 2009:para. 4 (the Commission advises government officials in England, Scotland, Wales and Northern Ireland).

¹¹ Sustainable Development Commission, Press Release, 2009:para. 1, 5 (Porritt stepped down as Chair of the Commission on July 27, 2009, after nine years in the position).

¹² Templeton, 2009:para. 1.

¹³ Templeton, 2009:para. 9.

¹⁴ Templeton, 2009:para. 8.

¹⁵ Templeton, 2009:para. 4.

¹⁶ “[G]rapp[ing] with the topics of sex, contraception, abortion, immigration and family sizes that differ by ethnicity and income [makes most of us uncomfortable]. What in the population mix is *not* a hot button? Especially when the word ‘control’ is added, and when the world’s biggest religions have fruitful multiplication embedded in their philosophical DNA” (Engelman, 2009:27-28; original emphasis). “*Are we too many?* Few questions have sparked such heated debate in environmental political thought” (MacGregor, 2009:4; original emphasis).

¹⁷ Templeton, 2009 (See over 400 comments on the “Have Your Say” portion of the webpage).

¹⁸ Templeton, 2009 (See Alyssa’s comment on the “Have Your Say” portion of the webpage).

environmentalists when Porritt seems to be wishing away other people's children, or at least their children-to-be. Porritt's public statements offer a cautionary tale to anyone attempting to frame highly-sensitive population-related questions.

One difficult population-related question is this: 'where to begin?' Broadly speaking, we know that "[w]orld population growth is the number by which births exceed deaths",¹⁹ and "[h]ardly anybody favors more deaths."²⁰ Yet, Porritt seems content to trade off less spending on illnesses, and therefore more deaths than might otherwise be, for more spending on contraception, and therefore fewer births than might otherwise be. Further, Porritt seems to implicitly support a two-child-per-couple norm, perhaps even a two-child-per-couple law, as forms of population control. I believe that it is this kind of ill-defined positioning that has plagued attempts to talk about population-related problems and solutions in ways that do not trigger immediate fight-or-flight responses among environmentalists and policy makers. To be clear, you will not be advocating for policies that seem to favour higher death rates; you will not be advocating for policies amounting to population control. You will aim to frame 'p-word' problems/solutions constructively, in clear terms that more people in the North might understand and accept.

In addition to this objective, bear in mind the following limitations:

Focus on Theory: Your thesis will not be a legal memo, or a policy paper. Instead, your thesis will focus on relevant law-and-society theories. But which ones? First, you will be taking a course called Green Legal Theory (GLT) with your supervisor, Dr. Michael M'Gonigle, as part of UVic's LLM program. GLT promises "to explore the foundations of the environmental/legal problematic and its implications for transformative theory (and practice)".²¹ You will weave key elements of GLT into your thesis. Second, you have already completed a course in Political Ecology with your co-supervisor, Dr. Karena Shaw. The course explored how our political economy adversely impacts ecological systems, and like GLT, will help push your thesis beyond a single-minded focus on population numbers. Third, pollution has been called a 'wicked problem';²² kindly explain this concept, and apply it. Finally, build in other law-and-society theories to critique or strengthen the arguments that you cite or create.

Methodological Limits: You will not be conducting personal interviews or gathering fresh data as part of your research effort. Rely on existing literature regarding selected theories, and United Nations data regarding population projections. Do not hesitate to draw on recent and relevant news sources to build your arguments.

¹⁹ Jacobsen, 1995:260.

²⁰ Cohen, 1995:17.

²¹ M'Gonigle, 2010:1.

²² Rittel & Webber, 1973:157, 168.

Time Limits: Focus your theoretical research on literature going back 200 years or so, to the time of Thomas Malthus's *Essay on the Principle of Population*.²³ Malthus is often credited with launching over-population discourses in the global North.²⁴

Place Limits: Prominent analysts in the North have problematized population growth in the South, based on data indicating that population growth rates are relatively high in developing countries.²⁵ This kind of approach may be interpreted to mean that there can never be too many of *us*, only too many of *them*.²⁶ In contrast, you will focus on Canada and America. I understand that your work may occasionally touch down in other countries, or shift to sub-national, international, or global scales. However, if the Foundation requires legal research focusing on the global South, the Foundation will engage a legal theorist embedded in that part of the world.²⁷

Scope Limits: Population flows are about more than births and deaths; migration patterns are relevant to population numbers.²⁸ Over the coming decades, immigration is expected to be the main contributor to population growth in Canada, and a substantial contributor to population growth in the US.²⁹ But the Foundation is not interested in obstructing immigration; we wish to promote better lives for the already-living, wherever they are or may wish to be. The Foundation is primarily interested in regulations that attempt to govern how people are made, not how they are moved. So, as a simplifying move, you will not analyze cross-border migration. Questions regarding the intersection of migration, environment, and law warrant their own separate research projects.

With death and migration off the table, reproductive decision-making becomes your primary focus. This narrows the scope of your thesis considerably, but nonetheless gives

²³ Malthus, 1992. Originally published in 1798, the *Essay* was revised repeatedly by the author until its final 1826 edition. The *Essay* has been re-published and re-interpreted repeatedly since then. This 1992 version tracks Malthus' various revisions, and includes a helpful introduction by Donald Winch.

²⁴ See e.g.'s MacGregor, 2009:5; Sachs, 2008:73; Boyd, 2003:283; Polanyi, 2001:127-128. Although Malthus is most (in)famous, Ross (1998) traces key Malthusian arguments back to slightly earlier writings: a book published by Robert Wallace in 1761, and a pamphlet published by Joseph Townsend in 1786 (at 5, 12). Malthus (1992) himself credited writers like Wallace, Townsend, Adam Smith and others, with a nod to Plato and Aristotle, as his predecessors in relation to the notion of over-population (at xi, 7-8).

²⁵ See e.g.'s Engelman, 2009:23, 26-29; Brown, 2008:16-17, 117-120, 149; Boyd, 2003:285-287; Ehrlich, 1968:15, 132-133, 165-166. Some of these same sources also framed population numbers in developed countries, particularly the US, as problematic. See Engelman, 2009:24, 26, 28; Ehrlich, 1968:11, 133, 135.

²⁶ MacGregor, 2009:10.

²⁷ For a critique of approaches that seek to impose a set of universalizing views on differently-situated individuals in far-away places, see Esteva & Prakash, 1997.

²⁸ In turn, many factors underlie birth, death, and migration rates, and many factors underlie those factors, and so on. Yet, as a starting point, I am narrowing the scope of my thesis by considering the simplest big-picture phenomena: births, deaths, and migration.

²⁹ In the US, population is estimated at 318 million in 2010, and is projected to be 404 million by 2050 - growth of approximately 86 million, 42 million from net migration. In Canada, population is estimated at 34 million in 2010, and is projected to be 44 million by 2050 - growth of approximately 10 million, 8.55 million from net migration. See UNPD Population Database (2008), on 'medium variant' assumptions.

rise to a host of difficult and sensitive questions, not the least of which relate to abortion, contraception, and reproductive self-determination.³⁰

You will not wade into the abortion debate. When it comes to maternal health in general, other organizations are advocating for global improvements. For example, one target under the United Nations' Millennium Development Goals (MDGs) is to achieve universal access, by 2015, to reproductive health (including family planning) around the globe.³¹ This target may not be met,³² but to be candid, the UN does not need the arguments in your thesis to help meet its goals. Assisting women to establish effective control over their own reproductive capabilities³³ has been recognized as an important social objective in its own right,³⁴ and is linked to other important social objectives like improving equality, education and healthcare for women; all of these factors have been linked to falling birth rates.³⁵ To wed concrete initiatives regarding family planning with explicit concerns regarding overpopulation may conflate birth control with population control,³⁶ potentially tainting the entire MDG family planning initiative.³⁷ In other words, to argue that we need better access to birth control in order to manage population numbers may undermine efforts to improve access to contraception and abortion for the general benefit of women. You will not take your thesis in that direction.

With death, migration, abortion, and contraception largely outside the scope of your thesis, what's left for you to propose as a solution to 'the population problem'?

³⁰ Engelman, 2009:27-29 (speaks to contraception, abortion, and reproductive self-determination, primarily in China and the US); Isaacs, 1981:69, 145, 199, 412 (speaks to abortion, contraception, and coercion); Gordon, 1990:xv (refers to reproductive self-determination).

³¹ See UN Millennium Declaration, 2000:5 (Under Article 19, heads of state and government resolved to reduce maternal mortality by three quarters by the year 2015). See also UN World Summit Outcome, 2005:15-16 (Under Article 57(g), heads of state and government committed to achieve "universal access to reproductive health by 2015", with reference to the prior International Conference on Population and Development). See also UN Millennium Development Goals Report, 2008:24, 26-27 (Goal 5 is improving maternal health, and a target under that goal is universal access to reproductive health. An unmet need for family planning is reported as a cause for concern in relation to this goal/target).

³² In the UN Millennium Development Goals Report (2008), maternal mortality is listed as a goal that is likely to be missed unless urgent action is taken; an unmet need for family planning is reported as a cause for concern in relation to this goal (at 4, 27).

³³ "The capacity to reproduce is not a disadvantage, but lack of control over it is" (Gordon, 1990:xvii).

³⁴ UN Millennium Development Goals Report, 2008:27 (benefits include avoiding accidental pregnancies and maternal deaths, and thus easing the burden on families re: child education and healthcare).

³⁵ Improving education and job opportunities for women, and improving education and healthcare generally, are linked to a desire among women for smaller families (Engelman, 2009:28-29).

³⁶ See e.g. Ross (1998), who conflates the early distribution of contraception in Columbia by US-based organizations with the notion of population control (at 18). I will briefly argue in Chapter 4 that improved access to contraception, absent coercion to use it, is not population control.

³⁷ Gordon (1990) writes that, during the 1960s, "population control programs [in some countries] interfered with the articulation of women's desires for birth control...[and] in the United States...[population control] clouded the vision of reproductive freedom. This mist was a product...of the fact that the only existing birth-control organizations had become entirely identified with population control" (at 396).

Paradoxically, you should think deeply about reproductive self-determination. As a law-and-society theorist, you should think in terms of how some rules in Canada and America, including state-made laws and non-state rules, may push people into particular reproductive decisions.

Conclusion

Lawyers are sometimes called ‘word-smiths.’ To say the ‘p-word’ without triggering a gag reflex in others, the Foundation needs a carefully constructed vocabulary. When we speak or write, we need words that have been weighed and measured. We seek a common understanding, not wider misunderstandings. It is not for you to wave your arms and declare a population emergency. That has been done, arguably to counter-productive effect,³⁸ and it is no job for a lawyer. You will craft new phrases, or clarify existing ones – phrases like ‘population problem’ and ‘population control’ - in the context of regulatory systems operating within Canada/America. You will draw on various law-and-society theories to put Porritt’s ‘p-word’ in perspective.

In terms of structure, you will use this letter as your opening Chapter 1. Chapter 2 will establish a theoretical framework to justify and guide your subsequent analysis. Chapter 3 will review and critique some of the ways in which the population problem and related solutions have been framed in the past. Chapter 4 will be your attempt to re-frame the problem and its solutions in constructive and clear terms, in ways that avoid past missteps. And Chapter 5 will be your letter to the Foundation, summarizing your work.

In terms of tone, make accessibility your watchword. Explain key concepts so that a twelve-year-old might understand them. Keep in mind that you are exploring a conceptual space where population numbers, ecological degradation, political economy, and legal theory intersect; thus, you are “combining integrative scholarship within a context of current politics.”³⁹ Anyone interested in following your arguments may be interested in understanding your political and personal leanings. Do not hide behind third person prose; do not claim neutrality. Write yourself into your thesis.

Yours,

The Chair

³⁸ Most notably by Ehrlich (1968), with the publication of *The Population Bomb*, which included predictions of mass starvation and calls for global population control. More on this work in Chapter 3.

³⁹ Holling, 2005-2006:3.

Appendix to (Hypothetical) Letter Basic Terminology⁴⁰

Population numbers means:

- (i) the total number of people living in a particular space, at a particular time; and
- (ii) the net change in the total number of people living in a particular space over time.

The first branch of this definition is referred to as the **population pool**, the second branch **population flow**. The second branch may be further broken down into: **population growth** or **population stability** or **population retreat**, as the case may be.

Consumption/waste means whatever a person does to carry on material life (including survival behaviours), over a period of time, whether or not the social-ecological impacts of those actions are local to that person.⁴¹ Consumption/waste includes: personal, governmental, industrial, commercial, and non-commercial activities attributable to a person, like the production of goods, the use of energy, and the emission of household and industrial wastes, and greenhouse gases. Included are activities not measured by economic indicators like gross domestic product (e.g. unpaid household or yard work).

Consumption/waste is defined to include activity that some analysts might prefer to categorize separately as ‘production’. But from an ecological perspective, it makes little difference if my car consumes fossil fuels on the weekend, for example, or if my tools consume fossil fuels at work. “ ‘[C]onsuming’ occurs all along the chain, not just at the downstream node of consumer demand. ...Producers are consumers; production is consumption.”⁴² At its most basic, consumption/waste refers to what each human being extracts from ecological systems, and puts back in the form of waste, whether in the context of households, factories, mines, governments, businesses, or other scenarios.

The word **consumption** is used alone when the intent is to refer to activities generally considered to be contributors to living, or to a higher material standard of living (like consuming food, building a home, or driving a car), without referring to the resulting undesirable **waste** (like sewage, household trash, or greenhouse gases).

“Broadly speaking, if population is the number of us, then consumption is the way each of us behaves.”⁴³

⁴⁰ My aim in this Appendix is not to formulate perfect or universal definitions, nor to review long-standing debates regarding contestable terms. Instead, I provide these definitions for the purposes of clarity, in the context of my particular project. Later in this thesis, I discuss terms that I believe deserve closer attention, like ‘population demands’ and ‘population control’.

⁴¹ Jacobsen, 1995:256 (my definition draws on Jacobsen’s definition of *consumption*).

⁴² Princen, Maniates & Conca, 2002:16.

⁴³ Engelman, 2009:25.

Chapter 2 – A green legal theory of wicked problems, and non-state re-solutions

Introduction

I was born and raised on the moon.⁴⁴ Sudbury, Ontario is my hometown.⁴⁵ It has a long and toxic mining history.⁴⁶ So destructive were early roasting and smelting operations that the landscape was scorched bare and black, over thousands of hectares.⁴⁷ In the late 1960s, the United States sent astronauts to Sudbury to don equipment and collect rocks on the moon-like terrain.⁴⁸ Since this moon landing, and perhaps partly because of it, local government has worked to throw a green frock over the blackened rock. Limestone, fertilizer, and grass seed have been set down; trees have been planted. Drive through town, and the results of these re-greening efforts surround you.⁴⁹ Yet, under the

⁴⁴ Edinger (2008) muses that “the Sudbury ‘moonscape’ of the 1940s to 1970s has become part of Canadian legend” (at 106). I was born in 1970.

⁴⁵ The term *reflexivity* has been defined to include “the way researchers consciously write themselves into the text [of their work], the audiences’ reactions to and reflections on the meaning of the research, [and] the social location of the researcher” (Fonow & Cook, 2005:2219). I adopt a reflexive approach here, aiming to write myself and my social location into this thesis. Like some feminist legal theorists, I believe that neutrality and objectivity, in the context of law-in-society analysis, is an “impossible ideal” (Fletcher, 2002:136). I bring my self and my experiences to my analysis, whether I acknowledge it or not.

⁴⁶ Winterhalder, 1995.

⁴⁷ The land was rendered barren (17,000 ha) and semi-barren (72,000 ha) by a combination of: logging; roasting ore (i.e. stripping areas of trees and using them to cook ore in open pits); and smelting ore. Erosion and fire, made much worse by the industrial activities like logging, prospecting, and train travel, also played a part (Winterhalder, 1995:17-27). But “decades of intensive fumigation from smelters caused most of the damage” (Winterhalder, 1995:30).

⁴⁸ “Apollo XI astronauts visited the basin before their historic 1969 flight to study the site of a possible meteoritic impact such as they might see on the moon” (Mount, 1986:11). Thus, the extra-terrestrial rocks were of interest. All the same, a photo taken during the visit shows two astronauts wearing space backpacks, collecting rocks on a denuded landscape (Mount, 1986:12). Query whether the region would have been visited by moon-bound astronauts in partial moon-gear if it had remained covered in pine and cedar forests. For descriptions and images of the destruction of the Sudbury area’s forest cover as it stood in the 1870s, see Winterhalder, 1995:17-18, 20.

⁴⁹ For images of a re-greened area, see SARA, 2008:4.50. For a detailed description of early re-greening efforts in the Sudbury area, see Lautenbach, 1995:109-119. Many Sudburians, including leaders, students and volunteers, deserve credit for their re-greening work. The United Nations agreed in 1992, when it presented the municipality with a UN Local Government Honours Award (Lautenbach, 1995:119).

greenery, heavy metals hide in the soil.⁵⁰ And if you hike just outside the green zone, beyond the usual sightlines, you can find the moon under your feet.⁵¹

It seems that governments in Canada and America have been using environmental laws to achieve similar results. Governments have set down these laws to hide a social-ecological mess under a green guise.⁵² Many environmental laws have been passed in Can-America,⁵³ but their green promise has not been fulfilled; underlying toxic tendencies remain.⁵⁴ In our political economy, the thinking behind green law-making has shallow roots;⁵⁵ it does little to change what seem to be socially and ecologically corrosive power structures.⁵⁶ Despite a tangle of environmental laws in Canada and America, falling water tables, declining fish stocks, combusting fossil fuels, denuded

⁵⁰ “Metal concentrations [in surface soils] tended to be elevated within 7 to 10 km of the historic smelting centres”, but were elevated up to 120 km away in some cases. Mean levels of copper and nickel in Sudbury soils exceed Ministry of Environment criteria (SARA, 2008:ECviii). Nickel, copper, arsenic, and lead have recently been found in Sudbury area soils (SARA, 2008:7.17-7.18). “Levels of nickel, copper, and other heavy metals in soils below and immediately adjacent to roasting bed sites still remain at toxic levels” (Edinger, 2008:107). Edinger also explains that intensive liming has reduced soil acidity, “such that biologically available nickel and copper are now reduced to acceptable levels in most soils, and vegetation recovery has proceeded well in many areas.” The words “acceptable levels”, “most soils”, and “many areas” are less than completely reassuring. See also Winterhalder, 1995:21, 26, 30.

⁵¹ From 1978 to 1993, reclamation efforts were dedicated to public view corridors, alongside roadways and within neighbourhoods (Lautenbach, 1995:112-113, 117, 118). “By the end of 2005, 3,367 ha had been treated by the Land Reclamation Program. Although impressive in its scope, given estimates of well over 80,000 ha of land affected by past mining activities, the task of land reclamation remains daunting” (SARA, 2008:4.1). Denuded lands are visible online: Google Maps <<http://maps.google.com/maps?hl=en&ie=UTF8&t=h&ll=46.573967,-80.804787&spn=0.121071,0.307961&z=12>>, and <<http://maps.google.com/maps?hl=en&ie=UTF8&ll=46.489943,-81.045284&spn=0.030315,0.07699&t=h&z=14>>.

⁵² Luke (2006) makes a similar point: “the system of sustainable degradation [including policy responses] enables capital to extract even more value by maintaining the appearances of creating ecological sustainability while exploiting the realities of environmental degradation” (at 112).

⁵³ I will refer to Canada and the US, taken together, as ‘Can-America’ in this thesis. This is a shorthand reference to the two countries. I do not mean to imply complete political or economic integration, although a case could be made that political brokering, free trading and other factors are merging the two countries toward one political economy. One indicator: according to Boyd (2003), potential claims by US corporations for compensation under NAFTA limit environmental law-making in Canada (at 259).

⁵⁴ “As in the United States, despite thirty-plus years of sustained effort to protect the environment through increasingly detailed laws and policies, most indicators of environmental performance in Canada continue to worsen” (Boyd, 2003:275).

⁵⁵ M’Gonigle (2008) is struck by the sub-theoretical character of environmental law (at 34).

⁵⁶ M’Gonigle (2008) argues that environmental law is based on key elements of liberal democratic theory (at 34). Related and “self-reinforcing [power] structures” are resistant to incremental change (at 38). Even when an historic recession presents an opportunity for radical change, world leaders work to “reinflate the very financial, production and consumption systems that are responsible for the ecological crisis that these leaders ignore” (at 38).

lands, toxic wastes, eroding soils, disappearing species, flaming forests, changing climates, and other forms of eco-degradation threaten people and other life forms around the globe.⁵⁷

Green Legal Theory (GLT)⁵⁸ is evolving in response. Pioneered by Michael M’Gonigle, GLT proposes a transformative paradigm,⁵⁹ by leading us to think more deeply about the limits of traditional environmental regulation and the need to expand the conception of social regulation if serious change is to be secured.⁶⁰ GLT looks, in part, to the perspectives of Indigenous peoples.⁶¹ In common with John Borrows, GLT offers: an assertion that people are an integral part of the natural world; an argument for maintaining balance and respect between people and the natural world; a recognition that people are subject to limits imposed by the natural world; a concern that serious harm will flow from degradation by people of the natural world, and a recommendation to draw on the wisdom of people living closest to the natural world.⁶²

Yet, on balance, peoples continue to degrade the natural world on a massive scale, and at a frightening pace.⁶³ In Chapter 4 of this thesis, I problematize Can-American population numbers and consumption demands, and the imperatives underlying their scale and growth, as one unified concept, called *population demands*, thus “problematiz[ing] many processes that are now mere background.”⁶⁴ In my view, these underlying imperatives largely take the form of non-state rules, amounting to *population control* and

⁵⁷ For similarly impressive and depressing lists of examples of ecological degradation, see M’Gonigle, 2008:34; Brown, 2008:4-5; MEAB, 2005:10-15, 17; Speth, 2003-2004:779; Boyd, 2003:349 (in Canada); Plumwood, 2002:1-2; Rees, 2002:255, 261-262. From here forward, the phrase ‘ecological degradation’ will be used to boldly understate “the massive scale and frightening pace of environmental decline”, which is global in scope (M’Gonigle, 2008:36).

⁵⁸ M’Gonigle, 2008; M’Gonigle, 2000.

⁵⁹ M’Gonigle, 2008:34.

⁶⁰ M’Gonigle 2008; M’Gonigle, 2000.

⁶¹ M’Gonigle, 2000:32, 36.

⁶² Borrows, 2002:34, 47, 53, and M’Gonigle, 2000:35, 36 (oneness with nature); Borrows, 2002:49-50, and M’Gonigle, 2000:27 (balance & respect); Borrows, 2002:51, and M’Gonigle, 2000:19, 21-22 (ecological limits); Borrows, 2002:51, 52, and M’Gonigle, 2000:12, 35 (consequences); Borrows, 2002:33, 39-42, and M’Gonigle, 2000:35-39 (local wisdom).

⁶³ M’Gonigle, 2008:36; MEAB, 2005:1-5.

⁶⁴ M’Gonigle, 2008:34.

consumption control, both aimed in an upward direction. I suggest critique as a way to break down degrading structures of social control in our culture, and conclude by moving toward a broader legal imaginary. In Chapter 3, I analyze problem definitions and resolutions related to population and proposed in the past, in an attempt to understand the approaches and missteps of prior theorists. In this context, I explore dialectical dynamics and theoretical implications. In this Chapter 2, I develop a theoretical framework built mainly on key aspects of wicked problems, legal pluralism, and GLT⁶⁵ to help justify and guide subsequent problem framing, response hunting, and theory spinning efforts.

As outlined above, GLT draws close attention to people-nature relations, or roughly speaking, what Elinor Ostrom calls social-ecological systems.⁶⁶ As part of its analysis of how the law relates to these systems, GLT adopts three law-related elements which help structure and inform this chapter: first, a strong critique of law; second, a broad concept of law, and third, a local orientation to law. More specifically, GLT offers: first, a critique of the “dead end of a paradigm of environmental law as prop to an unsustainable political economy”;⁶⁷ second, a broad conception of law in society as “authoritative processes of cultural self-constitution”;⁶⁸ and third, a radically democratic re-formation of law which allows “socio-ecological innovations to emerge from the diverse experiences of people living collectively in place.”⁶⁹

In this Chapter, I discuss some basic theoretical questions. Along the way, I add a layer to GLT’s critique of state-made law by characterizing social-ecological problems as wicked problems,⁷⁰ which by definition defy once-and-for-all definitions and solutions, even state-made ones. I discuss legal pluralism’s complex and comprehensive approach to law, unpacking what GLT might mean when it refers to law as authoritative processes

⁶⁵ Key concepts from feminist legal theory will appear more prominently in Chapters 3 and 4.

⁶⁶ Ostrom (2007) also refers to social-ecological systems as ‘SEs’, or ‘human-environment systems’ (at 15181).

⁶⁷ M’Gonigle, 2008:34.

⁶⁸ M’Gonigle, 2008:36.

⁶⁹ M’Gonigle, 2008:38. For clarity, ‘law’ in this context is the broad concept of law set out above.

⁷⁰ Rittel & Webber, 1973.

of cultural self-constitution.⁷¹ Later in this thesis, I frame specific non-state rules as socially and ecologically degrading. Undermining these rules through critique and defiance may open room for greater reproductive freedom, and for greener consumption rules to take root. In keeping with one crucial GLT objective, this chapter will begin to explore “how a community might live within the carrying capacity of nature.”⁷²

Drawn together, these elements are intended to serve a central thesis recommendation: that environmentalists concerned with the wicked problem of global ecological degradation should expect modest progressive change, at best, from the state and its laws, and environmentalists focused on the wicked problem of population demands in Can-America should avoid government engagement altogether. If we take wicked problems, legal pluralism, and GLT seriously, we may conclude that the seemingly “all-important institutions of law and the state”⁷³ aim primarily to protect an exploitative, growth-obsessed status quo, and on their own are no match for our social-ecological problems. But we can tap ‘legal’ alternatives.⁷⁴ Non-state rules that help constitute culture⁷⁵ are potential sources of ecological degradation, and alternatively, tools for “progressive social [and ecological] transformation”.⁷⁶ We can try to assert conscious control over the “living law”.⁷⁷ We should critique, even defy, destructive non-state rules, and cultivate greener non-state ones, before larger swaths of humanity are alienated, larger swaths of non-humanity are obliterated, and larger swaths of Earth are moon-scaped.

⁷¹ For simplicity, I have laid out these two arguments as discrete and sequential, but they splinter or overlap during the discussion that follows.

⁷² M’Gonigle, 2000:19.

⁷³ M’Gonigle, 2000:9.

⁷⁴ Webber (2006) notes that the project of critical legal pluralism is “valuable in reminding us of other paths that might have been and might still be taken” (at 182; footnote omitted). Mack (2009) argues that state-made paths for Indigenous peoples do not exhaust the field of possibility (at 128); sometimes “the best defence is to simply turn away from our adversary” (at 136).

⁷⁵ M’Gonigle, 2008:36 (refers to “the practices that authoritatively constitute culture”).

⁷⁶ M’Gonigle, 2000:9. The addition of the words “and ecological” is my own, but is consistent with M’Gonigle’s wide-angle perspective on social-ecological systems.

⁷⁷ Webber, 2006:177. Webber refers to an earlier work by Eugen Ehrlich from which this phrase is derived. I use the phrase as Webber does: as a proxy for ‘informal law’, or what I will be calling non-state rules.

Wicked problems

Problems as Normative Claims

“The point of emancipatory theory”, writes Terry Eagleton, “is to regress us to childhood”.⁷⁸ To Eagleton, theory demands that “we return to childhood by rejecting what seems natural and refusing to be fobbed off with shifty answers” from well-meaning adults who have long forgotten their feelings of wondrous uncertainty.⁷⁹ Momentarily, I will ask some of the most basic questions faced by children and scholars alike. What is a problem? Can all problems be solved? What is law? Can all problems be solved by law? If not law, then what? Along the way, I will be exploring three law-related elements embedded in GLT, as outlined in my Introduction. Grappling with general and specific questions forces me to make clear my relevant foundational beliefs.

So what is a *problem* in the first place? Almost 40 years ago, two planning experts named Horst Rittel and Melvin Webber⁸⁰ referred to a problem as a perceived gap between what-is and what-ought-to-be.⁸¹ The simplicity of this notion is misleading.⁸² The (purportedly) concrete *is* calls for observation and interpretation,⁸³ and the (precariously) normative *ought* calls for critique and judgement.⁸⁴ So, in effect, saying that something *is* a problem is *not* an empirical claim at all. If we accept that what constitutes a problem is a gap between what-is, which is open to various interpretations, and what-ought-to-be, which is open to serious debate, then when I identify a problem I

⁷⁸ Eagleton, 1990:34.

⁷⁹ Eagleton, 1990:35.

⁸⁰ For brevity, and to avoid confusion with Jeremy Webber, I will refer to Horst Rittel and Melvin Webber simply as “Rittel” from here forward, in this thesis.

⁸¹ Rittel, 1973:159, 161, 165.

⁸² A cautionary note: Geertz (1983) argues that the distinction between *is* and *ought* does not hold across cultures; he explains how these concepts can collapse into one another (at 167-234). Yet, this distinction seems to be well-understood and well-regarded in today’s Can-American culture. Moreover, it appears to be analytically helpful, so I accept the distinction in the context of this thesis, at least as a starting point.

⁸³ According to Curtis (2002), ‘census-taking’ is really ‘census-making’: “[B]ecause no large-scale census of population can be based on direct physical observations of equivalent bodies in time and space, it is practically necessary to generate and assemble opinions about such things” (at 25).

⁸⁴ Rittel, 1973:162.

make a normative claim that what is, as I see it, *ought* to be different, as I judge it.⁸⁵ Thus, simply identifying and articulating a problem is no easy task, because problem formulation is inevitably influenced by the information, alternatives and perspectives at play. Here, “event and judgment flow together”.⁸⁶ Some notion of ‘the good’, ‘the better’, or ‘the good enough’ seems inescapable.⁸⁷ And the analyst’s perspective, from a particular social position, is highly relevant. For example, a legal theorist is not inclined to define a problem or suggest a solution in terms of a particular technology; a male economist is not inclined to define a problem or suggest a solution in terms of feminist legal theory; a chemical engineer is not inclined to define a problem or suggest a solution in terms of macroeconomic theory.⁸⁸ This thesis is based primarily on law-and-society theories, so it will come as no surprise that I find problems and resolutions in how we regulate ourselves. The very notion of law itself will come under close scrutiny.

Crucially, when a person defines a problem, the definition itself points toward potential solutions, whether the person realizes it or not. Despite classical planning theory, planners generally do not devise goals, define a problem, seek alternatives, try a solution, feedback results, and then repeat, in a step-by-step sequence; not outside a lab, at least.⁸⁹ “Problem understanding and problem resolution are concomitant to each other.”⁹⁰ In other words, if a problem is the gap between what-is and what-ought-to-be, then an analyst must have some idea of what-ought-to-be in order to believe that a problem exists in the first place.⁹¹ Rittel claims that formulating a problem and conceiving a solution are identical.⁹² Thus, if a problem definition proposed by one person faces no workable solutions, then it may strike other people as unconvincing and unstable, and unworthy of

⁸⁵ Rittel, 1973:161.

⁸⁶ Geertz, 1983:179.

⁸⁷ Rittel, 1973:162, 163. This perspective on perspectives underscores to the importance of the notion of reflexivity advocated by Fonow & Cook, 2005:2219.

⁸⁸ Rittel (1973) does not offer these examples, but comments on heterogeneity generally: “common interests, common value systems, and shared stylistic preferences that differ from those of other groups” (at 167).

⁸⁹ Rittel, 1973:159, 162 (but their longer lists of steps have been simplified in my argument).

⁹⁰ Rittel, 1973:161.

⁹¹ Rittel, 1973:161.

⁹² Rittel, 1973:161.

attention. The proposed problem definition crumbles, forcing at least a partial re-constitution of the original problem formulation, and at the same time, the proposed solutions. The process might be seen as a form of dialectic.⁹³ In my view, this dialectical process is particularly evident in past theoretical discussions regarding ‘the population problem’. To give a cartoonish example, if the problem is framed as ‘too many people on the planet for its resources to support’, then confounding questions immediately arise, like: ‘how many people ought to be?’, and ‘how do we get to that number?’ If the proposed answers are: ‘5 billion fewer than today’s 6.8’, and ‘change laws everywhere to increase deaths, decrease births, and end immigration’, then the problem definition falls off a cliff. If proposed solutions are left unsaid, then the problem definition is half-built, half-broken.

Wicked Problems as Vicious Curses

Rittel proceeds to make a bold claim: virtually all public policy issues are ‘wicked problems’,⁹⁴ meaning “‘vicious (like a circle)’”,⁹⁵ intractable,⁹⁶ and incorrigible⁹⁷ (but not necessarily ethically deplorable).⁹⁸ Unlike ‘tame problems’ addressed by chemists, mathematicians or chess players – where the goal and how to get there are clear - a public policy problem cannot be solved *once and for all*.⁹⁹ Rittel prefers to refer to ‘re-solutions’, not solutions, in relation to wicked problems, as a reminder that “[s]ocial problems are never solved...only re-solved – over and over again.”¹⁰⁰ This may come as an incomprehensible claim to lawyers and politicians. As Robert Samek, a critic of

⁹³ In a review of another scholar’s work, Harvey (1987) briefly states two variations on the concept of dialectics: “...a progressive development of a flawed structural principle, followed by collapse and a reconstitution of the same contradiction at a higher level of system generality...”; or more simply “...cycles of development, collapse, sublation, and reconstruction...” (at 99).

⁹⁴ Rittel, 1973:160.

⁹⁵ Rittel, 1973:160.

⁹⁶ Rittel, 1973:159.

⁹⁷ Rittel, 1973:167.

⁹⁸ Rittel, 1973:160.

⁹⁹ Rittel, 1973:160, 162-163, 164.

¹⁰⁰ Rittel, 1973:160. Following Rittel, I generally refer to ‘re-solutions’, not ‘solutions’, to wicked problems. The exception to this general approach is when I describe the work of an expert who seems to advocate once-and-for-all solutions, in which case, I use the word ‘solutions’.

lawyers who see the law as a panacea,¹⁰¹ once put it: “we have acquired such an exaggerated faith in our legal institutions that we believe that they [our social problems] can be solved by legislating them out of existence.”¹⁰² Yet, “code does not determine conduct.”¹⁰³ The characterization of social problems as *wicked* suggests that any state-made ‘solution’ is, at best, a partial and provisional¹⁰⁴ ‘re-solution’.

But what makes virtually all social problems *wicked*?¹⁰⁵ Complexity and uncertainty regarding causes and effects seem to go to the heart of the notion of wickedness: “The planner who works with open systems is caught up in the ambiguity of their causal webs.”¹⁰⁶ Complexity and uncertainty obscure the location and importance of links between potential causes and a problem (as first conceived), as well as the links between one potential cause and another. A social problem may have multiple causes; focusing on a particular cause makes a problem look like a symptom; the cause may have its own causes making more problems look like symptoms; chains of causation, or feedback loops create circles out of chains of causation, adding further complexity and confusion.¹⁰⁷ If causes and effects in complex social systems form a conceptual web stretching out in multiple and looping directions, then social problems will “defy efforts to delineate their boundaries and to identify their causes”.¹⁰⁸ Further, a re-solution may give effect to waves of repercussions that ripple through the system in unexpected ways, perhaps “inducing [wicked] problems of greater severity at some other node.”¹⁰⁹ Thus, problems

¹⁰¹ Samek, 1977:418.

¹⁰² Samek, 1977:426.

¹⁰³ Geertz, 1973:18.

¹⁰⁴ Webber (2006) argues that “the very heart of law...[is] the need to establish, *at least provisionally*, a single normative position to govern relations within a given social milieu, despite the continuing existence of normative disagreement” (at 169; emphasis added). “The job of decision makers is to impose a collective resolution, but that resolution has to be made and remade” (at 192).

¹⁰⁵ Rittel (1973) lists and discusses “ten distinguishing properties of planning-type problems, i.e. wicked ones” (at 160; 161-167). The authors are not clear on which properties, or which combination of properties, are constitutive of wicked problems. However, complexity and uncertainty regarding cause-and-effect, and plurality regarding objectives, seem to be the key elements.

¹⁰⁶ Rittel, 1973:167.

¹⁰⁷ Rittel, 1973:159, 165.

¹⁰⁸ Rittel, 1973:167.

¹⁰⁹ Rittel, 1973:159.

of environmental quality,¹¹⁰ poverty,¹¹¹ crime in the streets,¹¹² or even the adjustment of a tax rates,¹¹³ for example, defy easy or permanent fixes. And it is impossible to be certain of success in re-solving a wicked problem, because competing worldviews present different notions of success, and because it is impossible to know what the future would have held if a particular re-resolution had never been implemented,¹¹⁴ or if a competing resolution has been implemented instead. Thus, social problems provoke incurable feelings that we must try again, and do better.¹¹⁵

Importantly, Rittel argues that defining a wicked problem is itself a wicked problem.¹¹⁶ Moving beyond complexity and uncertainty regarding causes and effects, Rittel emphasizes the diversity of worldviews, with competing goals and values, found in the context of a large and plural society.¹¹⁷ People who are differently-situated in society can have radically different points of view, impacting their interpretation of what-is, and their judgement of what-ought-to-be – including their notions of ‘the good’, ‘the better’, and ‘the good enough’. This rich diversity of perspectives, in turn, impacts people’s notion of the gap (if any) between the *is* and the *ought*. It seems safe to say

that diverse values are held by different groups of individuals – that what satisfies one may be abhorrent to another, that what comprises problem-solution for one is problem-generation for another. Under such circumstances, and in the absence of an overriding social theory or an overriding social ethic, there is no gainsaying which group is right and which should have its ends served.¹¹⁸

Thus, Rittel’s hypothesis seems to be this: *all* social problems are wicked, meaning intractable, or not solvable once-and-for-all, *because* all social problems face complexity and uncertainty regarding their causes and effects, and a diversity of perspectives

¹¹⁰ Rittel, 1973:157, 168.

¹¹¹ Rittel, 1973:161.

¹¹² Rittel, 1973:160, 164.

¹¹³ Rittel, 1973:160.

¹¹⁴ Rittel, 1973:166.

¹¹⁵ Rittel, 1973:162.

¹¹⁶ Rittel, 1973:159, 161.

¹¹⁷ Rittel (1973) offers examples of competing values, like efficiency, liberty, individualism, equity (at 158, 160, 166, 167, 168). Holder (2000) makes the point cautiously: “the universality of ‘basic’ moral principles may be questioned...in a time of multi-culturalism” (at 175).

¹¹⁸ Rittel, 1973:169.

regarding what ought-to-be. But if a multiplicity of conflicting perspectives is one constitutive element of a wicked problem, then, by definition, moving towards one community-wide consensus regarding a solution, as difficult as that may be, also moves toward taming that problem. Perhaps a better formulation of Rittel's hypothesis would be contingent, not absolute: *if* a social problem faces complexity and uncertainty regarding its causes and effects, in a social context marked by perennial diversity of perspectives regarding what ought-to-be,¹¹⁹ *then* that social problem can be characterized as wicked, meaning intractable, or not solvable once-and-for-all.

The 'P-word' and Eco-Degradation as Wicked Problems

For the purposes of this thesis, whether or not *all* social problems are wicked, or which ones are wicked, are not central questions. Although Rittel mentions the environment and pollution,¹²⁰ his main focus is on social systems, particularly within America. My field of view is wider, encompassing social-ecological systems across Can-America, and occasionally, around the globe. Following Rittel's basic logic, a social-ecological problem may be defined as a perceived gap between what-is and what-ought-to-be, implicating significant elements of both the social and the ecological domains. I am concerned about the impacts of Can-American population demands on global ecological systems, and the law's role in underpinning those demands. In this context, the concept of wicked problems offers a fitting theoretical start. Complexity and uncertainty regarding causes and effects, and a diversity of perspectives regarding what-ought-to-be, crowd around 'the population problem.' Population growth has been linked to poverty, political economy, gender inequality, child mortality, old age insecurity, inaccessible contraception, sheer momentum,¹²¹ nature's laws,¹²² and even God's plan,¹²³ and this list

¹¹⁹ Rittel (1973) refers to "large social systems" (at 158) and asserts that "high-scale societies of the Western world are becoming increasingly heterogeneous" (at 167). To Rittel, "large population size will mean that small minorities can comprise large numbers of people; and...even small minorities can swing large political influence" (at 168).

¹²⁰ Rittel, 1973:157, 168.

¹²¹ Sachs, 2008:164, 168, 174-175 (poverty); 176-178 (political economy); 187-188 (gender inequality); 164, 185-186 (child mortality); 190 (old age insecurity); 188-189 (inaccessible contraception); 168-169 (population momentum); Engelman, 2009:29 (gender equality, accessible contraception, and healthy children lead to lower fertility).

¹²² Malthus, 1992:14-15, 40, 57.

is undoubtedly incomplete. And each of these phenomena has its own complex web of causes and effects, real and imagined. I have found little evidence to support a claim that humanity's 'population problem' is definable once-and-for-all, let alone solvable once-and-for-all. I have found a wide diversity of perspectives regarding what-is, and what-ought-to-be, in relation to the intersection of population, environment, and law. If population retreat emerged as a trend in Can-America, for example, many people around the world might express relief, while many others would excite fear.

The concept of wicked problems seems fitting when analyzing perceived is-ought gaps within systems of this magnitude and complexity, systems encompassing not only how people interact with one other but also how we collectively interact with our natural world. Drawing on a range of studies, Ostrom paints a confounding picture of social-ecological systems, calling attention to multiple sets of multiple variables, interactions among variables at different tiers, feedback loops across time and space, and perhaps most obviously and importantly, a mysterious and changing planet.¹²⁴ Social-ecological systems do not self-simplify or sit still under study; they present "compound puzzles nested in compound puzzles";¹²⁵ they present a multitude of moving targets. At the risk of understating the challenges faced by researchers, Ostrom opines that the "key is assessing which variables at multiple tiers across the biophysical and social domains affect human behavior and social-ecological outcomes over time."¹²⁶ She concludes that "advocating a single-policy panacea is not appropriate for crafting sustainable SESs".¹²⁷ On this argument, rigid state-made laws, all on their own, seem like no match for the social systems our laws purport to regulate together with the ecological systems our laws claim to protect. Law sits on the books, eyes shut tight, wishing away complexity, uncertainty, and change.¹²⁸ M'Gonigle pulls no punches: "There is no complex system

¹²³ Dodoo & Frost, 2008:436 (citing a 10-year old study completed in Africa, by Bledsoe).

¹²⁴ Ostrom, 2007:15181-15183.

¹²⁵ Ostrom, 2007:15183.

¹²⁶ Ostrom, 2007:15183.

¹²⁷ Ostrom, 2007:15185 (her reference to 'SESs' is to social-ecological systems).

¹²⁸ Samek (1977) critiques law for its rigid, categorical view of the world; for example, "the paper world of law is firmly drawn over our vision" (at 411).

that can be managed; there will always be surprise from the unknown”,¹²⁹ and “[s]olving such problems [as climate change] through state-based regulation is the false premise of the environmental law paradigm.”¹³⁰

To illustrate wicked problems in action, consider a relatively small-scale and straightforward example of a problem of ecological degradation.¹³¹ Google Maps is a helpful tool for exploring far-away places. It offers a bird’s-eye view of the Sudbury region, revealing vast areas of denuded land.¹³² This is in spite of heroic re-greening efforts.¹³³ Winterhalder literally draws a picture of the cause and effect relationships that led to the formation of barren lands in the Sudbury area. This picture, as interpreted and simplified by Winterhalder, appears on paper as a complex web.¹³⁴ The web includes logging, smelters, roastbeds, open conditions, plant death, frost action, and other factors. Some of these factors are primarily social (e.g. man-made smelters), others are at least partially ecological (e.g. erosion). Some factors interacted with one another, and fed back on themselves (e.g. smelters killed plants; plant deaths enhanced frost action; enhanced frost action caused more plant deaths, causing more enhanced frost action).¹³⁵ Crucially, the web is incomplete. Like Google Maps, my mind’s-eye can ‘zoom in’ on any node of Winterhalder’s web, and imagine that node exploding into a colourful array of cause and effect relationships. For example, I could zoom in on “roastbeds”, and ask: “Why did they cook ore this way?” Defensible answers might include economic and technological

¹²⁹ M’Gonigle, 2008:37.

¹³⁰ M’Gonigle, 2008:34.

¹³¹ Another example, but at an intermediate spatial scale (somewhere between the global scale of climate change, and the local scale of Sudbury’s denuded lands) can be drawn from the recent history of salmon aquaculture along the BC Coast (Volpe & Shaw, 2008). BC aquaculture, aimed at creating jobs, alleviating hunger, and conserving wild salmon, “has largely failed to deliver on its promises, spawning an increasingly vocal campaign by environmental groups defining it as a problem in its own right” (at 131).

¹³² Online: Google Maps <<http://maps.google.com/maps?hl=en&ie=UTF8&t=h&ll=46.573967,-80.804787&spn=0.121071,0.307961&z=12>> (see especially the Copper Cliff area, to the west of the City of Sudbury); <<http://maps.google.com/maps?hl=en&ie=UTF8&ll=46.489943,-81.045284&spn=0.030315,0.07699&t=h&z=14>> (see especially the Falconbridge and Coniston areas, to the east of the City). See also Winterhalder, 1995:25, for a map indicating that these three areas were hardest-hit by roasting and smelting activities up to 1973. “[T]he task of land reclamation remains daunting” (SARA, 2008:4.1).

¹³³ For images, see SARA, 2008:4.50. For a description of the re-greening efforts and the UN award, see Lautenbach, 1995:109-119.

¹³⁴ Winterhalder, 1995:27.

¹³⁵ Winterhalder, 1995:24-30.

factors. Zoom in on “economic factors”, and ask: “What thinking underlies this economic system?” An ideology of endless growth, for starters.¹³⁶ Zoom out, zoom out, zoom out, and ask: “What is going on with land, air, and water on this planet, and the life that relies on them?” Diverse economic, political, legal, technological, and other ‘big picture’ factors come into view. And one factor should not be overlooked: population numbers. Population numbers are far from a complete explanation for widespread ecological degradation. And population growth has its own multitude of causes and effects. All of the factors mentioned above work at once; no one excludes another. Thus, Sudbury’s seemingly simple story of ecological degradation on a local scale can be imagined as a web of complexities and uncertainties regarding causes and effects at different tiers, as “compound puzzles nested in compound puzzles.”¹³⁷

And how can we begin to ‘solve’ this (these) problem(s)? If Sudbury’s unsightly landscapes and undesirable reputation are perceived as the problem, then one re-solution is for local government to spear-head efforts to re-green the land, starting with areas people can see.¹³⁸ But what about the heavy metals residing in the soils over thousands of hectares?¹³⁹ What government initiative, what laws, will ‘solve’ *that* problem? An alternative problem definition might frame the denuded lands as a symptom of another problem, like toxic smelters.¹⁴⁰ Can laws shut these down? But what about lost nickel production? More people want more nickel to make more machines to make more stuff! And what about lost jobs? People need work, and never mind how destructive or

¹³⁶ Speth (2003-2004) indicts “the ‘growth at all costs’ imperative” as an underlying cause of global ecological degradation (at 783). M’Gonigle (2000) critiques “a social order built on the prospects of endless growth as the cure-all to our mistakes and injustices” (at 21). Daly (1998) adds: “Not only must we grow forever, we must accelerate forever! This is hollow political verbiage, totally disconnected from logical and physical first principles” (at 286).

¹³⁷ Ostrom, 2007:15183.

¹³⁸ For many years, re-greening was primarily about aesthetics and reputation (SARA, 2008:EC.iii-EC.iv, 4.1, 4.49, 4.51-4.52; Lautenbach, 1995:112-113, 117, 118). Only within the last 15 years has the re-greening program started to move away from ‘viewstrip’ restoration, and toward restoring watersheds. Re-greening efforts are ongoing (SARA, 2008:4.53-4.54).

¹³⁹ SARA, 2008:EC.viii, 7.17-7.18; Edinger, 2008:107; Winterhalder, 1995:21, 26, 30.

¹⁴⁰ The Coniston smelter closed in 1972, contributing to a dramatic drop in ground-level pollution (SARA, 2008:EC.iii).

unhealthy that work might be.¹⁴¹ Perhaps the state can pass laws to reduce toxic emissions? But this can lead to lost jobs too.¹⁴² Problem re-resolution for one group, the people breathing the air, becomes problem creation for another, the people cut from the payroll. Perhaps governments should just leave the problems to ‘the market’ to sort out. Companies *want* to clean up their image, because image sells. In 1972, one company built a super-stack to disperse emissions into the atmosphere, contributing to a dramatic drop in ground-level pollution.¹⁴³ But this re-resolution caused acid rain, killing or impacting thousands of lakes.¹⁴⁴ Re-solving one wicked problem created another.

Imagine chains and loops of causes and effects, stretching in different directions, and crossing different temporal, spatial, and conceptual scales. Take Winterhalder’s snapshot of causes and effects, and imagine each node exploding into multiple sub-nodes, and each sub-node moving in different and unexpected directions over time. Imagine web-upon-web, complexities and uncertainties regarding causes and effects at different tiers, and different ideas for re-resolutions held by different groups of people. And imagine the state chasing these complexities, or running from them. Defining and re-solving these social-ecological problems is like cats herding cats, or like playing ‘Whac-A-Mole’ only the moles can whack back. If ‘population’ is added to the list of underlying causes, then a degraded social-ecological situation begins to look even more vexing.

Imagine the future. As global populations grow, might we expect more mines, more denuded landscapes, or fewer? In BC, the Minister of Forests, Mines, and Lands offers one perspective: It depends on profit potential, period. “A key priority for us is to

¹⁴¹ Edinger (2008) describes the destructive impacts of roasting and smelting operations on the lands and waters of the Sudbury region (at 106-109). He notes that health implications are understudied (at 109). Nagarajan (2008) reviewed selected health-related data (at 125), and found that “the health status of Sudbury area residents is below the provincial average in most ways and that the state of Aboriginal health is cause for special concern” (at 144). For example, “[m]ale lung cancer death rates are substantially higher than the provincial figure – about 28 percent higher” (at 130). Determining causation for these health disparities presents a wicked problem. Nagarajan points primarily to unequal access to health care (at 144-146), but mentions “lifestyle choices in terms of eating, drinking, and smoking” and “concerns about the area’s physical environment” (at 146).

¹⁴² When the mining companies were forced to install pollution abatement equipment, they independently increased mechanization and cut jobs from about 30,000 positions in the 1960s to less than 5,000 today, not including contractors (Edinger, 2008:110-111).

¹⁴³ SARA, 2008:EC.iii.

¹⁴⁴ SARA, 2008:4.1-4.2; Edinger, 2008:107-108.

continue to deliver mines through the regulatory process and give people confidence that once they discover an ore body that is economically viable, that they can get it into production.”¹⁴⁵ Not surprisingly, the Minister believes “we’ll see significant growth again in 2011”,¹⁴⁶ particularly in mining exploration. A less simplistic perspective draws on the theory of wicked problems: The spread of mines and related wastes depends on many factors, including consumer demands, existing supplies, producer technologies, and cultural change, just for starters. Yet, these factors do not render population numbers irrelevant. None of these factors, including population numbers, are mutually exclusive; all of these factors matter; all of these factors inter-link.

Thus, when analysts or officials claim that a factor relevant to ecological degradation, like ‘the population problem’, is not *the* problem, they start with a straw argument.¹⁴⁷ The analyst is asserting that others believe in just one problem. But who claims that any one factor, however relevant, is *the* problem in relation to ecological degradation, to the exclusion of all the rest? Population numbers are not *the* problem, but that is not to say that population numbers are not *a* problem,¹⁴⁸ or part of some larger problem. Consider M’Gonigle’s humbling conclusion on what-is: “We now know enough to know that we cannot know. Thus the human animal of the ecological age is less the wise species with the final answer, homo sapiens, than the questing one that always seeks to understand how better to situate social truths in natural ones, knowing that there is no answer.”¹⁴⁹ And consider M’Gonigle’s provisional vision of what-ought-to-be: “If there is a moral order which inheres in that universe, it has implications for the positive design of human institutions, designs that will be diverse according to the diversity of cultural, historical and territorial experiences.”¹⁵⁰ By extension, bottom-up non-state rules may be more responsive to local environmental changes and activism, and may respond in more diverse ways that better fit diverse local conditions, than top-down state-made laws.

¹⁴⁵ Penner, 2011:para. 22 (quoting Minister Pat Bell).

¹⁴⁶ Penner, 2011:para. 12 (quoting Minister Pat Bell).

¹⁴⁷ See e.g. Pearce, 2010:para. 1-2, and counter-arguments by Walker, 2010.

¹⁴⁸ Walker, 2010.

¹⁴⁹ M’Gonigle, 2008:37. See also Esteva & Prakash, 1997:279 for a similar argument.

¹⁵⁰ M’Gonigle, 2000:34-35.

Moreover, state-made laws seem an unlikely source of radical and costly environmental regulations, when profit-focused people are helping steer the state.

If ‘the population problem’ is wicked - as in intractable, vicious, incorrigible - does it follow that *all* attempts at re-resolution amount to wasted time and effort? If defining wicked problems is itself a wicked problem, does that mean they defy *any* definition? Michael Maniates raises similar concerns in his critique of the IPAT equation, a theory offering a population-related explanation for ecological degradation.¹⁵¹ Roughly speaking, IPAT argues that ecological impacts, ‘I,’ are driven by population, ‘P,’ times affluence (or consumption), ‘A,’ times technology, ‘T,’ and that “[f]ocusing on one or two of these three factors...will ultimately disappoint”.¹⁵² Michael Maniates critiques IPAT in a way that might also apply to the theory of wicked problems, a theory that

amplifies and privileges an ‘everything is connected to everything else’ biophysical, ecosystem-management understanding of environmental problems, one that obscures the exercise of power while systematically disempowering citizen actors. ...[K]nowing how or when or even why to intervene becomes difficult; such ‘system complexity’ seems to overwhelm any possibility of planned, coordinated, effective intervention.¹⁵³

Yet, to say that social-ecological problems are not solvable once and for all is not a reason to do nothing. Just the opposite: an imperative arises to re-formulate wicked problems over and over again, and to apply fresh re-solutions at modest spatial, temporal and conceptual scales. The concept of wicked problems underscores the need for tenacity in relation to problem framing and re-resolution hunting, and modesty in relation to expected outcomes. Our governments can’t do it all. Everyone can play some part, repeatedly, using any and every ‘legal’ tool available to us. Otherwise, wicked problems threaten to overwhelm. Sudbury’s social-ecological problems remain far from solved, not because of the concept of wicked problems, but in part because of the misapplication

¹⁵¹ Ehrlich & Holdren (1971) wrote up the factors comprising ‘IPAT’ (at 1212-1214). Ehrlich, Ehrlich & Holdren (1973) added the formula: “Environmental degradation...can be written as a mathematical equation: total environmental damage equals population times the level of material affluence per person, times the environmental damage done by the technology we use to supply each bit of affluence. These factors are related to each other and to the economic and social framework in which choices are made...there are no simple, single-faceted ways to stop the escalation of environmental problems... simultaneous attacks must be mounted on *all* components of the problem” (at 12-13; original emphasis).

¹⁵² Maniates, 2002:59.

¹⁵³ Maniates, 2002:60 (footnote omitted).

of the concept of tame ones: seeing a problem/solution as a simple, one-shot affair.¹⁵⁴ Re-green the land people can see, re-green the City's image, and Sudbury's ecological problems disappear – or so the local story goes.¹⁵⁵ This simplistic approach works in the context of tame problems, like chemistry experiments and math problems. But it understates the perennial challenge of problem defining and problem re-solving in the context of social-ecological systems.

To say that a problem is not solvable once-and-for-all is not to say that certain actions cannot make marked social or ecological improvements. Sudbury presents a greener façade than 40 years ago, and environmental law has scored some noteworthy successes.¹⁵⁶ But, despite much effort, social-ecological problems have not been 'solved', not in Sudbury and not globally.¹⁵⁷ Global ecological degradation continues to worsen.¹⁵⁸ In this thesis, I take a close look at population- and consumption-related problems, and underlying imperatives, despite the fact that the population debate has been born and re-born repeatedly for over 200 years, often with corrosive social implications.¹⁵⁹ A partial rejoinder to Maniates's concerns might be this:

If there is any message in what I have been saying here, it is that the world is a various place, various between lawyers and anthropologists...various between little traditions and great, various between colonial thens and nationalist nows; and much is to be gained, scientifically and otherwise, by confronting that grand actuality rather than wishing it away in a haze of forceless generalities and false comforts.¹⁶⁰

¹⁵⁴ There are probably many inter-related reasons why work on a wicked problem might lose momentum, including "considerations that are external to the problem...run[ning] out of time, or money, or patience" (Rittel, 1973:162). These resources, like so many others, are not without limits.

¹⁵⁵ "The [re-greening] program has successfully met the original mandate...which was to create conditions that change the image of Sudbury from an undesirable place to live to a community and industry driven environmental success story" (SARA, 2008:EC.iv).

¹⁵⁶ For example, reducing ozone depletion and end-of-pipe industrial emissions (Boyd, 2003:217-218; 248). See also Speth, 2003-2004:780 (ozone depletion), and Gale, 2000:204 (more eco-protection through parks, protected areas, and environmental assessments, and some safer havens for endangered species).

¹⁵⁷ Despite some successes, "the socio-natural web continues to show signs of being stressed beyond its adaptive capacity, and the era of national environmental legislation must be declared a failure" (Gale, 2000:204). For a recent overview of Sudbury's social-ecological problems, see the articles collected in Leadbeater, 2008. Health, poverty, and food security are flagged, in addition to ecological degradation. Arguably, all these problems are tied together, to varying degrees.

¹⁵⁸ MEAB, 2005; IPCC, 2007.

¹⁵⁹ Historical debates will be analyzed in Chapter 3.

¹⁶⁰ Geertz, 1983:234.

To Geertz's list, I would add more social-ecological elements: state-made laws and non-state rules, dominating forces and emancipatory efforts, centralized power and local knowledge, changing climates and re-greened hillsides, and diversity across the awe-inspiring web of life constituting our lives on this planet.¹⁶¹ Maniates seems to wish away this system complexity, seems to wish for false comforts. To me, this wish leads toward a feckless snapping of life-sustaining strands.

To sum up: If a social-ecological problem is marked by complexity and uncertainty regarding its causes and effects, in a context marked by a perennial diversity of perspectives regarding what ought-to-be, then that problem can be characterized as wicked, meaning intractable, or not definable or solvable once-and-for-all. Analysts who approach such social-ecological problems as if they are lab experiments or chess games bring false simplicity, misguided certainty, and false objectivity to complex, uncertain, and subjective situations. The 'population problem' in relation to ecological degradation fits squarely into this category. At least three implications flow. First, population-minded environmentalists can justify regularly re-thinking social-ecological scenarios perceived as problematic, to help re-define/re-solve problems within various contexts. Second, ecological degradation is more than the state and its laws can hope to manage on their own, so we should set modest expectations for environmental laws grudgingly passed and inconsistently enforced by governments. And third, wicked problem resolution calls for tenacious, multi-pronged action, perhaps including state-made laws, but not excluding experimentation with 'legal' alternatives spotlighted by the theory of legal pluralism.

¹⁶¹ I am adding political and economic systems (which I see as subsets of social systems), and ecological systems to Geertz's list, to further emphasize the complexity and diversity of social-ecological systems.

Legal Pluralism

First-Person Pluralism

To add a legal dimension to my theoretical framework, I accept the advice that Eagleton offers to theorists, and regress to my childhood.¹⁶² As a child, I thought about three phenomena on a regular basis: the rules, my actions, and the consequences. I was often told that I should behave according to a rule (i.e. the *ought*) in a particular situation; I made a decision about what to do in that particular situation (i.e. the *is*), and certain positive or negative consequences might flow if my behaviour did or did not follow the rule (i.e. if an *is-ought* gap opened up). The first set of rules that mattered to me came from my parents. If my *is* did not respect my parents' *ought*, then this gap - if detected – presented a social problem from my parents' point of view.¹⁶³ A brief hearing and swift punishment might follow: a scolding, or a slap on the wrist. Or, if my *is* satisfied or surpassed their *ought*, then some reward might follow: praise, or dessert. In this thesis, both rewards and punishments are called 'sanctions'.¹⁶⁴ The threat or promise of sanctions often shaped my beliefs, then my behaviour. Or maybe it was the other way around,¹⁶⁵ as suggested by Geertz: “How, given what we believe, must we act; what, given how we act, must we believe.”¹⁶⁶ In either event, parental rules, with small sanctions attached, attempted to solve micro-scale social problems, to close gaps between my behaviour and my parents' rules. And ideally, parental rules, with small sanctions attached, prevented an unwelcome gap from opening in the first place.

¹⁶² Eagleton, 1990:34.

¹⁶³ But this gap was not necessarily a problem from my point of view, because I might have had a very different vision of the *ought*; not an arbitrary one, but one based on what I considered to be good reasons. And this gap was not necessarily a problem from *both* my parents' points of view; they were not always a united front, an observable phenomenon that I could exploit to secure a change to the rule. Lawyers may use much the same approach when arguing a case in court (e.g. pick a good test case; make your best argument; hope that more authority figures side with you than against).

¹⁶⁴ Following Ellickson, 1991:124.

¹⁶⁵ Reeve (2009) outlines cognitive dissonance theory (at 275-279) which suggests that “[b]eliefs follow from (and act to justify) what one says and does” (at 279), at least under some circumstances.

¹⁶⁶ Geertz, 1983:180.

Later, I was introduced to new sets of rules. I learned a set of rules imposed and enforced by my teachers at school, and another by my friends in the schoolyard. As a teenager, the rules of the workplace, the rules of peer groups, and the laws of the state came into focus. Growing up, Roman Catholic religious rules seemed to be an omnipresent part of the mix.¹⁶⁷ Some sets of rules overlapped. For example, certain religious rules were adopted and enforced by my parents. Some sets of rules clashed. For example, a few school rules were opposed by my parents, leading to debates between parent and teacher regarding jurisdiction (i.e. “my son” versus “my classroom”). Strict rules sometimes nested within lax ones. A state-made law might set one rule of behaviour, for example, while a social norm might regulate that behaviour more tightly; compliance with both rules was possible by observing the stricter of the two, or the more generous rule might be respected while defying the stricter one. The main point here is this: the government is far from the only rule-making entity in our lives, and non-state rules can function much like law. Parental rules, organizational rules, social norms, religious doctrine, and other non-state rules can regulate our beliefs/behaviours more strictly, more directly, and more regularly, than state-made laws do.

Growing up, and to this day, the rules that really matter to me are the ones that bear directly on a particular decision, and that come with sanctions attached.¹⁶⁸ In my view, sanctions render rules law-like, even when the rules do not flow from the state. On the upside, all of the law-like rules I’ve mentioned are open to critique, and if confronted with ‘good’ arguments, are subject to change. No single set of rules – whether from parents, teachers, governments, or other sources - is entirely clear or consistent, or all-powerful.¹⁶⁹ And finally, no single set of rules – not even the seemingly almighty law of the state - occupies the entire field of social decision-making. State-made law might be present or absent in relation to a particular decision, non-state rules might be present or absent, and rule-making jurisdiction over a particular decision might be disputed and

¹⁶⁷ I was baptized into the Roman Catholic faith, raised as a church-going Catholic, and educated in Catholic schools growing up (until the end of Grade 9). I am still Catholic; no sacrament exists to un-baptize me. Today, I would also describe myself as almost-atheist. See Chapter 4 for clarification.

¹⁶⁸ By definition, as discussed later.

¹⁶⁹ See Ellickson, 1991:130 and Merry, 1988:879-886 for additional examples of interactions between different kinds of rules.

unclear. As Geertz might say, we have matters here that “lawyers should find at least reminiscent of those they deal with.”¹⁷⁰ This first-person narrative is intended to illustrate the essence of legal pluralism: “a field that challenges the notion of law as being exclusively the domain of the state. Rather, families, religious orders...a plurality of social structures have internal legal orders that function in a compelling legal fashion.”¹⁷¹ But a first-person perspective tells us more than this: all rules considered, each one of us faces a one-of-a-kind regulatory landscape. Many of the rules I face will be the same as or similar to rules faced by others, but I would be hard pressed to find another person on Earth who is caught in precisely the same multi-webs of state-made laws, parental rules, verbal agreements, social norms, religious doctrine, and other non-state rules at the same time as I am.

Generally speaking, if I take the time to listen, I can hear a cacophony of rules from different sources, whispering to me at once. And in relation to a particular decision in a given social situation, a limited number of rules, or one, or none at all,¹⁷² shout at me. In a specific social context, different rules from different sources might work together to pull my behaviour in one particular direction, or might pull in different directions at once. In a very real way, this situation presented a problem to me as a child: the *is* of overlapping, competing, and conflicting rules, up against my perceived *ought*. At times, I thought there *ought* to be one consistent and comprehensive set of rules, applicable to everyone; a lawyer-to-be’s fantasy. Perhaps this is one reason I wound up in law school. Needless to say, the “law of the lawyers”¹⁷³ has not solved my problem, only further complicated it. Many years ago, at Osgoode Hall Law School, I was told that people are ruled by law. Today, in UVic’s Master of Laws program, I take the position that people are ruled by rules, and the law is just one sub-set.

¹⁷⁰ Geertz, 1983:180 (commenting on various rules applicable to Regreg, a Bali villager, some emanating from kin, some from council, some from other villagers, and none from a state as we know it).

¹⁷¹ M’Gonigle, 2008:36.

¹⁷² And this is not to say that I am ignoring an applicable rule; one simply may not apply. For instance, when deciding when to retreat to my apartment at the end of the day, or when to go to bed for the night, I am not aware of any rule applicable to me. I face no curfew or bedtime, state-made or otherwise, at this time and place.

¹⁷³ Melissaris, 2004:59.

My micro-experiences with the rules are by no means representative of others'. Perspectives on the rules that matter may differ radically from person to person, from time to time, from place to place, and from one situation to another. For anyone who grew up without parents or friends, at least two of the rule sources that I've mentioned may be inapplicable. For those who have come to, or come from, a place with different legal systems, the sources of rules that I've mentioned may be incomplete. For example, Indigenous scholars know that their legal principles and traditional ways of governing themselves are every bit as compelling as state-made law.¹⁷⁴ And make no mistake: despite my childhood dreams and law school fantasies, state-made law is not one consistent set of rules applicable to everyone, consistent through and through. The same state-made law can hit different people in radically different ways. Indigenous and feminist legal scholars know this from first-hand, under-foot experience. I am a man, so I can't know the feelings, or the life impacts, of being told, in effect, that I must carry a fetus to term against my wishes;¹⁷⁵ yet, a more invasive and discriminatory use of man-made law against women I can hardly imagine. I am of European descent, so I don't know the feelings, or the life-way impacts, of having settler-made law, like the *Indian Act*,¹⁷⁶ aimed directly at me and those close to me, but not at other peoples. To say that

¹⁷⁴ For example, Mack (2009) makes the point that Indigenous legal traditions pre-existed the Canadian state, and continue to co-exist alongside state-made laws (at 35, 52). He reflects on the Nuu-chah-nulth "system of governance within which leaders called *Hawiih* were raised to embody the principles of generosity" (at 22). Totems were used by the Maa-nulth people to "bind the chief to principles of generosity and respect – principles we understand as necessary to maintain the delicate balances of the world" (at 129). Borrows (2002) argues that "the creation of an imbalance in the relationship of human to animal" is seen as a "violation of Anishinabek environmental law" (at 50). And from the perspective of certain Indigenous communities in the US, Williams (1996-1997) comments on the importance of traditional values, beliefs and practices, and the teaching of collective responsibilities through storytelling (at 764-765).

¹⁷⁵ *R. v. Morgentaler*, [1988] 1 S.C.R. 30 (striking down Canada's anti-abortion law, on *Charter* grounds).

¹⁷⁶ R.S.C 1985, c. I-5. Consider, for example, the anti-potlatching provision. The version of s.114 in effect from 1895 to 1951 aimed to stop aboriginal potlatch ceremonies in British Columbia, by declaring it unlawful "to celebrate, any Indian festival, dance or other ceremony of which the giving away or paying or giving back of money, goods or articles of any sort forms a part" (Woodward, 1989:341). Violations were punishable by jail time not exceeding six months. In America, traditional practices carried out by indigenous peoples of America (including female-coming-of-age ceremonies of the Dakota people) became subject to a government ban under the 'Indian Offenses' policy of the 1880s; such ceremonies remained illegal for almost a hundred years (Churchill, 2003:175). I am not aware of any similarly sweeping prohibition applicable to *non-native* festivals, dances, or gift-giving ceremonies in Canada, then or now.

state-made laws are neutral and uniform¹⁷⁷ in application by virtue of their state origins is nonsense, and insulting to anyone who has been singled out for special treatment not just for what they did or did not do but for who they are, by law-makers who can never do or not do because they can never be. The main point is this: The makers/enforcers of rules may differ radically from one person's perspective to another's, and from time to time, from place to place, and from one situation to the next, and the content of rules and related sanctions will certainly vary along these parameters, and perhaps along others. Yet, all people in society face diverse bundles of rules, contingent on context, and born out of a plurality of social locations. Each person enmeshed in our society jitters and jigs¹⁷⁸ their way along uniquely intersecting webs of significance,¹⁷⁹ spun by different sources,¹⁸⁰ including ourselves. For those of us who live in a place with a viable state, state-made laws make up only one sub-set of sticky strands. And in relation to regulating the beliefs/behaviours driving ecological degradation, strands of state-made law seem to catch few crimes against nature. Stickier non-state rules we might spin ourselves.

The Rule of Rules

Legal pluralists recognize that people embedded in societies are often governed contextually according to rules that have little or nothing to do with state-made laws. "According to the new legal pluralism, plural normative orders are found in virtually all societies"; non-state normative orders are particularly visible, but not limited to, societies with colonial histories.¹⁸¹ Merry defines legal pluralism as "a situation in which two or

¹⁷⁷ To the legal centralist, "law' is confined to a particular framework, one that sets it apart from social life and which promotes an image of autonomy that is used to maintain its power and authority over social relations in general, thereby sustaining a notion of hierarchy while at the same time maintaining an image of neutrality and equality within its own domain" (Griffiths, 2002:293).

¹⁷⁸ I use the word 'jitters' to suggest nervousness, linked to the threat of punishment for rule-breaking. I use the word 'jigs' to suggest playfulness, linked to the promise of reward for rule-obedience.

¹⁷⁹ Geertz, 1973:5. Geertz used this metaphor to refer to culture. Here, I use the metaphor in a narrower sense, to refer to webs of rules.

¹⁸⁰ I can imagine a lawyer literally living in his office in downtown Toronto, no social contact, files slid under the door, opinions out by email. This lawyer may see only state-made law in his world. I can imagine a person living alone deep in the mountains of Northern BC, little social contact, canned food piled high, isolated from the world. This person may see no human-made rules whatsoever. But these barren regulatory results are only imaginable *by removing the person largely or entirely from society*.

¹⁸¹ Merry, 1988:873.

more legal systems coexist in the same social field.”¹⁸² This definition seems flat and understated, when presented next to a detailed first-person account, or when considered in the context of Can-America’s colonial past, and present.¹⁸³ Nevertheless, legal pluralism is an “extraordinarily powerful move”;¹⁸⁴ “a central theme in the reconceptualization of the law/society relation”;¹⁸⁵ and “not a passing aberration but a central feature of the modern scene”.¹⁸⁶ It is a product “of a certain cast of thought, one rather entranced with the diversity of things.”¹⁸⁷ Fittingly, a diversity of opinion has appeared regarding the precise meanings and distinct subcategories of legal pluralism, with related implications.¹⁸⁸ For my purposes, the ‘strong’ or ‘new’ pluralist view¹⁸⁹ of human regulation outlined so far, brought to life from a first-person perspective, seems sufficient, and meshes with the ‘wicked’ conceptualization of social-ecological systems developed earlier in this chapter. Complexities, uncertainties, and diversities of perspective are not ignored, but confronted, and to a large degree, embraced.

As Merry emphasizes: “legal pluralism moves away from the ideology of legal centralism – the predisposition to think of all legal ordering as rooted in state law – and suggests attention to other forms of ordering and their intersections with state law.”¹⁹⁰ Legal pluralists accept that there is more to social life and individual decision-making than state-made law, and “worr[y] about missing what else is going on; the extent to

¹⁸² Merry, 1988:870. Santos (2002) offers a similar formulation: “Legal pluralism concerns the idea that more than one legal system operate in a single political unit” (at 89).

¹⁸³ For examples of then-and-now colonialism from Indigenous perspectives, see Mack, 2009 (reflecting on a long-standing and ongoing imperial legacy by the Crown against Maa-nulth peoples in British Columbia); Churchill, 2003 (outlining settler atrocities against Indigenous adults and children in America, including assaults on Native reproduction extending into the twenty-first century), and Williams, 1996-1997 (discussing colonial attitudes in academic circles, and noting colonial legacies in US law).

¹⁸⁴ Merry, 1988:870.

¹⁸⁵ Merry, 1988:869.

¹⁸⁶ Geertz, 1983:232 (and almost thirty years later, legal pluralism is still a beacon to many legal scholars).

¹⁸⁷ Geertz, 1983:232 (stated approvingly).

¹⁸⁸ For examples of diverse perspectives on legal pluralism, see Mack, 2009; Webber, 2006; Merry, 1988. The diverse views outlined by Mack, Webber, and Merry, within and between their works, are instructive.

¹⁸⁹ Griffiths (2002) sums up “strong, deep or new legal pluralism” this way: “[i]t recognises that legal pluralism exists in all societies, that is, that there are multiple forms of ordering that pertain to members of a society that are not necessarily dependent upon the state for recognition of their authority” (at 302).

¹⁹⁰ Merry, 1988:889.

which other forms of regulation outside law constitute law.”¹⁹¹ In my view, the greater danger is missing how other forms of regulation *shape beliefs and behaviours*, particularly those rules that aim to push population numbers and consumption demands in particular directions. People frustrated with enduring patterns of social and ecological degradation within our culture may wonder where these patterns come from; many patterns do not appear to be driven by state-made law alone, at least not directly. People frustrated with the failure of environmental law and government institutions¹⁹² to reverse ecological degradation or to embrace sustainable practices, despite heaps of legislation, regulation, and case law purporting to occupy the field, may wonder what other forms of ‘legality’ can govern state leaders, and what other ‘legal’ options are open to the rest of us. In response to both questions, legal pluralism brings non-state regulatory systems into our field of view. Drawing on legal pluralism, M’Gonigle expands the notion of law to mean “authoritative processes of cultural self-constitution”;¹⁹³ legal pluralism “challenges the notion of law as being exclusively the domain of the state”.¹⁹⁴ But ultimately, “[t]he existence of legal pluralism itself is of less interest than the dynamics of change and transformation.”¹⁹⁵

Not surprisingly given the array of perspectives in large and diverse societies, legal pluralism is not embraced by all theorists. For some, the notion of law is inextricably tied to the state. Remove the state from the equation, and you may have something influential - a social practice, like fashion, with the “sanction of popular opinion” attached¹⁹⁶ - but you do not have law. Litowitz claims that

the state has a monopoly on the enactment and enforcement of law. There is no such thing as an ‘alternative legal system’ akin to ‘alternative medicine’ or ‘alternative cinema’; there is only one legal system and one set of laws that have the backing of the police and the

¹⁹¹ Merry, 1988:874.

¹⁹² M’Gonigle, 2006:328-330 (describing how the University of Victoria’s decision-making structures and bureaucratic imperatives helped block comprehensive reforms toward sustainability).

¹⁹³ M’Gonigle, 2008:36.

¹⁹⁴ M’Gonigle, 2008:36. Santos (2002) traces legal pluralism (and its political ambitions and ambiguities) to late nineteenth century Europe, where it emerged as “a reaction against state legal centralism or exclusivism, based on the claim that, in reality, state law was far from exclusive, and in some instances was not even central in the normative ordering of life” (at 89-90).

¹⁹⁵ Merry, 1988:879.

¹⁹⁶ Litowitz, 2000:545.

court system. ...[T]he law forms an internally consistent totality, a map that stretches across all possible territory.¹⁹⁷

Somewhat paradoxically, Litowitz does not appear to be a champion of state-made law, but a critic of the hegemony of legal codes over social relations.¹⁹⁸ This may partly explain his reluctance to combine state-made law and social practice under one heading, ‘law’. If his project is to target state-made law for critique and state-made law alone, referring to other social practices as ‘law’ could result in unintended collateral damage. De-mystifying state-made law seems to be Litowitz’s primary interest, not necessarily elevating or degrading any other social practice. Yet, Litowitz seems to be entranced by the judiciary and the police, as if these are the only people in society who deal in rule-making or enforcement. As a result, the “social arrangement[s]...reinforced in schools, churches, institutions, scholarly exchanges, museums, and popular culture”, which, according to Litowitz, were important to the work of Gramsci (which Litowitz holds in high regard),¹⁹⁹ drop out of Litowitz’s field of view. This move impoverishes his analytical framework in at least two ways. First, I may be free to do X or Y under state-made law, but I may decide to do X because of a rule imposed under a non-state regulatory system. Any worldview that is fixated on state-made law misses the rule that drove my decision. Second, on Litowitz’s view, if my behaviour is inconsistent with state-made law, then my behaviour can only be characterized in one way, as deviant. Yet, my behaviour may be driven by disrespect for a ‘bad law’, and respect for some other rule imposed under a non-state regulatory system. Any worldview fixated on state-made law ignores this ‘legal’ complexity and uncertainty, and our diversity of perspectives.

Again, Litowitz characterizes state-made law as hegemonic,²⁰⁰ it induces “submission and resignation”.²⁰¹ Ironically, the law's most impressive hegemonic achievement may

¹⁹⁷ Litowitz, 2000:545, 547.

¹⁹⁸ Litowitz, 2000:545-551.

¹⁹⁹ Litowitz, 2000:519.

²⁰⁰ Litowitz, 2000:515, 546-547. Litowitz describes variations of the notion of ‘hegemony’, but argues “that the current legal system is hegemonic in the Gramscian sense in that it induces people to comply with a dominant set of practices and institutions without the threat of physical force” (at 517). And law is almost inherently hegemonic because it “always involves the imposition of an official code by the state onto the

be its success at inducing mass amnesia in relation to the regulatory systems that compete with the state, even as people everywhere continue to make decisions, large and small, by the rules of those systems. Lawyers and bureaucrats may reify the ‘rule of law’. Yet we are ruled by rules, and state-made law is simply one sub-species.²⁰² Population-minded environmentalists need not make the same mistake. Only by being attentive to non-state rules may we unearth creative ways to consciously (re)green them.

In contrast to the Litowitz approach, some legal scholars are primarily interested in drawing attention to non-state regulatory systems. To call state-made law and non-state rules ‘law’ aims to put the two sub-systems on equal footing, at least as a starting proposition. At least in part, these projects are about persuading others to notice and respect non-state rules, particularly when they clash directly and controversially with state-made law. Santos, for example, is focused on “plural forms of resistance and embryonic *legal* alternatives arising from the bottom the world over. This is the goal of subaltern cosmopolitan *legality*”.²⁰³ And Borrows identifies and champions “First Nations *legal* principles concerning sustainable communities.”²⁰⁴ But is this *legal*? Is this *law*? I am inclined to say ‘yes’. In common usage, the word ‘law’ is used to describe a wide variety of rules. My father ‘laid down the law’ at home; the Catholic Church refers to ‘the moral law’ and ‘unlawful birth control methods’ in its doctrinal documents;²⁰⁵ legal theorists comment on ‘natural laws’;²⁰⁶ scientists and ecological economists study the laws of thermodynamics.²⁰⁷ None of these ‘laws’, real or imagined, emanate from the state, but the word ‘law’ does not seem out of place.

affairs of an individual” (at 546). “Hegemony, then, consists largely in the channeling of behavior into officially recognized institutions and practices and by not offering any alternatives” (at 547).

²⁰¹ Litowitz, 2000:545.

²⁰² Geertz, 1983: 232 (“...to conceive of law as a species of social imagination may have something to be said for it”). Cotterrell, 1998:380 (“a pluralist approach in legal theory...may see this law as one species of a larger genus”).

²⁰³ Santos & Rodríguez-Garavito, 2005:12 (emphasis added).

²⁰⁴ Borrows, 2002:34 (emphasis added).

²⁰⁵ Encyclical Letter, 1969:para. 4, 14.

²⁰⁶ M’Gonigle, 2000:20-21.

²⁰⁷ Daly, 2007:3, 13.

For her part, Merry seems conflicted regarding the use of ‘law’ as a label. She embraces the notion of a new and deep *legal* pluralism. She seems to encourage a first-person perspective on ‘law’, calling attention to “forms of *legality* in small places...[to] the specificity of each situation, to the variations in minute social processes, and to the complex texture of ideological meanings formed within particular historical situations.”²⁰⁸ Yet, in her view, “once legal centralism has been vanquished, calling all forms of ordering that are not state law by the term law confounds the analysis.”²⁰⁹ To be clear, my project is often situated in minute social processes. I will be writing about how people make decisions regarding reproduction and consumption, and I believe that non-state rules play a prominent role. In short, the word ‘law’ could be used in this thesis to cover both sub-sets of rules, state-made and non-state, without stretching the meaning of the word beyond recognition.²¹⁰ On the contrary, this approach would be consistent with Webber’s definition of law as “what the participants in social fields consider to be obligatory, the rules that they believe govern their conduct.”²¹¹

Up to this point, I have sometimes referred to various rules as ‘law’, regardless of their maternity, and might refer to each *set* of rules (together with processes like rule negotiation, creation, interpretation, adjudication, enforcement, and change)²¹² as a ‘legal’ system. But as the sub-title of this thesis suggests, I wish to distinguish, in the context of our political economy, between the hyperbolized ‘rule of law’, on the one hand, and the more comprehensive ‘rule of rules’, on the other. In Chapter 4, the concept of population demands will bring the rule of rules in Can-America into sharper focus, revealing some situations where non-state rules may assume (un)helpful ecological positions. Like Litowitz and M’Gonigle, I take a critical posture toward failings in state-made law, but also toward degrading non-state rules. Thus, I am reluctant to use the

²⁰⁸ Merry, 1988:892 (emphasis added).

²⁰⁹ Merry, 1988:878.

²¹⁰ Geertz (1983) comes to a similar conclusion, after studying a set of non-Western quasi-legal traditions: “Whether the adjudicative styles...are properly to be called ‘law’ or not...is of minor importance; though I, myself, would want to do so. What matters is that their imaginative power not be obscured. They do not just regulate behavior; they construe it” (at 214-215).

²¹¹ Webber, 2006:171.

²¹² Webber (2006) describes similar processes as relevant to normative orders, whether state-made or not (at 170).

word ‘law’ to cover both state-made law and non-state rules, because I often wish to critique one set, or the other, while avoiding confusion. As Merry suggests, calling both sub-sets of social life ‘law’ may confound my analysis. Like Santos and Borrows, I wish to raise awareness regarding the existence and power of non-state rules. However, while these theorists focus on contexts where state-made law clashes openly with other regulatory systems, my focus is on non-state rules operating outside the shadow of law, or nested almost invisibly within state-made laws. Later, I will argue that many of us in Can-America live under population control and consumption control, but not in a downward direction, and not by way of state-made law. Rather, specific religious doctrines and economic imperatives aim to push population numbers and consumption demands UP.

Although I assume a critical posture in relation to specific non-state rules, this is not to critique or de-legitimize non-state regulatory systems, in general. On the contrary, I see power in non-state rules, as much as the state may try to crush, usurp, or displace that power. And I believe that all regulatory systems, state-based or otherwise, sometimes incorporate specific rules into their regulatory frameworks that are harmful or degrading in the context of larger social-ecological systems. Sometimes, the same ‘bad law’ pops up in different ‘legal systems’, revealing overlaps between them. It is these specific rules that I wish to critique, and perhaps defy, based on the degradation they seem to inspire, regardless of rule origins. Sources of ‘law’ remain relevant, however, because we need to understand where a rule comes from to begin to understand how those rules might be challenged, and changed.²¹³ In light of all of these competing conceptual considerations, from here forward, I refer to rules emanating from the state as law or state-made law, and rules emanating from other sources as non-state rules. I make this distinction for the purposes of clarity, not on any presumption of paramountcy.²¹⁴ I refer to all behavioural

²¹³ As Webber (2006) argues, “agency is an essential part of all law and must be incorporated into legal pluralism” (at 195). For example, *who* is making non-state ‘law’? *Who* interprets it, enforces it? *Who* can re-make or change it? I would suggest that it depends largely on the particular rule and context in question.

²¹⁴ As Webber (2006) notes, legal pluralism presumes that competing normative orders share equal status, or at least rejects any presumption of state superiority (at 189). I fall into the second camp. Like Merry (1988), I recognize that the state can wield relatively strong coercive power against competing normative orders (at 879). But as much as it may try, the state does not necessarily succeed at besting the competition.

prescriptions with sanctions attached as rules,²¹⁵ regardless of maternity. And I use the word ‘law’, in quotation marks, to refer to rules while emphasizing their likeness to law.

Stressing Sanctions, and the Social-Ecological

Returning to first principles: how do we know that a rule exists in the first place? To Ellickson: “The best, and always sufficient, evidence that a rule is operative is the routine (though not necessarily inevitable) administration of sanctions – whether rewards or punishments – upon people detected breaking the rule.”²¹⁶ “Conversely, the total absence of enforcement actions against detected violators of a guideline is conclusive evidence that the guideline is not a rule.”²¹⁷ A principle of introductory psychology is at play: People tend to be drawn to rewards and repelled by punishments, and so beliefs and/or behaviours may be shaped by attaching rewards/punishments to behavioural prescriptions.²¹⁸ A rule’s belief/behaviour-shaping aspirations are not always fulfilled, as criminal lawyers know too well. And rules are not the only way to shape beliefs/behaviours; we can try to persuade one another to do this or that, or not do it, by offering passive advice through to compelling reasons. But when a social circle, large or small, wishes to get serious about compliance with a certain code of conduct, like the state often does with its law-making, then sanctions are crucial. Conversely, if sanctions drop out of the picture, then rules, whether state-made or not, are ‘rule’, are ‘law’ in name only. Lazarus’s critique of federal environmental laws in America makes a similar point: “[several factors, including] delays in rulemaking, and simple nonenforcement are more than capable of converting a seemingly uncompromising legal mandate into nothing more

And state-inferiority is entirely possible: the heads of some multi-national corporations now wield sufficient power over jobs and resources in our country to coerce its national government (Boyd, 2003:254).

²¹⁵ Following Ellickson (1991), who ties the notion of rules to the administration of sanctions (at 128).

²¹⁶ Ellickson, 1991:128 (footnote omitted). Ellickson makes it clear that rewards are generally attached to *following* prosocial rules; thus, to say that rewards are attached to ‘*breaking* the rule’ is a slip by Ellickson in this particular quote.

²¹⁷ Ellickson, 1991:128-129.

²¹⁸ In the context of a textbook where many other theories and factors relevant to human behaviour are considered, Reeve (2009) summarizes one set of behavioural theories this way: “Basically, when attractive incentives are at stake, people do what they need to do to obtain the incentives; and when aversive incentives are at stake, people do what they need to do to rid themselves of the irritants. ...[W]e generally follow our hedonistic tendencies (approach pleasure, avoid pain) and engage in those courses of action that we believe will produce reward and prevent punishment” (at 110).

than a symbolic aspirational statement.”²¹⁹ Due in part to inadequate resources directed toward enforcement, Canada’s environmental record is poor compared to other developed nations.²²⁰ And “the federal government candidly admits that ‘legislation and regulation are only as good as their enforcement’ ”.²²¹ It is a well-worn critique of environmental law,²²² but sanctions go to the heart of what makes law compelling. On this basis, environmental law that goes unenforced is arguably not ‘law’ at all. It is not a ‘rule’. It is, at best, a guideline. And perspective matters: if big companies see big fines simply as a cost of doing business, then even well-intentioned enforcement efforts are easily dismissed by big companies, and therefore, by the rest of us.²²³

Val Plumwood regresses us to childhood dependencies: “That the Other is an independent being on whom one is dependent is the child’s first and hardest lesson, even before the lesson that the nurturing Other must in turn be nurtured.”²²⁴ If we conceive of our global ecological system as the “Other”, how well is she nurtured by powerful people in Canada and America? As part of a critique of federal environmental law in the US, Lazarus observes that after a tough environmental law is passed, political and corporate interests work to undermine it.²²⁵ “The same powerful short-term impulses that seek to prevent a law’s enactment do not disappear upon the law’s passage. They instead typically remain to seek the law’s ultimate undoing.”²²⁶ If political-corporate interests can persuade government officials to relax enforcement, then the new law is arguably ‘law’ only in name, it is a ‘rule’ only on paper. In Canada, Boyd documents how federal

²¹⁹ Lazarus, 2008-2009:1156.

²²⁰ Boyd, 2003:212.

²²¹ Boyd, 2003:237 (footnote omitted)

²²² Boyd, 2003:238-241.

²²³ See Boyd, 2003:170 (minimal fines are viewed by industry as a cost of doing business; larger fines are not rigorously enforced). See also Edinger, 2008:109 (mining companies operating in Sudbury “continue to be convicted of a wide range of environmental violations, on various scales, for which they pay fines”).

²²⁴ Plumwood, 2002:4.

²²⁵ For example: “Shocking, the mining companies [operating in Sudbury] argued against emission reductions on the basis that the lands and lakes were irreparably damaged, and that therefore the cost of implementing emissions reductions would not yield any benefit in terms of landscape recovery” (Edinger, 2008:110, citing a study by Keller in 1999).

²²⁶ Lazarus, 2008-2009:1157.

and provincial governments tend to do the bidding of the resource extraction industry.²²⁷ He asserts that “access to prime ministers, premiers, and their top advisers is limited to very powerful members of society, who are usually opponents rather than proponents of environmental protection.”²²⁸ Not only do business leaders enjoy privileged access to government officials, business leaders *become* government officials.²²⁹ “[O]verlapping personnel in industry, government and the legal profession insure powerful status quo interests.”²³⁰ Is it any surprise that lobbying for passage and enforcement of environmental laws is an uphill climb in our political economy? Are governments pursuing progressive social-ecological change, or “[c]onquering and developing whatever wild or communal spaces”²³¹ they can? Canada has no shortage of environmental law, yet big oil companies continue to brazenly denude the lands of Northern Alberta, a problem that Google Maps readily reveals,²³² and big mining companies continue to brazenly foul the air of Northern Ontario.²³³ Is it an energy-efficient counter-strategy to pound on the door to the castle, pleading for help against robber-barons, if robber-barons and their friends seem to share the throne to serve their interests, seem to strip the planet to green their pockets? If a counter-strategy is limited to this, it is hollow at worst, and partial at best, partly because we govern ourselves in so many different ways.

²²⁷ Boyd, 2003:252-256.

²²⁸ Boyd, 2003:265.

²²⁹ A few examples: Before winning a seat in BC’s Legislative Assembly, Pat Bell, now the Minister of Forests, Mines, and Lands, owned a trucking company and co-owned a logging company (online: BC Government <<http://www.gov.bc.ca/for/minister.html>>, at para. 6). BC Premier Gordon Campbell was once a developer (online: BC Government <<http://www.gov.bc.ca/premier/biography>>, at para. 7). Canadian Prime Minister Stephen Harper worked in the Alberta oil patch in the 1970s (online: Prime Minister of Canada <<http://pm.gc.ca/eng/pm.asp>>, at para. 7). And former US Vice-President Dick Cheney was chairman of the board and CEO to Halliburton, a global oil and gas company, in the 1990s (online: Halliburton <<http://www.halliburton.com/ps/default.aspx?pageid=2437&navid=1015>>, at para. 35).

²³⁰ Leane, 1998:27 (footnotes omitted). Leane cited a decades-old Canadian study to support his assertion; I assert that the phenomenon applies to Canada and America today.

²³¹ M’Gonigle, 2000:37.

²³² Online: Google Maps <<http://maps.google.com/maps?hl=en&ie=UTF8&t=h&ll=57.010833,-111.626587&spn=0.767164,2.463684&z=9>>.

²³³ In Sudbury, the big mining companies “continue to be convicted of a wide range of environmental violations, on various scales, for which they pay fines,” including a \$375,000 fine in 2003 (Edinger, 2008:109). Air pollution has been dramatically reduced in recent decades (SARA, 2008:EC.iii, 3.53). But some air pollution continues (SARA, 2008:EC.iii), with occasional fallout that does damage to car paint, and does who-knows-what to people’s lungs (Edinger, 2008:109).

The road to state-made re-solutions looks even rockier for population-minded environmentalists, in part because of past missteps. Some experts concerned with ‘the population problem’ have called for brutal population control measures as the first and most important solution,²³⁴ helping make the ‘p-word’ profane. In the here and now, it seems difficult to talk or write about the topic in a focused way, let alone call for legislated re-solutions. In short, I take the position that it would be politically naïve, and perhaps socially suicidal, to lobby governments heavily invested in our capitalist system to legislate a counter-response to rising population demands in Can-America. To fully understand this position, a fuller understanding of the concept of ‘population demands’ is necessary; that concept is developed in Chapter 4.²³⁵

Turning away from notions and limits of law to categories of non-state rules, we arrive at “a far greater tangle.”²³⁶ Ellickson offers a vocabulary for different non-state rules at play in our society, namely personal ethics, contracts, organizational rules, and social norms. To Ellickson, these distinctions hinge primarily on the identity of the creator/enforcer of the rules in question. On Ellickson’s taxonomy, ethics are self-created and self-enforced;²³⁷ contracts are created with another person and are enforced by that other;²³⁸ organizational rules are created and enforced by a centralized authority other than the state, and social norms seem to arise within tight-knit communities.²³⁹ In

²³⁴ Most notably, Ehrlich, 1968:11, 89, 135, 138-139, 142, 146, 162-163, 164.

²³⁵ For further discussion, see Chapter 4, under the heading ‘Ruling Out State-Made Re-Solutions to Population Demands.’

²³⁶ Merry, 1988:875.

²³⁷ It is worth noting that, despite Ellickson’s (1991) assertion, the creation of ethics is probably much more complicated than this. For example, ethics can be taught to us as children, like any other rule.

²³⁸ Ellickson (1991) does not seem to mean *legally-binding* contracts. To Ellickson, I create a ‘contract’ if I make a commitment to another person, provided that the person holds me to my word with sanctions. From a lawyer’s perspective, the label ‘promises’ might better suit this category, where some of my promises may be legally-binding, and others not. In either case, this kind of rule is not created for me by the state. A promise, whether legally-binding or not, is created by me when I make a commitment to another person, and if I break the promise, then it may be ‘enforced’ on that other person’s initiative. If the promise is not legally-binding, then the remedy is “personal self-help” (at 131). If the promise is legally-binding, then remedies may involve the courts, in which case, the promise may ultimately be enforced by a state institution. Another possibility is that the state *is* the other party to a legally-binding promise, in which case, the state would be involved in promise-creation and promise-enforcement from the beginning. These scenarios demonstrate the hazards of trying to slot non-state rules into stable, discrete categories.

²³⁹ It is worth noting that, despite Ellickson’s (1991) assertion, the creation of social norms is probably much more complicated than this. For example, social norms can exist in loose-knit communities, and even people who are strangers to one another may find that they share specific social norms.

keeping with the assertion that it takes a sanction to make a rule, Ellickson gives names to categories of sanctions associated with each regulatory system.²⁴⁰ This taxonomy is useful, because it offers a partial vocabulary to help us to talk about non-state rules. But the taxonomy has its problems, as Ellickson is quick to point out. In real world social systems, these rules and their enforcement are tangled and overlapping. None of the non-state categories is cleanly separated or entirely insulated from the others, or from state-made law; they penetrate one another. For example, when courts consider a business custom to lend meaning to an incomplete express contract,²⁴¹ at least three sets of rules corresponding to three rule sources are at play at once. And authorities may work toward harmonizing rules in different social contexts; for example, a group's social norms may work their way into state-made law, or conversely, law may shape pre-existing social norms.²⁴² Moving from overlaps to omissions within Ellickson's taxonomy, he seems to slot religious doctrine in the category of organizational rules,²⁴³ even though people who respect these rules may believe they are made and enforced not by a fallible earthly organization, but by an infallible God. This has profound implications, because religious rules are believed by the faithful to be received by divine revelation,²⁴⁴ and can be difficult to critique or change on their own terms.²⁴⁵ Further, Ellickson's taxonomy does not expressly recognize Indigenous legal traditions or subaltern legal systems, despite compelling scholarship in these areas.²⁴⁶ Nevertheless, if we put aside the problems with Ellickson's categories for a moment and take a step back, we may begin to recognize the rough and overlapping outlines of some non-state regulatory sub-systems operating in our

²⁴⁰ Ellickson, 1991:130-132.

²⁴¹ Ellickson, 1991:132.

²⁴² Ellickson, 1991:132.

²⁴³ Ellickson, 1991:127.

²⁴⁴ “[T]he moral teaching on marriage...is based on the natural law as illuminated and enriched by divine Revelation. No member of the faithful could possibly deny that the Church is competent in her magisterium to interpret the natural moral law” (Encyclical Letter, 1969:para. 4).

²⁴⁵ “[A]rchitects of religious thought have long recognized that the threat of an omniscient and omnipotent deity operating at an ultimate level of social control is, if credible, a wondrously powerful instrument for fostering cooperation” (Ellickson, 1991:237).

²⁴⁶ Two examples drawn from Indigenous legal scholarship: Mack, 2009; Borrows, 2002. One example that defends subaltern legal systems: Santos & Rodríguez-Garavito, 2005.

own society. These intersecting, often tangled rule-webs, including their sanctions, may be fairly described as “authoritative processes of cultural self-constitution.”²⁴⁷

In this thesis, I will not be concerned with de-constructing or re-constructing categories comprising a “comprehensive system of social control”.²⁴⁸ Instead, I focus on specific rules themselves, the objects of my critique. I will try to state clearly what I think those rules say, and how I think they are created, enforced, amended, and/or repealed – preferably on the particular regulatory system’s own terms.²⁴⁹ The goal of the critique is to help un-do some of these rules, miming how a lawyer might challenge specific laws in court: Offer critical arguments against the rule, and leave it to the creators, enforcers and followers of the rule to make their respective decisions. As Merry might put it, I don’t want to miss “what else is going on”²⁵⁰ in relation to population and consumption, from a Can-American regulatory perspective. I look for rules in our society which aim to push people into particular reproduction and consumption decisions. Examples of non-state rules may include: rules made (long ago) by religious leaders (or god?) in relation to their followers, with the threat of ultimate judgement attached;²⁵¹ rules made by one life-partner in relation to their other, with the threat of break-up, insult or abuse attached; rules made by parents in relation to their adult children, with the threat of the silent treatment or lost inheritance attached; norms made among friends or community members, with the promise of social approval or the threat of social stigma attached;²⁵²

²⁴⁷ M’Gonigle, 2008:36.

²⁴⁸ Ellickson, 1991:131.

²⁴⁹ Webber (2006) advocates the following approach: “To respect...[state and non-state normative] orders, one must respect their processes of reasoning, their resources for normative argument, and perhaps also their mechanisms for decision-making” (at 196). This approach seems advisable, particularly when a critic is not a participant in the normative order in question. On the other hand, if a person *is* a participant in that normative order, then it seems to me that these processes, resources, and mechanisms, and perhaps the very meaning of ‘reason’ itself, may properly become the target of criticism, disdain, and even defiance. Or if a group of people under one normative order, like an Indigenous group, is targeted by the processes, resources, and mechanisms of a competing normative order, like the Canadian state, then again, criticism, disdain and defiance may be perfectly defensible responses. For a case study in how a state-made normative order has been used to colonize a competing non-state order, see Mack, 2009.

²⁵⁰ Merry, 1988:874.

²⁵¹ Explored in Chapter 4.

²⁵² Ellickson (1991) argues that, in ordinary usage, “*Norm* denotes both behavior that *is* normal, and behavior that people *should* mimic to avoid being punished” (at 126). Thus, a distinction may be made between a descriptive ‘norm’, and the prescriptive ‘law-like norm’ with sanctions attached. When a group of people

economic dogma promulgated by the business-minded and aimed at politicians, with the threat of public ridicule, lost jobs, or lost donations²⁵³ attached. Specific rules and sanctions emanating from these non-state sources seem relevant and compelling. Arguably, some of them amount to population control and consumption control, aimed UP. State-made laws are also considered. Each set of rules might be described as a regulatory web with its own creators and enforcers, and its own purported jurisdiction, however hotly disputed that jurisdiction might be. In this thesis, neither the omnipresence nor the omnipotence of state-made law or any other rule category is presumed. Earlier, I described social-ecological systems as web-like in their complexity. Imagine the rule of rules in similar terms: Sets of rules form webs-tangled-in-webs, with complexities and uncertainties regarding interactions at different tiers, and different perspectives for re-solving those differences held by different groups of people. At bottom, population-minded environmentalists should recognize non-state rules that help constitute culture as potential sources of ecological degradation, or alternatively, as tools for progressive social and ecological change. Clearly, the theory of legal pluralism blows the regulatory analysis of ‘the population problem’ wide open.

creates a law-like norm, they may be forbidding a given behaviour, even if that behaviour may be considered ‘the norm’. An example: cheating on a spouse while engaged in a strictly monogamous relationship might be common enough within a community or society to be considered the norm, but a law-like norm may forbid it. In this thesis, I use the phrase ‘social norm’ in the law-like sense.

²⁵³ “[E]conomic blackmail is a typical industry tactic” (Boyd, 2003:254). But if a position taken by industry is, in effect, a standing guideline with sanctions attached (e.g. ‘do not implement or enforce tough environmental laws, or else jobs and donations will disappear’), then the guideline may be characterized as worse than blackmail. The guideline may be characterized as a law-like rule! In effect, big corporations appear to impose law-like rules on Can-American governments in relation to environmental issues, the reverse of how citizens might imagine the environmental law-making process.

Conclusion

Circle back around to a partially re-greened moonscape, to my hometown. My father worked for a big mining company. He worked in the refineries. My family depended on the mining company, on the income he earned from his job. We benefitted from the destructive mining activity. His job depended, in part, on more and more people, from all over the world, wanting more nickel to make more machines to make more stuff. I have held jobs as a lawyer for companies involved in similarly exploitative activities, like mining the Alberta tar sands. But being born into a capitalist machine does not mean that we must remain cogs in it for life. We can think about the machine, and how it works, how it thinks. We can grind away at the machine, as it grinds away at us and our planet.²⁵⁴ We can critique the colossal entirety of it, or some tiny vulnerable part. Theoretically, a well-placed, re-greened rule can do more to slow a destructive machine than a politician's paper tiger.²⁵⁵ Social-ecological systems are extraordinarily complex, social-ecological life is messy, it is not a lab experiment, it is not a day in court. The social-ecological problem of population demands, a wicked problem, seems to call for never-ending debate and rule (re)making on a local scale, perhaps aggregating into radical change on a global scale.²⁵⁶ Bottom-up advocacy and activism may result in adaptive changes to non-state rules, the 'living law', while the robber-barons haplessly guard the castle, the machine, the monumental law.²⁵⁷

But sabotaging the machine is not a win-win proposition. For openers, critiquing the social structures that help the machine grind along may infuriate people who reify the

²⁵⁴ In a presentation on March 16, 2010, Michael M'Gonigle suggested that our system of capitalism and the state is like a giant machine grinding away at global social-ecological systems, from the top-down.

²⁵⁵ Esteva & Prakash (1997) take the position that global powers "are built on shaky foundations...and may, therefore, be effectively opposed through modest local action" (at 286).

²⁵⁶ See Esteva & Prakash (1997) for a discussion regarding thinking and action, at local versus global scales (at 277-289). See also M'Gonigle (2000) urging a new ecological political economy grounded in local territories (at 34-39), and a "role for the state as the facilitator and arbitrator of diversity and balance, rather than as its conqueror" (at 38).

²⁵⁷ Litowitz (2000) perceives law "as a monument against which all positions are defined" (at 545). Mack's (2009) LLM thesis, and my conversations with him, helped me to think of state-made law in Can-America as a monument to a self-destructive and dying way of life.

machine, even as it runs them over. People could lose their jobs, their livelihoods. To salvage ecological systems seems to mean deep social sacrifice, perhaps even the collapse of capitalism as we know it.²⁵⁸ But the alternative is worse: To utterly destroy the ecological is to utterly self-destruct.²⁵⁹ Nonetheless, if population demands retreat, for whatever reason, or by whatever rule, then millions of people could lose their jobs. People could lose their jobs in Sudbury because of a drop in demand for nickel, people could lose their jobs in Fort McMurray because of a drop in demand for oil. On the upside, these jobs are not the only ones imaginable; our social system is not the only one possible. We face a dizzying array of wicked problems in Can-America, and we must consider a multiplicity of ways to re-solve them; this takes and makes work. Imagine non-state rules aimed at (re)greening beliefs and behaviours.²⁶⁰ Imagine heavy industry reduced to ashes, and greener jobs growing. Yet, “[i]t seems to be easier for us today to imagine the thoroughgoing deterioration of the earth and of nature than the breakdown of late capitalism; perhaps that is due to some weakness in our imaginations”.²⁶¹ In the end, it seems that “[o]ur task is...to foster a diverse ‘r-evolution’, that is, a radical new future which does not seek primarily to change laws or power structures within an existing cultural context, but to reshape culture in more profound ways.”²⁶²

But what is culture, and how do we re-shape it, re-solve it? To Asch, “culture includes rules and/or behaviour regarding virtually all aspects of human social life...passed from one generation to another by learning.”²⁶³ To me, non-state rules form crucial parts of Can-American culture, and offer targets for critique by environmentalists concerned with

²⁵⁸ M’Gonigle (2008) writes: “GLT’s re-formation program is thus, first, a deconstructive one...perhaps inherently marginaliz[ing] the value of GLT or, at least, mak[ing] it realistically dependent on some degree of systematic collapse before it can have an effect” (at 38).

²⁵⁹ Wright (2006) laments “the massive onslaught of progress” under a globally integrated economic system feeding on the entire planet’s natural capital; a collapse, if it comes, will be global (at 178). Plumwood (2002) writes: “We must change this culture or face extinction” (at 5). M’Gonigle (2000) concurs: “...no one anywhere can survive for long if they undermine the innate structures of ‘nature’” (at 12).

²⁶⁰ Plumwood (2002) makes a similar point regarding ‘reason’: “[i]t has been made a vehicle for domination and death; it can and must become a vehicle for liberation and life” (at 5).

²⁶¹ Jameson, 1994:xii.

²⁶² M’Gonigle, 2008:38.

²⁶³ Asch (1992) asserts that, according to anthropology texts, the concept of culture includes these aspects, among others (at 224).

‘the population problem.’ But what is ‘the population problem’? In Chapter 3, I analyze problem definitions proposed in the past, and in Chapter 4, I explain my own problem/re-solution formulation incorporating Porritt’s ‘p-word’ as just one part. I identify a potential re-solution: through critique, and perhaps defiance, we can try to undermine certain structures of social control in Can-American culture, namely specific non-state rules that I call ‘population-UP control’ and ‘consumption-UP control’.²⁶⁴ The theory of wicked problems – problems which defy once-and-for-all definitions and solutions – helps justify this project. The theory of legal pluralism helps bring to light the non-state rules that aim to drive population numbers and consumption demands in a particular direction. And green legal theory, together with a plurality of theoretical concepts, helps hand us tools for progressive social-ecological change.

²⁶⁴ Special thanks to Michael M’Gonigle for suggesting this turn of phrase, at one of our many meetings.

Chapter 3 – The dialectics of ‘population problem’ definitions, and re-solutions

Introduction

The Sudbury area offers more than the moon. To the northeast stands the Temagami area, in the southwest flows the French River. I used to drive from downtown Sudbury to Killarney Provincial Park in an hour; I used to drive forty minutes to my parents’ camp on Fairbanks Lake. In my experience, some of Ontario’s most stirring and calming landscapes and waterways lie here. Wounded.²⁶⁵ I began to see and feel these wilder places by canoe, in the late 1980s. My first multi-day canoe trip was to the French River, as a high school student. That year, I was pushing through turbulent times at home; I felt shaken. But after a day of pulling a canoe down the river with long looping strokes, my mind fell quiet like the trees. After dark, I stood staring into the campfire, other students chatting around me. One started laughing, for what seemed like no reason. I asked: “What’s so funny?” He said: “You just look so...content.” And I was. I was so content I hadn’t even noticed. It hit me that I hadn’t felt that way in a while. Sometimes people fall into a river, and need saving. That spring, I fell onto a river – and it rescued me.

I don’t need to be paddling down a river or sitting by a campfire to believe that “humans are ultimately embedded in nature”.²⁶⁶ We are subsumed by it, even if sitting in a classroom, or in traffic. Wherever we are, we are utterly dependent on functioning ecosystems for our survival, on the air, water, food, fibre, fuel, on every body-and-mind-sustaining element born out of the Earth. The concrete, steel and glass around us create the illusion that people have risen above nature, and lost touch with it. But we are just children, nursing on nature our whole lives. Our relationship with the natural world is injured, but not ended. If we were ever completely cut off from the Earth, we would be

²⁶⁵ Recall Chapter 2: partially denuded lands stretching over tens of thousands of hectares; metals in soils as far as 120 km away from Sudbury smelters; thousands of acidified lakes.

²⁶⁶ Borrows, 2002:34. M’Gonigle (2000) conceptualizes our existence as “intimately dependent on the health of its social community and its natural/environmental context”; we should see ourselves not as independent individuals, but as “being-in-community-in-nature” (at 35).

painfully aware, then mortally wounded. I believe in climate change because I believe the scientists, but also because I can see and feel it. Growing up, Sudbury winters were cold right through. In the late 1980s, irregularities began to appear, regularly. Rain in January. Untimely smelt and salmon runs, as the seasons seemed to shift.²⁶⁷ If the scale and growth of the Can-American enterprise - not just population but also consumption and waste – have reached points where seasons are shaken, then we face a wicked problem of wild proportions.

Not only paddlers, rivers and seasons run high, then low. Many other elements of social-ecological systems are cyclical. The first part of this chapter introduces two theories with cycles at their centre: Holling’s theory of panarchy, and a Greek concept of dialectics. Both talk about cycles, including break-downs. In Chapter 2, I suggested that Porritt’s ‘p-word’ presents part of a wicked problem relevant to ecological degradation. To put forward my own re-formulation, I must look backward to understand how people have (in)famously problematized population. In the second part of this chapter, I review and critique five past definitions of ‘the population problem’, and related (re)solutions. My review is far from exhaustive. I picked two older formulations that seemed to crop up regularly in the literature: one by the Reverend Thomas Malthus, and the other by the biologist Paul Ehrlich.²⁶⁸ I picked three more recent formulations, drawing on expert sources which seem to generate fresh waves of interest: the UN Population Division, the Millennium Ecosystem Assessment Board, and Wackernagel and Rees. With legal pluralism in mind, I review these definitions of problems/re-solutions watchful as to whether state-made laws or non-state rules are framed as part of the problem, or as sites for re-solutions. I consider whether other analysts have perceived state-made laws or non-state rules as problem-makers or problem-breakers.

Like a frozen river, every problem formulation has its currents, and its cracks. Vulnerable bits or missing pieces - often flawed or absent re-solutions – leave each definition weakened, facing partial or complete break-down. If a problem is the gap

²⁶⁷ Heinberg, 2005:33 (who notes that the timing of the seasons has been noticeably altered).

²⁶⁸ For examples of pieces that refer to Ehrlich’s work, see Boyd, 2003:283 and Guha, 2000:77.

between what-is and what-ought-to-be, then an analyst must have some idea of what-ought-to-be to convince others that a problem exists at all.²⁶⁹ If re-resolutions are flawed or absent, then the problem formulation is fractured, and begins to fall apart, no matter how wicked the problem ‘out there’ appears to be. Greek dialectics come into play.

Panarchy and Dialectics

In a theory he calls ‘panarchy’, Holling draws attention to some basic characteristics of social-ecological systems that run in strong parallel to common threads within the theories of wicked problems and legal pluralism. Again, complexity, uncertainty, and diversity are taken seriously. Holling writes: “The bewildering, entrancing, unpredictable character of nature and people, the richness, diversity, and changeability of life comes from that evolutionary dance generated by cycles of growth, collapse, reorganization, renewal, and reestablishment.”²⁷⁰ Holling proposes a hierarchical and cyclical model of social-ecological systems, made up of four phases along a horizontal figure-8 continuum – or ‘∞’. The phases start with exploitation (or growth), followed by consolidation (or conservation), then creative destruction (or release), and finally re- or de-structuring (or reorganization).²⁷¹ A complete cycle may lead to another loop of exploitation, consolidation, and so on, so that the basic ‘∞’-pattern repeats itself, but in surprising ways that can cut across hierarchical scales over time.²⁷²

As something grows, it “gradually becomes less resilient, that is, more vulnerable”,²⁷³ so that a disturbance can break it down, yet at the same time, create conditions for renewal.²⁷⁴ Holling offers an example of his theory at work in ecological systems: the growth of pioneer trees into a mature forest, followed by catastrophic fire, releasing nutrients and seeds, followed by fresh growth.²⁷⁵ He offers an example in economic

²⁶⁹ Rittel, 1973:161.

²⁷⁰ Holling, 2005-2006:18.

²⁷¹ Holling, 2005-2006:5-6.

²⁷² Holling, 2005-2006:9.

²⁷³ Holling, 2005-2006:6.

²⁷⁴ Holling, 2005-2006:6-7.

²⁷⁵ Holling, 2005-2006:6.

systems: an accumulation of resources into a highly efficient, yet rigid, system of production, followed by some human failing leading to decline, releasing knowledge and capital to fuel re-organization in unexpected ways.²⁷⁶ “One can observe this process of birth, growth, and change in front-loop/back-loop cycles in all systems - from a cell in the body, to an individual in his or her phases of life, to the operations of management agencies, to society itself.”²⁷⁷ One implication seems to be this: An exploitative political economy predicated on endless growth will tend to grow rigid and fragile and ultimately collapse, at least in part, and some other kinds of societies may rise up in its place.

Holling’s theory calls to mind the loops and twists of a paddle, the rise and fall of a river, the changing seasons. The word panarchy combines a reference to the Greek god Pan, “the paradoxical spirit of nature”,²⁷⁸ with the root word “anarchy”.²⁷⁹ Holling’s theory of panarchy, named after a Greek god, seems to run in rough parallel to a Greek notion of dialectics, as interpreted by Engels. Put simply, panarchy is a hierarchical and cyclical model applicable to and within social-ecological systems. Well over a century ago, Engels foreshadowed Holling’s theory in more abstract terms:

When we reflect on Nature, or the history of mankind, *or our own intellectual activity*, the first picture presented to us is of an endless maze of relations and interactions, in which nothing remains what, where and as it was, but everything moves, changes, comes into being and passes out of existence. This primitive, naïve, yet intrinsically correct conception of the world was that of ancient Greek philosophy, and was first clearly formulated by Heraclitus: *everything is and also is not, for everything is in flux, is constantly changing, constantly coming into being and passing away.*²⁸⁰

Engels followed Heraclitus, framing dialectics as a cyclical model of coming and going, “of progressive or retrogressive changes.”²⁸¹ Not just forests and economies, but ideas, grow out of what they are, and eventually decline, perhaps because of what they are not.²⁸² In a review of another scholar’s work, Harvey briefly offers two phrases to

²⁷⁶ Holling, 2005-2006:12-14.

²⁷⁷ Holling, 2005-2006:14.

²⁷⁸ Holling, 2005-2006:2.

²⁷⁹ Holling’s (2005-2006) view of ‘anarchy’ is unexplored in this particular piece.

²⁸⁰ Engels, 1920:27 (emphasis added).

²⁸¹ Engels, 1920:30.

²⁸² “This is not the dialectics of a simplistic Marxism that is still committed to some linear progress to a proletarian utopia. ...Instead, as has become better understood with the rise of systems theory, the

capture the concept of ‘critical dialectics’: first, “...a progressive development of a flawed structural principle, followed by collapse and a reconstitution of the same contradiction at a higher level of system generality...”,²⁸³ and second, “...cycles of development, collapse, sublation [or negation], and reconstruction”.²⁸⁴ The first phrase implies system hierarchy; the second phrase resembles phases of panarchy. The phases of panarchy, in turn, shine light on the relations and cycles that I can see or feel in the world around me, warming my mind to the more abstract concept of dialectics.²⁸⁵

Dialectics, according to Engels, apply not only to the world around us, but also to reflections of the world that we conjure in our minds,²⁸⁶ to our own intellectual activity.²⁸⁷ Harvey’s refers to ‘structural principles’: “[d]ialectical enquiry is a *process* that produces *things* in the form of concepts, abstractions, theories and all manner of institutionalised forms of knowledge which stand in their own right only to be supported or undermined by the continuing process of enquiry.”²⁸⁸ Applicable to a forest or an economy, dialectics also apply to ideas. Formulations of ‘the population problem’, and related re-solutions, can gather strength, then weaken; can flow and ebb; can grow, then

essence of essence is not one fact or thing or direction, but relationships, and complex, subtle ones at that” (M’Gonigle, 2008:37). For variations on the concept of dialectics, see Morrison, 2006 and Holloway, 2002. Morrison outlines how Marx offered a materialistic view of dialectics to explain the historical progression of societies from ‘primitive community’ to ‘capitalism’ (at 392-393; 138-139). Morrison also reviews Hegel’s complex take on dialectics: Hegel took an interest in historical development (like Marx); he believed that one thing’s existence could only be understood in relation to another’s; and he used the concepts of ‘contradiction’, ‘affirmation’, ‘negation’, and ‘negation of the negation’ in his cycle of development (at 140-142). In contrast, Holloway (2002) argues that “the stuff of dialectical thought...is the ‘consistent sense of non-identity’, the sense of the explosive force of that which is denied” (at 76). In my view, the relatively straight-forward Greek concept of dialectics, as interpreted by Engels, is sufficient for this chapter’s analytical purposes.

²⁸³ Harvey, 1987:99.

²⁸⁴ Harvey, 1987:99.

²⁸⁵ And dialectical thinking can be turned toward the theory of panarchy, helping to break it down. As my supervisors have explained to me, the theory of panarchy is vulnerable because it implies a linear progression, smooth transitions, and repetitive cycles, with prediction as its ambition. The concept of dialectics seems preferable, because it contemplates irregular cycles, complex and unpredictable pushes and pulls, with the possibility of permanent break-down. Even dialectical enquiry is “not itself outside of its own form of argumentation but subject to it” (Harvey, 1993:36).

²⁸⁶ Engels, 1920:29-30.

²⁸⁷ Engels, 1920:27.

²⁸⁸ Harvey, 1993:36 (original emphasis).

fail. Some flaw inherent in the formulation, or some thing the formulation is *not* (an absence), presents a vulnerability.²⁸⁹ Exploiting that vulnerability, through critique for example, can help break down the concept. For the remainder of this chapter, I will try to show that at least five formulations²⁹⁰ of the ‘population problem’ begin to burn when touched by the heat of critique, readying my conceptual landscape for a re-constitution of problems/re-solutions in Chapter 4. On my understanding, this analytical process shares parallels with panarchy; this process demonstrates Greek dialectics. In other words, the dialectical nature of structural principles serves as the structural principle for my analysis.

Past Formulations of Population Problems/Re-solutions

United Nations Population Division

The name of the UN Population Division suggests that the United Nations offers formulations of population-related problems and re-solutions. I reviewed a set of recent UN documents, in order to get an up-to-date glimpse²⁹¹ of state-made population numbers,²⁹² and state-made population perspectives. In terms of raw numbers, the UN recently announced that about 6.8 billion people live on Earth, and that over 9 billion are projected by 2050 – growth of about 2.3 billion.²⁹³ The population of developing countries is projected to account for most of this growth.²⁹⁴ In contrast, developed regions are projected to grow from 1.23 billion to 1.28 billion, and as a group, could

²⁸⁹ Of course, critics can generally point to flaws, absences, or vulnerabilities in any theory. My critique cannot hope to be thorough. Instead, I focus on the one or more flaws or absences that I judge to be most relevant to the arguments in Chapter 4.

²⁹⁰ None of these reviews is intended to exhaustively analyze everything that particular groups or individuals have written to problematize population. These groups and individuals may present different problem formulations in documentation not reviewed by me, and may have refined or revised their problem formulations over time. My goal here is to review problem definitions presented in discrete documents, to learn as much as I reasonably can about different ways to frame ‘the population problem’. Each problem definition is studied and critiqued within the four corners of its constitutive document.

²⁹¹ Despite its long history, it is only the UN’s recent treatment of population-related issues that is explored for the purposes of this thesis, namely the UN documents listed in the Bibliography. For an older take by the UN on the intersection of population, development, and ecological sustainability, see WCED, 1987.

²⁹² According to Curtis (2002), ‘census-taking’ is really ‘census-making’: “[B]ecause no large-scale census of population can be based on direct physical observations of equivalent bodies in time and space, it is practically necessary to generate and assemble opinions about such things” (at 25).

²⁹³ UNPD Press Release, 2009:1. Global population has more than doubled since 1960, when the world population was just over 3 billion people. See UN Population Database, 2008.

²⁹⁴ UNPD Press Release, 2009:1.

experience modest population retreat – down to 1.15 billion – if not for net migration from developing regions.²⁹⁵ America is exceptional: UN projections suggest that the US will see significant population growth, even setting aside net migration.²⁹⁶ Nevertheless, the projections applicable to the developing world tend to divert the attention of analysts in the global North to population-related issues in the global South.²⁹⁷ At the UN's last International Conference on Population and Development,²⁹⁸ tensions surfaced along regional lines, with officials from the North drawing attention to rapidly growing Southern populations, and officials from the South drawing attention to unsustainable patterns of Northern consumption and waste.²⁹⁹ In Chapter 4, I will argue that population numbers and consumption/waste are not as radically separate as these officials make out.

The UN relies in part on member countries to identify their own population-related concerns. In this context, the word 'population' means something broader than simply the number of people living in a particular country at a particular time. Rather, governments appear to classify something as a 'population concern' if it touches on birth rates, death rates, or migration in a way judged worthy of national or international attention. For example, in December 2007, the UN reported that "a majority of Governments viewed HIV/AIDS as the most significant demographic issue facing them."³⁰⁰ Developing countries ranked high childhood mortality and high maternal mortality as their next most important concerns. In sharp contrast, developed countries identified three closely-related population concerns: low fertility, population aging, and

²⁹⁵ UNPD Press Release, 2009:1, 7 (at para. 24).

²⁹⁶ In the United States, population is estimated at 318 million in 2010, and is projected to be 404 million by 2050. That's growth of approximately 86 million, 42 million of which is projected to be net migration. In Canada, population is estimated at 34 million in 2010, and is projected to be 44 million by 2050. That's growth of approximately 10 million, 8.55 million of which is projected to be net migration. See UNPD Population Database, 2008 (figures based 'medium variant' assumptions).

²⁹⁷ See e.g.'s Engelman, 2009:23, 26-29; Brown, 2008:16-17, 117-120, 149; Boyd, 2003:285-287; Ehrlich, 1968:15, 132-133, 165-166. But some of these same analysts have also framed population numbers in developed countries, particularly the US, as problematic; See e.g.'s Engelman, 2009:24, 26, 28; Ehrlich, 1968:11, 133, 135.

²⁹⁸ Organized by the UN Population Division, and held in Cairo in 1994.

²⁹⁹ Jacobsen, 1995:256-259.

³⁰⁰ UNPD Population Newsletter, 2007:1.

shrinking workforces.³⁰¹ All three relate to actual or potential (sub)population retreat. Fertility rates fell to near or below-replacement levels in most developed countries decades ago,³⁰² and Canada and America are no exceptions.³⁰³ The demographic result is a growing proportion of older people relative to working-age people and children, stressing pension systems in developed countries.³⁰⁴

It is easy to see how these state-made problem formulations point immediately to particular re-solutions, while the rule of growth, explored later in this thesis, is left unexamined and undisturbed. For example, in developed countries, red-flagging a shortage of working-aged people points to a need for immigration of skilled workers;³⁰⁵ focusing on stressed-out pension systems points to a need for pension reform.³⁰⁶ In developing countries, red-flagging fast growing labour pools points to an urgent need for job creation;³⁰⁷ framing maternal mortality as a population concern points to improving reproductive health.³⁰⁸ Importantly, one target under the United Nations' Millennium Development Goals is to achieve universal access, by 2015, to reproductive health.³⁰⁹ A strength of the UN approach emerges here: Population concerns may be framed in terms of other social problems that are important to address in their own right, which simultaneously opens the possibility of socially-progressive re-solutions.

³⁰¹ UNPD Population Newsletter, 2007:1.

³⁰² "Most developed countries have had below-replacement fertility (below 2.1 children per woman) for two or three decades" (UNPD Press Release, 2009:5).

³⁰³ In the US, fertility declined steadily from 3.71 children per woman in the late 1950s, to a low of 1.79 children per woman in the late 1970s. During the 2005 to 2010 period, fertility is estimated to have rebounded to 2.09, just under the replacement rate of 2.10. In Canada, fertility declined from 3.88 children per woman in the late 1950s, to a below-replacement rate of 1.98 in the early 1970s, to a low of 1.52 children per woman during the 2000 to 2005 period. Fertility is estimated to have increased slightly to 1.57 children per woman during the 2005 to 2010 period (UNPD Population Database, 2008). How can the UN say that the US is experiencing roughly-replacement fertility, but still project a significant increase in population over the next 40 years, even without a boost from net migration? The notion of 'population momentum', outlined in Appendix A, offers a potential explanation.

³⁰⁴ UNPD Population Newsletter, 2007:2. It is interesting how stresses on pension plans are emphasized, but easing pressures on education systems (due to aging populations) rarely warrant a mention.

³⁰⁵ UNPD Population Newsletter, 2007:2

³⁰⁶ UNPD Population Newsletter, 2007:2.

³⁰⁷ UNPD Press Release, 2009:2; UNPD Population Newsletter, 2007:1-2.

³⁰⁸ UNPD Policy Brief, 2009:1-3.

³⁰⁹ UN Millennium Declaration, 2000:5 (Article 19); UN World Summit Outcome, 2005:15-16 (Article 57g).

For the reasons sketched out above, population flows are viewed as a matter of concern by many countries. Fifty percent of developing countries identified *high rates* of internal population growth as a concern; fifty-four percent of developing countries flagged high fertility. In contrast, a majority of developed countries identified low fertility rates as a concern.³¹⁰ Crucially, the global consensus, as expressed in these UN documents, appears to be that moderate population growth is a panacea; only *rapid* growth (owing partly to high fertility), or stability/retreat (owing partly to low fertility) is framed as problematic. In the documents reviewed, no state problematized moderate growth, or the aggregate size of its population pool, or the two working together.³¹¹ No matter how many people in the pool, moderate growth seems to be what ought to be. It seems fair to say that states generally wish to promote steady population growth, not problematize it.

Links between population numbers and ecological degradation were almost never ranked as concerns by states in the UN documents reviewed. In those documents, only one country – Cambodia – is said to acknowledge a link between rapid population growth and damage to the environment.³¹² In addition, specific state-made laws or non-state rules are not specifically identified by developed countries as part of any ‘population concern.’³¹³ However, “Governments are now more inclined to view population as a legitimate area for government actions and to act upon these concerns by formulating and implementing policies that address population issues.”³¹⁴ As mentioned, those laws and policies may touch such issues as immigration, job creation, and maternal health.

At bottom, I see two absences and one flaw that leave these state-made problem formulations wounded. The UN Population Division gives its close attention to less developed regions. Two absences result: first, a failure to recognize any links between

³¹⁰ UNPD Population Newsletter, 2007:2.

³¹¹ The exceptions to this interpretation: the size of population *sub*-pools – like the number of people *of working age* or the number *of elderly people* relative to other age groups – is identified by many countries as a significant issue (UNPD Population Newsletter, 2007:2).

³¹² UNPD Policy Brief, 2009:6.

³¹³ Although the UN does identify inadequate government funding and support for modern contraceptives as a problem in least developed countries (UNPD Policy Brief, 2009:4, 6-7).

³¹⁴ UNPD Population Newsletter, 2007:3.

Can-American population numbers, Can-American consumption/waste, and global ecological degradation,³¹⁵ and second, a failure to problematize the regulatory imperatives underlying the scale and growth of the Can-American enterprise. The flaw: state reification of steady population growth. According to the documents reviewed, it seems that states see only rapid population growth, and population retreat or “stagnation”,³¹⁶ as problematic. It seems that Can-America’s growth imperatives have gone global. “[A]ll nations are hell-bent to foster the growth of their economies”,³¹⁷ and national governments view steady population growth as a key contributor.

The Reverend Thomas Malthus

In the context of less-developed countries, the UN takes the position that “[f]ast population growth, fueled by high fertility, hinders the reduction of poverty”.³¹⁸ In the context of 19th century England, Thomas Malthus took a similar position in his (in)famous *Essay*.³¹⁹ A clergyman and economist, Malthus theorized that a natural human tendency toward exponential population growth, relative to slower-growing food supplies, worked as a perennial driver of poverty and misery.³²⁰ This was his macro-definition of over-population: population flows pressing too hard against food flows. To Malthus, diseases, wars, and other miseries (i.e. more early deaths than otherwise),³²¹ and self-restraint in relation to reproduction (i.e. fewer births than otherwise), could serve as ‘immediate checks’ on population, but the ‘ultimate check’ was the limit imposed by the

³¹⁵ A UNPD Population Newsletter (2007) describes *per capita* energy use and carbon dioxide emissions in more developed regions as an environmental concern. “However, much of the future growth in energy demands and in motor vehicle use is expected to occur in the less developed regions, both because of population growth and rising incomes” (at 15). Thus, per capita consumption/waste is perceived as *our* ecological problem, population growth and rising wealth as *theirs*.

³¹⁶ For example, the number of working-aged people in developed regions is projected to ‘stagnate’ within a decade or two (UNPD Press Release, 2009:2). The word ‘stabilize’ would have been just as accurate.

³¹⁷ Daly, 2007:3.

³¹⁸ UNPD Policy Brief, 2009:1.

³¹⁹ Malthus, 1992.

³²⁰ Malthus, 1992:14-15, 17, 20, 25, 64, 70, 80, 195, 214, 217.

³²¹ Malthus (1992) insisted that these observations did not amount to a wish for more misery, war, disease, famine, or death; he declared himself to be anti-vice and anti-misery (at 69, 339, 353, 366-367, 384, 386). In the final words of his *Essay*, he expresses his utmost concern “to improve the condition and increase the happiness of the lower classes of society” (at 386).

means of subsistence.³²² At a micro level, Malthus asserted that poor people were creating children before working hard enough and long enough to save enough to properly feed and care for them without the help of regular social assistance.³²³ Thus, population numbers relative to food supplies, not in relation to ecological degradation, underpinned Malthus's notion of over-population, perceived by him as born within individual families and scaling up across entire countries.

Malthus's theory was informed, in part, by his Biblical beliefs. He believed that it was "the original command of the Creator, to increase and multiply and replenish the earth."³²⁴ And Malthus was "fully of [the] opinion, that it is the duty of man to obey this command".³²⁵ Malthus may be characterized as a legal pluralist: he viewed not only state-made law, but also God's law and nature's law as governing people's lives³²⁶ – and to Malthus, these two categories of 'law' were virtually interchangeable.³²⁷ A God-given, nature-driven imperative to reproduce meant that human population pools, in spite of periodic setbacks, would tend to increase in size over time, up to some limit imposed by food supplies.³²⁸ Under God's/nature's laws, people should reproduce;³²⁹ it was generally just a question of when. And Malthus's answer to that question was this: after

³²² Malthus, 1992:20-21, 29, 37, 377.

³²³ Malthus, 1992:64, 79, 218, 223, 227. And if "a man" brings a child into the world without adequate means of support, then, as an example to others, "the disgrace and inconvenience attending such a conduct should fall upon that individual who had thus inconsiderably plunged himself and his innocent children into want and misery" (at 64).

³²⁴ Malthus, 1992:334. And at 214: "We cannot but conceive, that it is an object of the Creator, that the earth should be replenished".

³²⁵ Malthus, 1992:334.

³²⁶ "Every express command given to man by his Creator is given in subordination to those great and uniform laws of nature which he had previously established" (Malthus, 1992:334).

³²⁷ Malthus, 1992:217, 221, 223-225, 228, 239, 385. For example: "the laws of nature...are the laws of God" (at 263), and "The laws of nature say, with St. Paul: 'If a man will not work, neither shall he eat'" (at 285), and God is the "great Author of nature" (at 343), and "the laws of nature...are the laws of God" (at 346).

³²⁸ Malthus, 1992:195-196, and at 199: "perhaps there is no instance where a permanent increase of agriculture has not effected a permanent increase of population somewhere or other".

³²⁹ To Malthus (1992): "It is clearly the duty of each individual not to marry till he has a prospect of supporting his children; but it is at the same time to be wished that he should retain undiminished his desire of marriage, in order that he may exert himself to realize this prospect, and be stimulated to make provision for the support of greater numbers. It is evidently, therefore, regulation and direction which are required with regard to the principle of population, not diminution or alteration" (at 215). In his 1803 version of the Essay, Malthus included a six-paragraph defence of childlessness as selfless and potentially beneficial to society, but deleted these paragraphs in 1806 following his own marriage (at 271-273).

a “period of delayed gratification...passed in saving...and in acquiring habits of sobriety, industry, and economy, which would enable him, in a few years, to enter into the matrimonial contract without fear of its [child-producing] consequences.”³³⁰ In other words, people should exercise “moral restraint, or the abstaining from marriage till we are in a condition to support a family”.³³¹ In this way, population pools could theoretically continue to grow at a pace comfortably behind, and in proportion to, the food supply, both within each family and across the country.³³²

Despite his opposition to *rapid* population growth, Malthus objected to “artificial and unnatural modes”³³³ of contraception as “improper arts”.³³⁴ Only waiting to marry,³³⁵ and observing celibacy in the meantime, was an acceptable form of birth control.³³⁶ Remaining abstinent while unmarried and free of contraception at all times were moral and religious imperatives; here, ethics and reason and religion merge together.³³⁷ Malthus might be mortified at modern, effective contraception: “If it were possible for

³³⁰ Malthus, 1992:218. Malthus offered many reproductive regulations: if a person has a child without a means of support, that person “clearly offends against the will of God” (at 223); if a person has more children than can be fed, child mortality would tend to result, wasting society’s resources and defeating God’s purpose to cover the earth with people (at 120-121, 320); if a person chooses not to have children despite the capacity to do so, “vice” would tend to result (at 15); but if a person never acquired the resources to raise children, Malthus accepted that ‘when’ may mean ‘never’; “...it is not the duty of man *simply* to propagate his species, but to propagate virtue and happiness...[and] if he has not a tolerably fair prospect of doing this, he is by no means called upon to leave descendants” (at 271; emphasis added).

³³¹ Malthus, 1992:225.

³³² Malthus, 1992:330, 335.

³³³ Malthus, 1992:368. “Indeed I should always particularly reprobate any artificial and unnatural modes of checking population, both on account of their immorality and their tendency to remove a necessary stimulus to industry” (at 368-369).

³³⁴ Malthus, 1992:218.

³³⁵ Deferring marriage could truncate adult fertility periods, and presumably lower average birth rates (Malthus, 1992:xiv, per Donald Winch’s Introduction).

³³⁶ Malthus, 1992:23, 71, 218, 352. Perhaps surprisingly, Malthus conceded that he did not assume these two forms of birth control to be highly effective: “I have never said that I expected either, much less both, of these duties [deferring marriage and practising abstinence] to be completely fulfilled” (at 352). But he did believe that self-restraint could be improved, because “the prevalence of this kind of prudential restraint is extremely different in different countries, and in the same countries in different periods” (at 326). Malthus seemed to hope that these methods were enough to slow population growth, without halting it.

³³⁷ Malthus (1992) asserts that only “prudence in marriage” is consistent with morality and religion (at 120). “[T]he law of chastity cannot be violated without producing evil” and “[t]he effect of anything like a promiscuous intercourse, [performed in a way] which prevents the birth of children, is evidently to weaken the best affections of the heart, and in a very marked manner to degrade the female character” (at 218). “[T]he only line of conduct approved by nature, reason, and religion: abstinence from marriage till we can support our children, and chastity till that period arrives” (at 239).

each married couple to limit by a wish the number of their children, there is certainly reason to fear...that neither the population of individual countries, nor of the whole earth, would ever reach its natural and proper extent”.³³⁸ Malthus opined that a country would be full, for practical purposes, when its then-existing population could not regularly import, or economically produce, enough additional food to support a further increase in population.³³⁹ Thus, a planet filled with adequately-fed people was his Biblical ideal, his Godly imperative, his natural directive, his rule-based *solution*.

To the extent that fertile, sexually-active, hetero-couples accept a set of religious/natural rules imposing a duty on them to reproduce whenever they can manage it, or insofar as they accept a general prohibition on using contraception, then they can expect children, perhaps many children. And that was the point of God’s/nature’s law, according to Malthus: more and more people until the earth fills up.³⁴⁰ In Malthus’s work, the foundations for a kind of population control appear, with control imposed by non-state rules and aimed in an upward direction.³⁴¹

Turning to state-made laws, Malthus found both population problems and solutions. In his view, laws that aimed to give regular and permanent relief to the poor were a part of the population problem.³⁴² Malthus saw indiscriminate long-term assistance as

³³⁸ Malthus, 1992:369.

³³⁹ Malthus, 1992:145. And due to a law of diminishing returns, this practical limit “must be always very far short of the utmost power of the earth to produce food” (at 146).

³⁴⁰ But again, not too quickly relative to food supplies (at 215, 231-232), or poverty and misery would result.

³⁴¹ At one point, Malthus (1992) makes what seems to be an uncharacteristic assertion, seeming to oppose pro-natalism: “It is not enough to abolish all the positive institutions which encourage population; but we must endeavour, at the same time, to correct the prevailing opinions which have the same or perhaps even a more powerful effect” (at 271). But read in the context of the wider work, I believe that he is referring to the Poor Laws, other ‘institutions’ of social assistance, and to indiscriminate private charity. The following passage is more representative of Malthus’s views on the regulation of human reproduction: “It must...be regulation and direction [of human passions] that are wanted, not diminution or extinction”, and “a strict attention to...consequences [of our natural impulses], and the regulation of our conduct conformably to them, must be considered our principle duty” (at 213). Throughout his Essay, Malthus lends support to ‘God’s’ regulation of human reproduction in an upward direction, provided that human numbers increase well behind, and in proportion to, the food supply (at 330, 335). His wish for population growth in England is crystal clear (at 230, 232 and 335).

³⁴² Temporary assistance, preferably in the form of voluntary charity (aimed at the hard-working, not the ‘indolent’), was acceptable to Malthus (1992). His theory left room to alleviate the hardships arising from occasional fluctuations in food production, illness, or other short-term misfortunes, provided that the poor weren’t made to feel secure enough in their social support to reproduce (at 99-100, 112-113, 342, 346-347).

ultimately self-defeating, partly because God-given, nature-driven laws favouring population growth, together with permanent economic support for the poor, would tend to lead to larger and larger numbers of poor people and lower real wages, without necessarily increasing food supplies.³⁴³ Poverty would be perpetuated by laws intended to alleviate it.³⁴⁴ One of Malthus's proposed solutions to his population/poverty problem was to phase out the old English Poor Laws, a means of social support administered by local parishes.³⁴⁵ The Poor Laws were reformed in 1834, shortly after Malthus's death. The new law outlawed "outdoor relief",³⁴⁶ and created "a system of workhouses in which circumstances were deliberately made so bad that people would choose to take the poorest paid work rather than enter them",³⁴⁷ thus, a free market in labour was created to serve industry.³⁴⁸ These were the politics for which Malthus was least loved.³⁴⁹

Malthus's theory was informed not only by his theology, but also by his naturalistic and simplistic political economics.³⁵⁰ Politically speaking, Malthus asserted that "it is not extent of territory but extent of population that measures the power of states."³⁵¹ Economically speaking, Malthus advocated for self-interest, hard work, private property, and free markets in labour.³⁵² To Malthus, private property was a "universal

³⁴³ Malthus, 1992:89, 100-101, 119, 218. But he expressed uncertainty about the extent of population growth stimulated by the Poor Laws (at 357).

³⁴⁴ Malthus, 1992:89, 93, 100-101, 123, 261.

³⁴⁵ Malthus, 1992:118, 261

³⁴⁶ Gordon, 1990:75.

³⁴⁷ Ross, 1998:27. More background on the changes to the Poor Laws can be found at 11-12.

³⁴⁸ Ross, 1998:11-12, 27.

³⁴⁹ Malthus, 1992:x (in Donald Winch's Introduction: "the policy for which Malthus was best known and least loved was that of gradual abolition of the legal right of paupers to obtain family assistance from their parish under the English Poor Law").

³⁵⁰ But the line between Malthus's theology and political economics is blurry. His Essay leaves the distinct impression that the ideologies of his political economy grew out of biblical teachings.

³⁵¹ Malthus, 1992:335-336.

³⁵² Malthus (1992) defended "self-love" as "the mainspring of the great machine", and virtually inevitable in society (at 67), and claimed that self-love or self-interest helped drive "the noblest exertions of human genius" (at 331). He argued against regular state assistance to the poor in part because it served as an incentive to laziness (at 47). He defended private property as beneficial to society, even inevitable (at 58, 64, 210, 331). He asserted that the operation of free markets in labour benefitted the labouring classes and society, by ultimately matching the supply of labour with the demand for it through changes in real

principle”,³⁵³ and laws of property served as an incentive for people to work themselves out of poverty.³⁵⁴ He claimed that “the principal and most permanent cause of poverty has little or no direct relation to forms of government, or the unequal distribution of property”.³⁵⁵ Thus, he minimized the negative social impacts of England’s political economy,³⁵⁶ and laid the blame for poverty principally at the feet of poor people.³⁵⁷

Malthus’s views have been widely de-constructed. One critic takes aim at Malthus’s simplistic underlying assumptions: “that overpopulation causes poverty and that individual failings in the form of lack of restraint cause overpopulation.”³⁵⁸ Some economists argue that technology and trade effectively liberate humanity from earth-imposed limits that might otherwise apply.³⁵⁹ But the most thorough and persuasive de-contruction that I reviewed was written by Eric Ross. His critique exposes an absence in Malthus’s theory: the hardships imposed on people by capitalism.³⁶⁰ Malthus’s views regarding over-population among the poor oversimplified early-nineteenth-century England’s poverty problems, and obscured the fact that an apparent ‘surplus’ of poor people was spurred by the enclosure of the commons and the clearance of rural peoples from their lands, their means of subsistence.³⁶¹ To Ross, it was largely the move from communal property to private property that left many people in England displaced and

wages; conversely, if labourers limited their own numbers, they could improve real wages and mitigate poverty (at 28, 97-98, 218, 230).

³⁵³ Malthus, 1992:146.

³⁵⁴ Malthus, 1992:331

³⁵⁵ Malthus, 1992:329.

³⁵⁶ Malthus (1992) was critical of those who claimed that almost all human misery could be attributed to human institutions, and downplayed their importance: “the truth is, that though human institutions appear to be, and indeed often are, the obvious and obtrusive causes of much mischief to society, they are, in reality, light and superficial in comparison with those deeper-seated causes of evil which result from the laws of nature and the passions of mankind” (at 57).

³⁵⁷ Malthus, 1992:227-228, 342.

³⁵⁸ Gordon, 1990:76.

³⁵⁹ See for example Simon, 1977:474-476 (re technology, especially energy generation), and Norton, 2002:1-3, 12-13, 17-18 (re economic freedom, including freer trade).

³⁶⁰ Ross, 1998:1.

³⁶¹ Ross, 1998:13-14.

despondent, a state that the state's Poor Laws aimed to alleviate.³⁶² So after stripping peoples of their lands, capitalists returned to strip people of their compensation.

Here, I see how framing over-population as '*the problem*' can become tantamount to exonerating everything else. Today, "globalisation of US capitalist enterprise is promoted as a panacea [when]...it is, in fact, exacerbating many preexisting social and economic problems, including environmental change".³⁶³ In Ross's view, Malthus's "greatest achievement, in fact, was to devise...an enduring argument for the prevention of social and economic change".³⁶⁴ Malthus's formulation of population problems and once-and-for-all solutions is like a table on two legs; it is easily knocked down. In particular, problematizing population numbers relative to food supplies, over and above everything else, is difficult to defend. Any large-scale society can and will be marked by impoverished peoples and places, if it relies for too long on a self-destructive political economy.³⁶⁵ And our capitalist political economy lurches toward self-destruction when it reifies the ripping of labour,³⁶⁶ lands,³⁶⁷ and waters³⁶⁸ away from many people through the rules of a privileged few, and when it threatens to rip living systems apart.³⁶⁹

³⁶² Ross, 1998:11, 14.

³⁶³ Ross, 1998:213.

³⁶⁴ Ross, 1998:6.

³⁶⁵ "Indeed, human society would have been annihilated but for protective counter-moves which blunted the action of this self-destructive mechanism" of unlimited market-driven changes in society, including the commodification of land, labour and money, and blind faith in progress (Polanyi, 2001:78-79). Labour "cannot be shoved about, used indiscriminately, or even left unused, without affecting also the human individual who happens to be the bearer of this peculiar commodity. ...Nature would be reduced to its elements...rivers polluted...the power to produce food and raw materials destroyed. ...[N]o society could stand the effects of such a system of crude fictions even for the shortest stretch of time unless its human and natural substance as well as its business organization was protected against the ravages of this satanic mill" (at 76-77).

³⁶⁶ For example, Engels (1920) gives Marx credit for exposing the way that capitalism exploits workers: even when labour is paid for by for-profit business owners, it is never paid for *in full*, because some "surplus value" (i.e. profit) must be left over for the business owners to keep as their own. In other words, if workers were paid what their labour was really worth, no profit margin would remain (at 33-34).

³⁶⁷ For example, as the English commons was privatized by the powerful, many people were displaced from the lands they relied upon. See Ross, 1998:11, 14, and Polanyi, 2001:42, 79.

³⁶⁸ For example, Teztan Biny (Fish Lake) and its surrounding lands in the BC interior are under threat of being converted from a place of traditional importance for Indigenous peoples to a source of copper-gold for Taseko Mines Ltd. (Baptiste, 2010).

³⁶⁹ By commodifying man and nature, capitalism and industrialization "must disjoint man's relationships and threaten his natural habitat with annihilation" (Polanyi, 2001:44).

The Biologist Paul R. Ehrlich

Like Malthus, Paul Ehrlich³⁷⁰ perceived unfavourable gaps between population numbers and food supplies as problematic,³⁷¹ but unlike Malthus, Ehrlich included ecological degradation in his problem formulation.³⁷² When he released *The Population Bomb*³⁷³ in 1968, Ehrlich perceived a direct link between ecological degradation and the size of population pools:

The causal chain of the [environmental] deterioration is easily followed to its source. Too many cars, too many factories, too much detergent, too much pesticide, multiplying contrails, inadequate sewage treatment plants, too little water, too much carbon dioxide – all can be traced easily to *too many people*.³⁷⁴

Here, Ehrlich refers to the number of cars, factories, pesticides, airplanes, and other goods making up parts of our consumption, and the amount of sewage and carbon dioxide making up parts of our waste. Thus, he touched on consumption/waste as dimensions of, or at least factors related to, his problem definition. And although concerned about population numbers in developing countries,³⁷⁵ linking population and consumption led Ehrlich to the US:

At the moment the United States uses well over half of all the raw materials consumed each year. Think of it. Less than 1/15th of the population of the world requires more than all the rest to maintain its inflated position.³⁷⁶

As the most powerful nation in the world today, *and its largest consumer*, the United States cannot stand isolated. We are today involved in the events leading to famine; tomorrow we may be destroyed by its consequences.³⁷⁷

Yet, population numbers around the planet were his primary concern.³⁷⁸ And he was very concerned, perhaps panic-stricken. Ehrlich compared population growth to

³⁷⁰ In a recent piece, Paul and Anne Ehrlich (2009) write that *The Population Bomb* was authored by both of them, but their publisher insisted on crediting authorship to just one of them (at 62). For convenience, I refer only to the credited author throughout this thesis, Paul Ehrlich.

³⁷¹ Ehrlich, 1968:11, 131-133, 160, 172-173.

³⁷² Ehrlich, 1968:11, 66-67, 138.

³⁷³ Ehrlich, 1968.

³⁷⁴ Ehrlich, 1968:66-67 (original emphasis).

³⁷⁵ Ehrlich, 1968:132-133, 160-166.

³⁷⁶ Ehrlich, 1968:133 (original emphasis).

³⁷⁷ Ehrlich, 1968:11 (original emphasis).

cancer.³⁷⁹ He predicted widespread famine.³⁸⁰ He warned of “the possibilities of global ecological catastrophe, of global pestilence, and of global thermonuclear war”.³⁸¹ All would be driven primarily, in his view, by global population numbers.³⁸² And because doomsday³⁸³ seemed to be just around the corner, Ehrlich perceived the most drastic *solutions* as justified. For openers, Ehrlich argued for the creation of a powerful US federal government agency with a mandate to take “whatever steps are necessary to establish a reasonable population size in the United States and to put an end to the steady deterioration of our environment.”³⁸⁴ “Whatever steps are necessary” – sounds open-ended and ominous, doesn’t it? And what might those steps be? The list is astonishing, even shocking.

“One plan... involves the addition of temporary sterilants to water supplies or staple food. Doses of the antidote would be carefully rationed by the government to produce the desired population size.”³⁸⁵ Another idea: Find a scientific method to ensure that a woman’s first born child is guaranteed to be a male, to relieve the urge for parents who want a boy to “keep trying”.³⁸⁶ Another: If a plan emerges in India to sterilize every father-of-three-or-more, pressure the Indian government to forge ahead, and offer to pitch in with helicopters and vehicles, doctors and scalpels.³⁸⁷ And another: withhold food aid from developing countries, or areas within them, if their governments don’t

³⁷⁸As demonstrated by Ehrlich’s (1968) assertions that: “We must be relentless in pushing for population control around the world” (at 166); “[p]opulation control in the only answer” (at 11), and “population control, of course, is the *only* solution to problems of population growth” (at 146; original emphasis).

³⁷⁹ Ehrlich, 1968:11, 166.

³⁸⁰ Ehrlich, 1968:11, 69, 133, 145-146.

³⁸¹ Ehrlich, 1968:133-134.

³⁸² Although other factors are also cited by Ehrlich (1968), including excess consumption/waste (at 11, 133, 149), inadequate food surpluses (at 11, 132), and our growth-obsessed political economy (at 149-150).

³⁸³ Ehrlich, 1968:156 (we must try “to avoid the doom now confronting us”).

³⁸⁴ Ehrlich, 1968:138.

³⁸⁵ Ehrlich, 1968:135. Ehrlich lamented the “criminal inadequacy of biomedical research in this area” (at 136), and urges that funding and research be dedicated to developing “new techniques of birth control, possibly leading to the development of mass sterilization agents such as were discussed above” (at 138). He wished to see the new techniques put to use in the US and developing countries (at 139).

³⁸⁶ Ehrlich, 1968:139.

³⁸⁷ Ehrlich, 1968:165-166 (Ehrlich lamented that the US did not respond to the sterilization idea in this way).

agree to implement population control,³⁸⁸ or if the countries are judged to be hopelessly behind in attaining food self-sufficiency.³⁸⁹ There's more: "Compulsory birth regulation",³⁹⁰ tighter migration control,³⁹¹ cash prizes to the childless,³⁹² and tax incentives/penalties to discourage reproduction.³⁹³ Encouragingly, I did find some policy ideas I could actually support, for a range of reasons: early access to sex-education,³⁹⁴ improved rights to abortion,³⁹⁵ and easier methods of adoption.³⁹⁶ Ehrlich left few legal stones un-thrown, by arguing for a highly-comprehensive, highly-offensive state-made program of population control to be enacted around the world.³⁹⁷ Here, it is worth noting that coercive sterilization programs cropped up in India and in America in the 1970s.³⁹⁸ Such programs may have seemed moderate to leaders at that time, next to Ehrlich's suite of proposed state-made solutions.³⁹⁹

³⁸⁸ Ehrlich, 1968:164-166. "I am sometimes astounded at the attitudes of Americans who are horrified at the prospect of our government insisting on population control as the price of food aid" (at 167).

³⁸⁹ Ehrlich, 1968:160.

³⁹⁰ Ehrlich, 1968:135 (he doesn't elaborate, but presumably he is talking about regulating the number of children per person or per couple).

³⁹¹ Ehrlich, 1968:162.

³⁹² Ehrlich, 1968:138.

³⁹³ Ehrlich, 1968:136-137.

³⁹⁴ Ehrlich, 1968:139-140.

³⁹⁵ Ehrlich, 1968:139.

³⁹⁶ Ehrlich, 1968:138.

³⁹⁷ Ehrlich (1968) laments: "Little is done on population control on a world scale" (at 89). "We must be relentless in pushing for population control around the world" (at 166). Ehrlich recommended reasonable steps relating to consumption/waste: increasing food production, and pursuing ecological restoration (at 131); compelling industrial clean-ups, limiting pesticide use, and replacing fossil fuels as an energy source (152-156). My description of solutions proposed by Ehrlich is not exhaustive.

³⁹⁸ Engelman (2009) writes: "When the government of India rewarded health workers for meeting sterilization quotas in 1976, the zeal of some of them for wielding scalpels regardless of their patients' wishes contributed to the downfall of Indira Gandhi's government in 1977" (at 28). See also MacGregor, 2009:12, and Gordon, 1990:394, 433. Churchill (2003) outlines coercive, even forcible, sterilization programs targeting Native women in America, beginning in the 1970s and continuing today (at 178).

³⁹⁹ Ehrlich & Ehrlich (2009) re-visited *The Population Bomb*, and discussed what they believed the book got right and wrong. In that shorter piece, the Ehrlichs retract none of the book's original proposed solutions.

Here, I find myself confronted by the concept of population control, in all its callousness and brutality.⁴⁰⁰ In 1968, Ehrlich defined population control as “the conscious regulation of the numbers of human beings to meet the needs, not just of individual families, but of society as a whole.”⁴⁰¹ At a glance, his definition seems neutral and uniform in application, like a lawyer’s definition of ‘governing law’ in a sales contract, but the once-and-for-all legal solutions he catches within his definition are teeth that would tear into some people and not others. A man who knows in his bones that he will not father children, a man like me, would not be directly targeted by Ehrlich’s solutions,⁴⁰² and may find himself rewarded. A woman who knows in her bones that she will mother children would be directly targeted by the state, and may find herself punished post-pregnancy. She might even face chemical sterilization pre-coitus!⁴⁰³ The diversity of the human species would create countless other scenarios where population control would hit differently-situated people in different and unexpected ways. But to Ehrlich, it would be for a good cause; the alternative, to him, was mass death.⁴⁰⁴

Oddly, Ehrlich wrote in a way that tempts the interpretation that he favoured a “death rate solution”, first of all because he called the death rate a ‘solution’.⁴⁰⁵ Second, Ehrlich criticized life-saving biomedical research as a counter-productive attempt at “death

⁴⁰⁰ Ehrlich (1968) himself concedes that his plan “sounds very callous” (at 165), and that he has in mind “many apparently brutal and heartless decisions” (at 166).

⁴⁰¹ Ehrlich, 1968:11.

⁴⁰² Ehrlich’s wished-for sterilant could be force-fed to me by the state and its laws, but I’m already sterile, by choice. I wish to help deflate the myth that law is necessarily neutral and uniform in application, by virtue of its state origins. State-made law can hit differently-situated people in radically different ways.

⁴⁰³ Rodgers (2006) defines “reproductive inequality” as “state treatment of women that locates benefits or burdens using procreative capacity as a marker for entitlement or disentitlement, or that treats the family formation within which procreation (potentially) occurs, or its absence, as a determinant of women’s (dis)entitlement” (at 271-272). Elements of Ehrlich’s population control scheme offer prime examples.

⁴⁰⁴ Ehrlich (1968) argues that failure to follow his advice means “we will all go down the drain” (at 165). “[Is this c]oercion? Perhaps, but coercion in a good cause” (at 166). After equating population growth with cancer, he continues his analogy: “Treating only the symptoms of cancer may make the victim more comfortable at first, but eventually he dies – often horribly. A similar fate awaits a world with a population explosion if only the symptoms are treated. ...The pain [of brutal treatment] may be intense. But the disease is so far advanced that only with radical surgery does the patient have a chance of survival” (at 166-167). It is unclear whether ‘the patient’ is humanity, or the planet. But either way, Ehrlich seems to argue that the death of the patient means the death of humanity, and population control is our only chance.

⁴⁰⁵ Ehrlich, 1968:69. See also Ehrlich & Ehrlich, 2009:68 (where this poor choice-of-words is repeated).

control”, unless paired with population control aimed down.⁴⁰⁶ And third, he referred to plagues and war as population control measures.⁴⁰⁷ Even if he didn’t mean these passages to be taken seriously or in isolation, when a population expert refers to ‘death rate solutions’, when he critiques health research, when he includes global plagues and mass death within his concept of population control and then calls repeatedly for population control, a reader can be forgiven for believing that the expert is literally wishing for population retreat “by any means necessary.” It is difficult to imagine many people understanding and accepting a problem definition that relies on this rhetoric, or calls for these solutions. Even today, the scientific inaccuracy of his 1968 predictions is more disconcerting to Ehrlich than the population control scheme that he proposed, or the hyperbole he used to propose it.⁴⁰⁸

The legal solutions Ehrlich suggested in the late 1960s are poison to population discourse, particularly from critical race and feminist perspectives. For starters, his scheme could conceivably consign some communities or nations to permanent minority status. Indigenous peoples in Can-America endured a horrifying de-construction of their lives and life-ways, following European contact.⁴⁰⁹ In Canada, European-derived peoples are dominant in their numbers; Indigenous minorities have been excluded from political decision-making.⁴¹⁰ Ehrlich’s program would extend colonial brutality through state-

⁴⁰⁶ Ehrlich, 1968:90-93.

⁴⁰⁷ Ehrlich, 1968:69.

⁴⁰⁸ Ehrlich & Ehrlich (2009) discuss the flaws they now see in *The Population Bomb*: first, its title (which was chosen by the publisher for marketing purposes); second, its underestimation of future environmental issues (the book did not foresee all the facets of ecological degradation that are clear today); third, its overestimation of future famines (the green revolution boosted food supplies) (at 65-68). The book’s biggest tactical error, according to the Ehrlichs: painting scenarios that didn’t come to pass; these were “failures of prediction” (at 67). The book’s most serious flaw: “its optimism” (at 66).

⁴⁰⁹ The extent of the social destruction is too extensive and multi-faceted to chronicle here. But for openers, Indigenous populations were devastated by smallpox across the Americas, including the area now called British Columbia, following first contact (Sewid-Smith, 1995:66). “Genocide, combined with theft of land and systematic cultural destruction, led to significant loss of traditional religious [and cultural] knowledge and practices. Despite the devastation, many indigenous North American traditions have managed to survive, although changed to greater or lesser degrees” (Churchill, 2003:176). Leaping ahead to a recent event, the treaty-making process between the Crown and Maa-nulth peoples, and the one-sided document that resulted in 2007, has shown the Crown to be unapologetic for atrocities against Indigenous peoples and their lands. The Maa-nulth are left without any claim to 95% of their traditional territories; the people are left disoriented, their legal traditions degraded (Mack, 2009:5, 65, 73, 96, 103, 115-116, 118).

⁴¹⁰ Borrows, 2002:36-39, 44-45.

made law, preventing population recovery among Indigenous peoples,⁴¹¹ perhaps stalling political power-sharing. Feminists know that Ehrlich's push for state-made laws aiming to control or influence people's reproductive decision-making was not an isolated incident. Rodgers offers a long list of state-made attempts, made in different places and at different times, to target women's reproductive capabilities through rewards and punishments. Her examples run a continuum from brutal, like allowing marital rape and criminalizing pregnancy termination, to subtle, like Quebec's pronatal policies and discriminatory tax laws.⁴¹² Writing not long after Ehrlich, Ris outlined the then-recent history of state-made laws in the US restricting the distribution of birth control devices, sometimes with the threat of large fines and jail time attached.⁴¹³ She argued that "[e]very woman should be able to control her own reproduction. This is essential not only for her emancipation but also for her welfare and the welfare of any children she may choose to have."⁴¹⁴ Rodgers adds: "The right of women to determine when to conceive and to carry a pregnancy to term, or when not to do so, is a primary marker of the possibility of equality."⁴¹⁵ Attempting to move the locus of reproductive control away from women's reasons and toward society's rules, whether implemented by state-made laws or non-state rules, and whether meant to move birth rates up or down, does violence to the values of gender equality and reproductive self-determination.

Despite any objections he may have anticipated, Ehrlich wrote that "our first step must be to immediately establish and advertise drastic policies designed to bring our own population size under control."⁴¹⁶ These pleas for population control in the US assumed that it didn't have population control already. In Chapter 4, I claim that certain non-state rules in Can-American society can be characterized as population control, aimed UP. *The Population Bomb* did suggest that people running churches and businesses want

⁴¹¹ "In light of the great demographic losses suffered by American Indians and their limited anticipated population growth, advocating for a policy of Native population regulation is not only unethical and neo-colonial but also ill-founded" (Churchill, 203:181).

⁴¹² Rodgers, 2006:272-275.

⁴¹³ Ris, 1976:87-88, 90, 92.

⁴¹⁴ Ris, 1976:85.

⁴¹⁵ Rodgers, 2006:275.

⁴¹⁶ Ehrlich, 1968:135.

more and more consumers of their goods/services,⁴¹⁷ but it didn't recognize the possibility that non-state rules may have already been regulating reproduction, to meet the wants of powerful interests. In effect, Ehrlich was arguing to replace one population control scheme with another aimed in the opposite direction. Ehrlich's proposed system of population control *down*, and Can-America's current system of population control *up*, are two socially degrading regulatory schemes. In Can-America, population-UP control and consumption-UP control aim to meet the endless 'needs' of our sickly society, a society bent on feeding more and more bodies of humanity, and more and more buckets of ecology, into the insatiable machine of economic growth.

Millennium Ecosystem Assessment Board

Although badly flawed, Ehrlich's formulation of 'the population problem' offers a modest take-away that population-minded environmentalists might accept: both population numbers and consumption/waste matter to ecological degradation. Evidence to support this view is presented within a recent re-framing of ecological issues, one that includes a population dimension. A 2005 report⁴¹⁸ released by the Millennium Ecosystem Assessment Board (MEAB) opens with an obvious but crucial point: "Everyone in the world depends completely on Earth's ecosystems and the services they provide, such as food, water, disease management, climate regulation, spiritual fulfillment, and aesthetic enjoyment."⁴¹⁹ In short, everyone relies on functioning ecosystems for our economies, our well-being, and our survival.

The report paints a troubling picture of humanity's recent degradation of the global ecosystems that support us. In my view, the most stunning ecological change over the last half-century, outlined early in the report, is the "substantial and largely irreversible

⁴¹⁷ In relation to business owners, Ehrlich (1968) argues: "the idea of an ever-expanding economy fueled by population growth seems tightly entrenched in the minds of businessmen, if not in the minds of economists. Each new baby is viewed as a consumer to stimulate an ever-growing economy. ...Our entire economy is geared to growing population and monumental waste" (at 149). In relation to one religion: "The Catholic Church recommends the rhythm method of contraception. Unfortunately, the people who practice this method of contraception are commonly called 'parents'" (at 82).

⁴¹⁸ The MEAB (2005) report was the result of work by 1,360 experts from 95 countries (at viii).

⁴¹⁹ MEAB, 2005:1.

loss in the diversity of life on Earth”. It appears that as the size and scale of the human enterprise grows, we collectively drive other life forms from the face of the planet. This shouldn’t surprise: we appropriate and/or occupy the ecological space they once did.⁴²⁰ Still, recent extinction rates run up to *one thousand times* higher than the fossil record, and future extinction rates are projected to run more than ten times higher than that!⁴²¹ And this is only the beginning of the legacy of loss we leave to future generations. “The use of two ecosystem services - capture fisheries and fresh water - is now well beyond levels that can be sustained even at current demands, much less future ones.”⁴²² Other disturbing dimensions of global ecological degradation include: cleared forests, degraded reefs, eroded soils, blooming algae, emerging pathogens, changing climates, and of course, polluted land, air and water.⁴²³ In short:

Over the past 50 years, humans have changed ecosystems more rapidly and extensively than in any comparable period of time in human history, largely to meet rapidly growing demands for food, fresh water, timber, fiber, and fuel.⁴²⁴

...
Between 1960 and 2000, the demand for ecosystem services grew significantly as world population doubled to 6 billion people and the global economy increased more than sixfold. To meet this demand, food production increased by roughly two-and-a-half times, water use doubled, wood harvests for pulp and paper production tripled, installed hydropower capacity doubled, and timber production increased by more than half.⁴²⁵

In other words, ecological systems are being ground down, and both population numbers and consumption demands are implicated. These links should also come as no surprise. As ingenious as we may think we are, people do not fabricate land, food, water, timber, fibre, fuel or any other material supports out of naked ingenuity. With substantial population pools come substantial consumption demands, for homes, food, water, and other ecosystem services, which only ecological systems can provide.

⁴²⁰ “[Human] demands for food and fibre, non-renewable resources, waste absorption, urban development, and even maintaining biodiversity, compete for ecological space. (The expansion of the human enterprise necessarily ‘appropriates’ resources and habitat from other species.)” (Wackernagel & Rees, 1996:55).

⁴²¹ MEAB, 2005:5. Under all four of MEAB’s plausible scenarios for the future, “biodiversity loss continues at high rates” (at 79).

⁴²² MEAB, 2005:6.

⁴²³ MEAB, 2005:2-11.

⁴²⁴ MEAB, 2005:1.

⁴²⁵ MEAB, 2005:5.

What about the future? The authors of the MEAB report expect more growth, more degradation. “The consumption of ecosystem services, which is unsustainable in many cases, will continue to grow as a consequence of a likely three- to sixfold increase in global GDP by 2050 even while global population growth is expected to slow and level off in mid-century.”⁴²⁶ This prediction presents serious questions. If many cases of ecosystem use are already *unsustainable*, how can the MEAB expect global economic growth to be *sustained* at relatively high levels over the next 40 years? If ecological systems begin to break down from unsustainable use - and the report offers much evidence that this is already happening - then won't economic systems break down in tandem? A compelling small-scale example of this ecology/economy dependency appears in the MEAB report. The collapse of the Atlantic cod stocks in the early 1990s translated directly into the collapse of the Newfoundland cod fishery.⁴²⁷ Herman Daly makes the point that there is no such thing as sustainable growth on a finite planet, not in the long-run; *sustainable* and *growth* are a contradiction in terms.⁴²⁸ Thus, we can expect continued unsustainable ecosystem use, by necessary implication, to undermine and eventually end sustained economic growth.⁴²⁹ We may be witnessing this phenomenon today, as the world economy sputters and experts struggle to explain why.

Based on its assumptions, the MEAB explores four plausible scenarios⁴³⁰ for the future of global social-ecological systems, and reports that

[h]uman use of ecosystem services increases substantially under all...[four] scenarios, during the next 50 years. In many cases this is accompanied by degradation in the quality of the service and sometimes, in cases where the service is being used unsustainably, a reduction in the quantity of the service available.

⁴²⁶ MEAB, 2005:2.

⁴²⁷ MEAB, 2005:12, 90.

⁴²⁸ Daly, 1998:285. Daly also raises serious doubts about whether the long-run levels of economic growth predicted by experts are possible (2008:512; 1998:286).

⁴²⁹ Wackernagel & Rees, 1996:147 (“...the ecological bottom-line: no ecosphere, no economy, no society”).

⁴³⁰ MEAB, 2005:15, 71-83. The scenario that assumes the highest global population in 2050 (9.6B), relative to the other three scenarios, is also associated with the worst ecological outcomes (at 79-80), even though it assumes the lowest rates of economic growth. On the other hand, the scenario that assumes the lowest global population in 2050 (8.1B) is associated with the second-worst ecological outcomes on two out of three parameters (at 80), partly because it assumes the highest rates of economic growth. Drawing any general conclusions here is difficult, because each scenario includes changes to multiple variables. These scenarios seem to support the modest claim that both population numbers and consumption demands are relevant to ecological degradation.

The combination of growing populations and growing per capita consumption increases the demand for ecosystem services, including water and food.⁴³¹

So, the MEAB again implicates growing population pools and growing consumption demands in relation to ecological degradation. The MEAB also recognizes that identifying these two factors as *the* causes of ecosystem change would be overly-simplistic. Ecological change is driven by multiple factors. The report presents a list of *direct* drivers, defined as natural or human-induced factors that unequivocally influence ecosystem processes. These direct drivers include pollution, deforestation, and fishing.⁴³² The report also points to five *indirect* drivers of changes in ecosystems, which operate more diffusely: population change, change in economic activity, socio-political factors, cultural factors, and technological change.⁴³³ Complexity and uncertainty mark the interactions of these factors with one another, and with ecological degradation:

Both economic growth and population growth lead to increased consumption of ecosystem resources, although the harmful environmental impacts of any particular level of consumption depend on the efficiency of the technologies used...

These factors interact in complex ways in different locations to change pressures on ecosystems...Driving forces are almost always multiple and interactive...

Even so, changes in any one of these indirect drivers generally result in changes in ecosystems. The causal linkage is almost always highly mediated by other factors, thereby complicating statements of causality or attempts to establish the proportionality of various contributors to changes.⁴³⁴

The multi-factored MEAB approach, with complex and uncertain linkages between factors, offers support for the theory of wicked problems, and reflects a natural world that M’Gonigle calls “so complex that it can never be fully perceived in a rational manner, never fully modelled, and certainly never managed”.⁴³⁵ Hunter adds: While it is “increasingly clear that human populations have a powerful effect on the environment...the exact relationship between population dynamics and the environment

⁴³¹ MEAB, 2005:80.

⁴³² MEAB, 2005:64, 67.

⁴³³ MEAB, 2005:64-66.

⁴³⁴ MEAB, 2005:64.

⁴³⁵ M’Gonigle, 2000:33.

is complex and not well understood.”⁴³⁶ Perhaps this is why the MEAB says little about cause-and-effect relationships between population numbers and ecological degradation, other than characterizing population change as one indirect driver of ecosystem change. Within the 155-page report’s central analysis of indirect drivers, one short paragraph, under the heading “Demographic Drivers”, offers bare-bones population-related statistics;⁴³⁷ this section makes no attempt to explain how those numbers might impact ecosystem use.⁴³⁸ Commentary regarding population numbers tends to be presented either as outlined above, or simply as background information.

What is the MEAB’s perspective on population-related regulation? The report identifies no specific rules explicitly relating to population numbers. In terms of re-solutions to ecological degradation, the report offers many state-based and non-state ideas. Over seventy response options are assessed, involving several categories of decisions (e.g.’s: legal, economic, social/behavioural, technological, cognitive), and several categories of decision-makers (e.g.’s: governments, industry, Indigenous groups, and non-governmental organizations).⁴³⁹ The MEAB emphasizes state-related moves like more transparency and accountability in government,⁴⁴⁰ more stakeholder involvement in decision-making,⁴⁴¹ and stronger legal frameworks to support market, subsidy, and tax reforms.⁴⁴² The section of the report summarizing these response options speaks to all indirect drivers of ecosystem change, except population change.⁴⁴³ The report does not identify specific re-solutions – state-made or otherwise - related specifically to population numbers, apart from two passing references to “population policy”.⁴⁴⁴

⁴³⁶ Hunter, 2000:iii.

⁴³⁷ MEAB, 2005:64 (e.g.’s: world population totals over the last 40 years; countries with past and present growth rates which are considered high or low; percentages associated with urbanization).

⁴³⁸ Although the report does briefly describe how urban populations, urban development, and urban sprawl have impacts on ecosystem services, both locally and in far-away places. See MEAB, 2005:60, 67, 69.

⁴³⁹ MEAB, 2005:123-131.

⁴⁴⁰ MEAB, 2005:193-194.

⁴⁴¹ MEAB, 2005:193-194.

⁴⁴² MEAB, 2005:95.

⁴⁴³ MEAB, 2005:2, 19-24.

⁴⁴⁴ MEAB, 2005:22, 97. These references are adjacent to commentary regarding education and public awareness campaigns by governments aimed at “[b]ehavioral changes that could reduce demand for

In relation to non-state rules, the MEAB offers these insights:

Cultural and Religious Drivers: To understand culture as a driver of ecosystem change, it is most useful to think of it as the values, beliefs, and norms that a group of people share. In this sense, culture conditions individuals' perceptions of the world, influences what they consider important, and suggests what courses of action are appropriate and inappropriate...

Broad comparisons of whole cultures have not proved useful because they ignore vast variations in values, beliefs, and norms within cultures.

Nevertheless, cultural differences clearly have important impacts on direct drivers. Cultural factors, for example, can influence consumption behavior (what and how much people consume) and values related to environmental stewardship, and they may be particularly important drivers of environmental change.⁴⁴⁵

These words draw attention to non-state rules, including religious doctrine, as potential drivers of ecological degradation; consumption demands are mentioned, population numbers are not. In short, the report does not explicitly characterize population numbers as problematic; does not offer explicit re-solutions regarding population numbers, and does not explicitly locate 'p-word' problems/re-solutions in terms of state-made laws or non-state rules. If a problem is a gap between what-is and what-ought-to-be, a clear formulation of a population problem is absent in this report. I found descriptive words regarding what-is, and an uncomfortable silence where what-ought-to-be could be.

Intuitively, we know that neither global population pools nor global population flows are the only factors driving global changes in ecosystems. The MEAB report supports this intuition. Many human and non-human drivers play roles in ecological degradation. The relationships are complex and uncertain; conclusions turn on authors' diverse perspectives. As the MEAB puts it, "[e]cological surprises are inevitable because of the complexity of the interactions and because of limitations in current understanding of the dynamic properties of ecosystems."⁴⁴⁶ Yet, it seems difficult to deny that the survival-preserving and/or affluence-seeking behaviour of 6.8 billion people is having – and is likely to continue to have - a profound impact on ecosystems, even without continued

degraded ecosystem services". Empowering women is also mentioned. Education and empowerment of women have been linked to lower birth rates; see for example Engelman, 2009:28-29, and Cohen, 1995:68-69. But the MEAB makes no such connection.

⁴⁴⁵ MEAB, 2005:65.

⁴⁴⁶ MEAB, 2005:83.

growth in population pools or economic activity. As Speth argues: "...while growth is a serious complicating factor, we could immediately and completely stop all growth in both population and economic activity and still destroy the planet merely by continuing to do exactly what we are doing today."⁴⁴⁷ We seem to expect, we seem to *demand*, further growth on both fronts, and so we can expect our ecological challenges to grow mightier.

Wackernagel and Rees

The MEAB report cites population *change*, as opposed to population *pools*, as an indirect driver of ecological change. This begs the question: If global population stabilized tomorrow at about 6.8 billion (as unrealistic as that would be), and if consumption, waste, technology, and other relevant factors also stabilized at today's levels around the globe (as unrealistic – and as unfair to poorer people - as that would be), would the Earth be able to sustain that particular human enterprise over the long run? If not, the gap between who the Earth is already carrying and who it can continue to sustain would be problematic, to say the least. This question leads to the reciprocal concepts of ecological footprint and carrying capacity.

Wackernagel and Rees ("W&R") began their footprint theory with a local-scale thought experiment.⁴⁴⁸ Imagine completely enclosing a city under a giant transparent dome. The dome is just big enough for the city and is tightly sealed, so that no material (only sunlight) is allowed to enter the city and no waste is allowed to escape. The outcome: People in that city would not survive for long. Now, imagine that the dome is expandable. The dome can grow to encircle as much surrounding land as is necessary to maintain the city's then-existing levels of population, consumption, and waste, given then-existing technologies. If the surrounding lands were made up of the same proportions of productive land as the planet generally, how big would the dome have to grow in order to ensure the people's long-run survival? The answer, expressed in terms of land/water area (e.g. hectares) would be the city's ecological footprint. In short, the ecological footprint concept "accounts for the flows of energy and matter to and from

⁴⁴⁷ Speth, 2003-2004:782.

⁴⁴⁸ Wackernagel & Rees, 1996:9-11.

any defined economy and converts these into the corresponding land/water area required from nature to support these flows”.⁴⁴⁹ Among other things, the footprint “assesses the sustainability of current human activities.”⁴⁵⁰

Researchers cannot replicate this thought experiment in the field, but they can use data, assumptions, and formulae to estimate ecological footprint sizes. Data can be drawn from many sources,⁴⁵¹ and calculations can be performed on many scales, including individual, municipal, regional, national, and global.⁴⁵² For example, W&R initially calculated⁴⁵³ that, in the 1990’s, an average American’s ecological footprint was 5.1 hectares, over three times that person’s “fair Earth share” of 1.5 hectares.⁴⁵⁴ And the population of the Lower Fraser Valley in BC (which includes the City of Vancouver) depended on an area at least 19 times larger than the valley bottom to support just a subset of the material and energy needs of the local people.⁴⁵⁵ W&R explained that these calculations represented a snapshot of a person or people’s footprint at a particular point in time; the footprint concept is not a predictive tool.⁴⁵⁶ W&R were also careful to say that their snapshots are not “fixed, necessary, or recommended”.⁴⁵⁷ A person or people’s footprint may be judged to be unsustainable, and will likely vary over time, “depending on income, prices, personal and prevailing social values as they affect consumer behaviour, and technological sophistication”.⁴⁵⁸

⁴⁴⁹ Wackernagel & Rees, 1996:3, 158.

⁴⁵⁰ Wackernagel & Rees, 1996:3.

⁴⁵¹ Wackernagel & Rees, 1996:70-71.

⁴⁵² Wackernagel & Rees, 1996:80-96.

⁴⁵³ These conclusions are out-of-date. However, they are provided for illustration purposes only, as I explore Wackernagel & Rees’s (1996) treatment of population numbers in relation to ecological degradation.

⁴⁵⁴ Wackernagel & Rees, 1996:85, 13, 54 (a “fair Earth share” is the amount of ecologically productive land on the planet, divided by world population, at a point in time).

⁴⁵⁵ Wackernagel & Rees, 1996:14-15, 86-88.

⁴⁵⁶ Wackernagel & Rees, 1996:22-23. The two snapshots presented here seem surprising. But according to Wackernagel & Rees, if these footprint calculations inaccurately estimate a person or people’s draw on nature, the error is on the side of under-estimation (at 52). For example, the footprint calculations performed in 1996 did not take account of all forms of pollution - only carbon dioxide (at 18, 85).

⁴⁵⁷ Wackernagel & Rees, 1996:12.

⁴⁵⁸ Wackernagel & Rees, 1996:12.

A common thread between the approaches taken by W&R and MEAB is this: the factors identified by MEAB as drivers of ecological degradation, as they hit the ground at a particular instant in time, are similar to and implicit in W&R's footprint calculations. For example, data regarding consumption and waste used in footprint calculations will reflect the positive efficiencies or negative impacts attributable to then-current technologies.⁴⁵⁹ Crucially, the footprint model emphasizes a "bottom line condition for sustainability: 'humanity must live within the means of nature'".⁴⁶⁰ The carrying capacity concept takes the same position.

In relation to non-human animals, carrying capacity is "conventionally defined as the maximum population size of a given species that an area can support without reducing its ability to support the same species in the future."⁴⁶¹ But in relation to humans, "carrying capacity is a collection of concepts with no single generally accepted meaning".⁴⁶² Still, W&R's thought experiment introduces not only their idea of ecological footprint, but also their concept of carrying capacity. As W&R explain, many or most of the people in the tight-fitting dome described in their thought experiment would not survive because "our imaginary human terrarium would have insufficient 'carrying capacity' to support the ecological load imposed by the contained human population."⁴⁶³ At bottom, the Earth is finite, and it cannot support an infinite number of us. And given a certain number of us, it cannot support infinite consumption or waste.

A key difference between the two concepts is this: The ecological footprint backgrounds population pools, while carrying capacity foregrounds them. Mathematically speaking, a calculation of ecological footprint can use precisely the same assumptions, data, and formula that a calculation of carrying capacity might use, only each formula solves for a different variable. As W&R explain, ecological footprint simply inverts the usual carrying capacity ratio, by measuring "land area required per person (or population),

⁴⁵⁹ Wackernagel & Rees, 1996:89, 127-129.

⁴⁶⁰ Wackernagel & Rees, 1996:115.

⁴⁶¹ Wackernagel & Rees, 1996:158.

⁴⁶² Cohen, 1995:232.

⁴⁶³ Wackernagel & Rees, 1996:10.

rather than population per unit area.”⁴⁶⁴ Calculating carrying capacity will mean solving an equation to arrive at a sustainable population number (given consumption/waste levels, and land/resource availability), while calculating ecological footprint will mean solving the equation for land area (given consumption/waste levels, and population numbers). Thus, carrying capacity treats the population pool as a variable, while the ecological footprint treats the population pool as a given. Under the footprint, the ‘p-word’ is hidden from view, while carrying capacity thrusts population numbers uncomfortably, perhaps unwisely, into people’s faces.

To illustrate this difference in emphasis, consider two contrasting calculations. W&R suggested that if everyone alive in the 1990s lived like an American did at that time (in terms of material consumption and waste generation), then we would need the equivalent of three planets like ours in order to sustain then-current global population.⁴⁶⁵ Using the very same equation/data/assumptions but solving for population numbers instead of land area suggests a global carrying capacity of just under 2 billion people.⁴⁶⁶ Neither is ‘the answer.’⁴⁶⁷ Calculations of ecological footprints and carrying capacities can vary dramatically, depending on the concepts, methods and assumptions used.⁴⁶⁸ The difference in emphasis separating the two concepts is not driven by precision or prediction, but by different re-solution sets. “Notwithstanding their cloak of quantification, many of the published estimates of human carrying capacity are probably less dispassionate analyses than they are political instruments, intended to influence

⁴⁶⁴ Wackernagel & Rees, 1996:51.

⁴⁶⁵ Wackernagel & Rees, 1996:13, 88-90. Just a few years later, Rees (2002) suggested that four planets like ours would be needed to support Canadian material standards-of-living (at 263).

⁴⁶⁶ World population stood at about 5.7 billion in 1995 (UNPD Population Database, 2008). If we would need three planets to sustain an American standard of living everywhere with global population taken as given, then at that same standard of living, one-third of 5.7 billion is the carrying capacity of just one planet.

⁴⁶⁷ Wackernagel & Rees (1996) emphasize that our demands on nature can change based on the decisions we make in the future (at 22-23). The footprint concept is “a way to visualize the consequences of current trends and to assess alternative ‘what if’ scenarios on the road to sustainability” (at 23). Cohen (1995) makes similar points in relation to carrying capacity (at 11, 261-262).

⁴⁶⁸ Cohen (1995) completed a wide-ranging review of many different calculations of carrying capacity, and found that they fell most often between 4 billion and 16 billion people (at 10, 368). For descriptions of various concepts and assumptions, see 232-233. Different views on technology, different assumptions on standards of living or desired levels of environmental quality, and (in)decisions re: time/space translate into varying numerical estimates. Each of these carrying capacities can be converted into ecological footprints.

actions one way or another”.⁴⁶⁹ W&R agree: their footprint concept was positioned as “a planning tool that can help to translate sustainability concerns into public action.”⁴⁷⁰ Problem and re-resolution formulation are concomitant to one another.⁴⁷¹ If my community’s ecological footprint seems too large for the ecological area around it, the obvious re-resolution is to reduce that footprint, by reducing our individual and collective consumption/waste. In sharp contrast, if my community is so large, expressed in terms of headcount, that it exceeds the carrying capacity of local ecosystems, expressed in terms of headcount, then what? One modest potential re-resolution: critique and abandon population-UP control in Can-America.

As W&R point out, the main strength of their footprint concept is “its ability to communicate biophysical realities simply and clearly”.⁴⁷² Yet, the concepts of ecological footprint and carrying capacity, like other population-related concepts studied here, attract detractors.⁴⁷³ The usefulness of the carrying capacity concept has been questioned or dismissed, for example, on the basis that trade and technology allow people to evade local ecological limits.⁴⁷⁴ The ecological footprint could be challenged, on the same basis.⁴⁷⁵ But W&R persuasively counter-argue that benefits offered by trade and technology can be temporary, illusory, and come at the expense of far-away places;⁴⁷⁶ in effect, a group of people “is able to import carrying capacity...[which] is accompanied by reduced load-bearing capacity in export regions.”⁴⁷⁷ From a population-*and*-consumption perspective, the weakness in the concepts of ecological footprint and carrying capacity is the apparent absence in one that shows up prominently in the other. Ecological footprints

⁴⁶⁹ Cohen, 1995:233.

⁴⁷⁰ Wackernagel & Rees, 1996:3.

⁴⁷¹ Rittel, 1973:161.

⁴⁷² Wackernagel & Rees, 1996:156; see also 55-56.

⁴⁷³ In relation to the footprint concept, see for example: Fiala, 2008; van den Bergh & Verbruggen, 1999. Fiala criticizes the predictive value of the ecological footprint, arguing that consumption and technology will change over time (at 521). But Wackernagel & Rees (1996) stressed that the ecological footprint gives a snapshot of ecological impact, not a forecast; it was never meant to be a crystal ball (at 22-23).

⁴⁷⁴ Wackernagel & Rees, 1996:49.

⁴⁷⁵ Wackernagel & Rees, 1996:127.

⁴⁷⁶ Wackernagel & Rees, 1996:127-133.

⁴⁷⁷ Wackernagel & Rees, 1996:130.

expressed as land areas downplay the relevance of population numbers to ecological degradation, and carrying capacities expressed as human headcounts downplay the relevance of resource use. Footprints lose their heads, while headcounts lose their footing. The concept of population demands, in contrast, will foreground both population numbers and consumption demands. The intent is to keep both these material factors sharply in focus, opening up a wider range of potential re-solutions than problem formulations that focus on population *or* consumption alone.⁴⁷⁸ In terms of re-solutions, consumption-minded environmentalists cannot conjure more planets no matter how hard we might wish for them, and population-minded environmentalists will not win over people by wishing them away. As a law-and-society theorist, my position is that a set of levers lies in ‘law’, pluralistically defined. So, my problem/re-solution formulation includes not only a material but also a cultural/regulatory dimension.

Do W&R find population-related problems or re-solutions in state-made laws, or non-state rules? As their problem formulation seems to dictate, W&R stress that people in Can-America and other developed countries should reduce their ecological footprints by reducing their (over)consumption/waste, to bring their draw on nature in line with local resources.⁴⁷⁹ In the 1990s, W&R believed that humanity was already in “overshoot”, taking more food, fiber, and fuel from Earth’s ecosystems than those systems could sustainably provide (and therefore, reducing “natural capital”); even the developed world, considered all on its own, seemed to be pushing or exceeding these limits. The result: global ecological degradation.⁴⁸⁰ In effect, these are the kinds of “sustainability gaps”⁴⁸¹ - gaps between *is* and *ought* – that W&R want closed. In relation to population, W&R

⁴⁷⁸ Change to technology is a wildcard. On the one hand, technology can allow us to do more with less, arguably shrinking our ecological footprint or enlarging the Earth’s carrying capacity. On the other hand, technology can exacerbate ecological degradation (e.g. bottom trawlers), and can expand waste streams (e.g. industrial effluent; electronics). See Wackernagel & Rees (1996) for a fuller discussion of this double-edged sword (at 127-129). But neither the ecological footprint concept nor the carrying capacity concept is superior to the other in relation to its treatment of changing technologies. Both take a snapshot of material life, thereby freezing technology at a point in time (at 89).

⁴⁷⁹ Wackernagel & Rees, 1996:155.

⁴⁸⁰ Wackernagel & Rees, 1996:149.

⁴⁸¹ Wackernagel & Rees, 1996:56.

sometimes specifically mention the ‘p-word’ alongside consumption,⁴⁸² and W&R refer to a need for “policies to address them both”.⁴⁸³ As in the MEAB report, “population policies” are mentioned in passing, with this brief comment: despite industrial overshoot, “high-income countries still do not encourage population reductions or low consumption, but are more worried about the aging of society and slack economic growth”.⁴⁸⁴ Turning to non-state rules, W&R see culture as an obstacle to re-solutions: “[i]n a culture in which much is good, more is better, and too much may not be enough it may not seem possible to improve the quality of life while reducing our Ecological Footprints.”⁴⁸⁵ With their footprint concept, W&R aimed to “contribute to the needed shift in social consciousness.”

In the end, W&R’s recommendations are focused on local policies and personal actions meant to reduce consumption/waste among the already-affluent, in order to open ecological space for the less-affluent, and for other forms of life (and people should pursue non-material endeavors to maintain quality of life).⁴⁸⁶ At the same time, W&R call for central governments to play a coordinating role.⁴⁸⁷ Presumably across all regulatory systems, “[n]ew rules are needed to ensure fairer access by everyone to sustainable flows of goods and services from the world’s ecosystems.”⁴⁸⁸ More specific suggestions are framed in terms of discouraging regional over-consumption.⁴⁸⁹ For example, our cities and our selves must become less resource and auto dependent.⁴⁹⁰

⁴⁸² Wackernagel & Rees, 1996:57, 156.

⁴⁸³ Wackernagel & Rees, 1996:57.

⁴⁸⁴ Wackernagel & Rees, 1996:154-155.

⁴⁸⁵ Wackernagel & Rees, 1996:135.

⁴⁸⁶ Wackernagel & Rees, 1996:57, 125, 132-138, 141, 154-155.

⁴⁸⁷ Wackernagel & Rees, 1996:143.

⁴⁸⁸ Wackernagel & Rees, 1996:155.

⁴⁸⁹ “Suitable initiatives that are much discussed but less frequently delivered include: planning for high-density, high-amenity downtown restoration; promoting the use of renewable energy in commercial and housing developments; reallocating urban space, particularly road and other auto-oriented areas, to low-cost housing and public open space; imposing disincentives on auto use while creating incentives to encourage public transit, walking and bicycling; and using the tax system – rewards *and* penalties – to encourage urban development, urban land trusts, co-operative housing, etc., dedicated to sustainability principles. The point is to keep cities within ecological limits...” (Wackernagel & Rees, 1996:141-142; original emphasis).

⁴⁹⁰ Wackernagel & Rees, 1996:141.

Thus, population-related recommendations are hard to find. In my view, W&R don't de-problematize the 'p-word' to the same extent that the MEAB does, but it is easy to lose sight of headcounts with my eyes fixed on my footprint.

Wide-Angle, First-Person Pluralism

With this plurality of perspectives in mind, let's step outside for another look at 'law'. Imagine a sunny day, and a single spider. It has spun a single web between two trees. If you look closely, you can see the one web hanging there in all its intricacy, glistening in the sun. You can see the one spider sitting in the middle of that web, patiently waiting for flies. If a fly gets tangled on just one or two sticky strands, the spider moves in quickly, and it is no contest. If a threat approaches from above or below, large or small, the spider spins a net and the threat is neutralized. This seems to be the vision of state-made law held by some practising lawyers, many active politicians, and legal centralists. It may be a common view among environmentalists. The state is central, and all-powerful, and it spins rhetoric into laws. When tackling any problem, regardless of complexity, uncertainty, or competing perspectives, the state need not consider rules outside of law books; just throw a fresh or existing matrix of laws over any problem, and move on to the next challenge.⁴⁹¹ In short, the state is the only rule-maker that matters. It spins one complicated but internally-consistent web stretching across all possible territory.⁴⁹² And the web-of-law is neutral and unbiased; it can catch anyone in its grip. At best, this is a partial vision of human regulatory existence. At worst, it is a myth, a false comfort. It is a myth that lures hopes for radical rule reform into a morass of existing laws, substantive and procedural, where environmentalists can 'win' only mild regulatory injections that leave us intoxicated. Or worse, we struggle, become exhausted, and lie still. This vision of 'law' appears particularly misguided when judged against the five expert perspectives outlined above. These experts show a strong tendency toward

⁴⁹¹ Samek (1977) critiques traditional law reform in part on this basis: "The 'legal' law reformer simply assumes that legislation is a universally appropriate method for curing any and every kind of social ill...Once it is drafted and passed, he fancies he has dealt with the problem and turns to other things" (at 416).

⁴⁹² Litowitz, 2000:547 (although he refers to a 'map', not a web, stretched across all territory).

multi-pronged approaches to regulating human behaviour, spinning well beyond the state.⁴⁹³

For a wide-angle vision of ‘law’, imagine a poorly-lit cave. In one prominent spot, a sunbeam lights up the same web, the same rule-spinner, doing the same things just described. But away from the light, regulatory webs hang almost invisibly from the ceiling in thick masses. These webs, including the sunlit one, run deeply into one another in ways that seem incomprehensible, but if you look closely, you can see intricate structures, and fluctuating limits. If you look closely, you can see many tiny rule-spinners moving in the shadows, sometimes working alone, sometimes in groups ranging from two or three up to bristling masses of greater power, spinning, guarding, and chewing small rule-strands. Look closely, and you’ll see a similar scene on the sunlit web; the state is not one monolith, it is many people and collectives sometimes spinning at cross-purposes.⁴⁹⁴ Sometimes, a single rule-strand runs thick through many webs, and is guarded by authorities of all sorts, embedded in all sorts of settings. We dance along these multi-webs with speed and confidence, seemingly unaware of the complex structures that move and support us, and sometimes confound us. Some of us step cautiously, taking each strand as we find it, trying to stay out of trouble. Some engage in tugs-of-war with others, with still others watching, whispering. But here’s the thing: there are no flies.⁴⁹⁵ We rule-spin for ourselves, and for one another, for those close to us, and for strangers if we crawl into positions of greater power; even then, others can counter-spin. If one of us makes a misstep, another may pounce, or a few, or many, or none. The centralized spinners may or may not notice, or care to react. This is a wide-angle, first-person perspective on legal pluralism. Scaling up from a first-person perspective, imagine many rule-threads-in-common, twisted together into strings,

⁴⁹³ Only Ehrlich seems largely devoted to state-made resolutions. Undoubtedly, he is not alone in the world.

⁴⁹⁴ In his review of pluralist conceptions of law, Cotterrell (1998) identifies theories that see the state itself not as unitary, but as legally plural (at 378-379). Santos (2002) briefly discusses the potential for “new forms of legal pluralism within state legality”, contingent on “the coexistence of different logics of regulation carried out by different state institutions with very little communication between them” (at 95).

⁴⁹⁵ Holloway (2002) uses a contrasting web metaphor: “We are flies caught in a spider’s web. We start from a tangled mess, because there is no other place to start... Flies caught in a web of social relations beyond our control, we can only try to free ourselves by hacking at the strands that imprison us” (at 5). I take the position that few, if any, of us are as helpless as this when it comes to non-state rule-making.

vibrating with sound, with notes, sonatas, symphonies, beautiful to some ears, frightening to others. Imagine other rule-threads pulling in different directions, knotting up, polarizing or paralyzing people. This vision aims to see a unity without losing sight of distinctions, and aims to see distinctions without losing sight of a unity.⁴⁹⁶ This is not a categorical pluralism, with neat regulatory webs spun in this place or that one, staying in their little packages, occasionally in touch or in tension. From a wide-angle, first-person perspective, we each occupy a unique position, we each hold a one-of-a-kind perspective in relation to a multiplicity of rules and sanctions, in relation to our relations with one another, in finite but uncountable social situations. On this view, “[p]arts and wholes are mutually constitutive of each other”;⁴⁹⁷ a whole can justifiably be sliced into different or finer parts, and the whole can justifiably be seen as a part of some other whole.⁴⁹⁸ The masses of regulatory multi-webs I’m theorizing about are marked by extraordinary complexity, uncertainty, and a diversity of perspectives; zooming in and out from different angles, as if using Google Maps, can offer deeper and higher understandings.⁴⁹⁹ If rules are sticky strands in social webs, we weave webs wicked.⁵⁰⁰

Within the five expert perspectives reviewed in this chapter, and in opposing positions raised as critique, we catch glimpses of many regulatory prescriptions, existing/proposed, express/implicit, in particular times/places/contexts. Sometimes these do’s and don’ts reinforce or replicate one another to some degree, sometimes they are held in varying degrees of tension, perhaps pulling in multiple directions at once. In rough-and-ready terms, here is a partial list of rule-strands from the preceding pages, spanning some 200 years: we must multiply; we can’t use contraception; we must exercise sexual self-restraint; we can’t keep supporting poor people; we must pursue trade and technology;

⁴⁹⁶ Harvey, 1993:33 (referring to a critique by Marx of so-called ‘common sense’, that sees unity without distinctions, or distinctions without unity).

⁴⁹⁷ Harvey, 1993:35.

⁴⁹⁸ Harvey, 1993:34-35. This is not to suggest that every set of distinctions is created equal. Some distinctions are more defensible than others, depending on context, and arbitrary distinctions are unhelpful.

⁴⁹⁹ Melissaris (2004) makes a similar point: the unique and valuable feature of legal pluralism is that “it will help us achieve a multiplicity of points of view and legitimately oscillate between them” (at 58).

⁵⁰⁰ Gale (2000) spins a web metaphor at a higher spatial/relational scale, referring to “a socionatural web, a unified space of social and ecological relations...nature and society are seamlessly interwoven and mutually construct each other” (at 212). Thus, the regulatory multi-webs that I am describing may be imagined as part of a much larger whole encompassing both social and ecological systems.

we must protect private property; we can't throw people off their land; we must respect ecological limits; we must have population control; we must protect equality rights; we must make our own reproductive decisions; we must have less immigration; we must respect Indigenous legal traditions; we must cut back our consumption/waste; we can't keep fishing and logging like this; we must grow our economy; we must live within the means of nature; we must complete a dispassionate analysis; we must shift our social consciousness; we must have more immigration; we must reform pension plans; we must create more jobs; we must improve reproductive health; we can't talk about solutions to the 'population problem'. As we have seen, these regulatory positions are not stranded in state-made laws; they spin their way out into non-state rules, as well. And rule migration can work the other way around, from non-state rules into law. How we categorize these rules seems secondary, *because they progress and regress, move and morph*. Imperatives might flow into and/or out of state-made laws, and/or religious doctrine, and/or social norms, and/or economic dogma, and/or moral codes, and/or. The 'and/or' is loaded with meaning: the permutations and combinations are staggering, and 'and' can range in meaning from the loosest sense of the word to a merging of two or more into one. And it is hard to say much about cause-and-effect between rule categories, in part because we don't rule ourselves by categories, we rule ourselves by rules. The five stories told in this chapter are not primarily about categories of 'law', fighting for meaning, validity or supremacy. These are stories of specific people with specific passions and reasons, touting or testing specific rules, jostling for our collective allegiance, and obedience. These are stories of specific people (sub)consciously (de)constructing and being (de)constructed by culture. These are stories of *struggle*. Through a worldview entranced with the diversity of things, this web-story presents a complex and confusing regulatory image, reflective of complex and confusing regulatory 'realities'.

Malthus's writing may help clarify this image. He was relatively transparent about the rules dear to him, so it is relatively easy to see categories of 'law' tangling up, pulling against, and/or fusing into one another. Recall Ellickson's simple taxonomy of rules, based on the identity of the creator/enforcer of a particular rule.⁵⁰¹ In Malthus's work, it

⁵⁰¹ For further discussion, see Chapter 2, under the heading 'Stressing Sanctions, and the Social-Ecological'.

is easy to see rules defying any notion of air-tight categories. His own first-person account states that his religious rules infused his morality, and his religion/morality infused his notion of ‘nature’s norms’; this basket of rules drove his agenda for legislative reform. Private property was a universal principle to him, like gospel, something ‘natural’. He was a priest *and* a political economist *and* a professor *and* a husband *and* a father-of-three;⁵⁰² he moved within various spheres of authority, carrying some authority.⁵⁰³ “Malthus was a sincere Christian, which means that his thinking on all questions of morals and politics has an important theological dimension – one that supported and was in turn supported by his philosophical and scientific beliefs.”⁵⁰⁴ Yet, some imperatives he held in tension. For example, he saw food security as crucial to his country, and expressed some support for agricultural trade restrictions.⁵⁰⁵ “In the eyes of many of his contemporaries within the small community of political economists, adherents of Adam Smith’s ‘system of natural liberty’ almost to a man, this constituted an act of apostasy, a departure from the general principle of free trade between nations.”⁵⁰⁶ In whatever social circles he inhabited, Malthus may have been spinning all sorts of (in)consistent rules, and/or the same ones doggedly. Or at least he tries. *To widely varying degrees, he’s affecting, and affected by, other people and their rules, everywhere he goes.* He’s interacting with others – parents, friends, colleagues, critics, others - in person and in writing, negotiating with some, and/or forming alliances, and/or engaging in open debate, and/or, and/or. And others are listening, reading, responding, shunning. At various points in time, (de)centralized authorities come to make their decisions on particular rule(s). Those decisions may strengthen and/or weaken rules within specific social circles; may broaden or narrow the rules; may leave rules marked by exceptions, or exceptions to exceptions. There are many possible outcomes to these

⁵⁰² Malthus, 1992:xxv-xxvi (Donald Winch’s Introduction gives a list of principal events in Malthus’s life).

⁵⁰³ “Individuals belong simultaneously to several legal communities, or move between them” (Cotterrell, 1998:377, summarizing one element of the 1936 work of Eugen Ehrlich).

⁵⁰⁴ Malthus, 1992:xi (per the Introduction written by Donald Winch).

⁵⁰⁵ Malthus, 1992:166-169.

⁵⁰⁶ Malthus, 1992:x (Per Donald Winch’s Introduction). Malthus himself saw economic advantages to trade, generally speaking (at 148).

multi-dimensional dialectics, or multilectics,⁵⁰⁷ and few if any certainties. These diverse dynamics apply multi-directionally, cutting apart rule categories.⁵⁰⁸ These diverse dynamics apply in much the same way to tugs-of-war in my own mind as I move toward (re)making an ethic, or to struggles between two or more people moving toward some agreement, all the way through to dynamics playing out within/between government(s). Government power exercised through law cannot be wished away, but should not be deemed supreme. Malthus's lifelong project may have played a role in chewing up the Poor Laws, regulatory strands spun by the mighty state itself.⁵⁰⁹ And some of his rules and reasons haunt us still.

Clearly, rules need not die when people do; people pass rules down. For better or worse, some sticky strands stretch from the distant past to hold our beliefs/behaviours today, despite radical changes in the world around us. As we will see, centuries-old biblical rules seem to echo through our secular ones, even though their biblical paternity may have slipped from view when handed down from parent to child, from ruler to ruled, like a missed detail in a child's game of 'telephone'. Generations-old names like Malthus, Locke, Smith, Marx, and Hobbes - and their rules and arguments, some explicitly religious, some purportedly secular but pursued religiously - still echo through university halls and other social settings. It was a different world back then, with far fewer people, where people did not wield nearly the same destructive power we wield today as individuals and as collectives. Yet, some of these old strands, strong and durable, or tired

⁵⁰⁷ "Linear approaches, and even the more complex but still simplistic dialectical approach, to the world in the social sciences hinder conceptual multivariate analysis. We need to think in 'multilectic' terms about how a diverse world with heterogeneous subparts originates and develops" (Stanfield, 1985:411). 'Multilectics' may be defined as "a multitude of opposites and their synthesis, rather than the Hegelian/Marxist synthesis of two opposites" (at 411). But *opposites* are not required to drive dialectics/multilectics, only *diversities* affecting and being affected by the others, held together in relationships of varying degrees of support or tension. In contrast to Stanfield (1985), M'Gonigle (2008) writes that the concept of dialectics is not limited to one thing or direction, but is sufficiently expansive to include subtle and complex relationships (at 37). I use the word 'multilectics' in this thesis as a rough synonym for 'dialectics', but in sentences where I wish to emphasize a multiplicity of subtle and complex relations.

⁵⁰⁸ This theory of struggle may apply outside of Canada/America, to countries as far away as China. I used to imagine that the implementation of a new policy in China would be a simple matter of fiat, but Greenhalgh & Winckler (2005) use rich prose to uncover similar multi-dimensional dialectical dynamics inside/outside the state apparatus, in relation to the roll-out of the one-child policy (at 93-130).

⁵⁰⁹ Malthus, 1992:x (In his Introduction, Donald Winch takes the position that Malthus cannot be credited or blamed for the reform).

and dusty, seem to bind many bodies and minds. And many of today's most powerful rule-spinners seem to want it, seem to *demand* it, that way. Certain profit-and-power-hungry people act in concert, tirelessly twisting together many strands old and new – religious doctrine, economic dogma, corporate policies, employment contracts, private property laws, limited liability protections, international trade agreements, and much more - into thick ropes, using the ropes to pull many workers and machines together, in turn using those workers and machines to reach out over vast distances to pull packages of material and energy, living and non-living, away from people and planet and toward themselves.⁵¹⁰ As more prey is liquidated, these heroic spinners keep what they can, and pass some around, so the less powerful get belief/behaviour-shaping bites. Our 'web-caves' are integrated parts of resilient social-ecological wholes, and ecosystems can heal themselves to a degree, given time. But if degradation outpaces healing for too long, then this story does not end well.⁵¹¹ And yes, I am implicated too.

Conclusion

I used to drive from downtown Sudbury to Killarney Provincial Park; I used to drive to my parents' camp on Fairbanks Lake. I have burned fossil fuel to visit wilder places. I've driven across Canada, not once but twice, camping along the way, just for fun.⁵¹² I've eaten lunch in old growth forests, and felt wonder; later, I fed wood into my campfire, to feel warm. Just to paddle a canoe, I bought a paddle and a canoe, and other camping gear, made in cities, made from nature. I am typing these words about ecological degradation into an electronic device tainted by toxins, and when I'm done, I will burn copies of it onto plastic-and-metal compact discs to hand in to University administrators. All of these materials will end up in waste streams one day, flowing out into the wilder world. And at the same time, I need food, water, and warmth to live, and healthy surroundings, stable climates, wilder places, social relations, and who knows

⁵¹⁰ Maguire (2000) briefly outlines how international institutions and agreements, from Bretton Woods to GATT, have been used to make way for a destructive corporate rampage around the planet (at 8-9).

⁵¹¹ Daly (2007) makes a similar argument, only more eloquently (at 9).

⁵¹² An uncomfortable paradox: affluent nature-lovers are "willing to drive thousands of miles, using up scarce oil and polluting the atmosphere, to visit national parks and sanctuaries; thus using anti-ecological means to marvel in the beauty of forests, swamps or mountains protected as specimens of a 'pristine' and 'untouched' nature" (Guha, 2000:83).

what else to live happily. All of these things are degraded by the consumption/waste that I help generate, that I problematize. I am a walking contradiction, a progressive-retrogressive dialectic. I live on social-ecological systems, help build them, and help grind them down; as I live and die, social-ecological systems build up and break down me.⁵¹³

I am not alone. I have plenty of human company here in Can-America. Materially speaking, we can work to minimize our individual footprints, but we can never live on nothing, not for long. All our footprints add up, and help wear things down. Reflecting on regulation, I imagine a massive but finite number of state-made laws and non-state rules pulling at each other, in different ways from different perspectives, in complex web-like criss-cross patterns, within and across the artificial categories we (un)build for them.⁵¹⁴ With rules in mind, people have problematized population numbers, at different times, in different ways and to varying degrees, and I have done some de-construction in this chapter. In Chapter 4, I will take my turn at construction, and others can critique. Round and round it goes, in unpredictable/indefinite/multi-dimensional tugs-of-war. The paradoxical spirit of nature, the multilectics of human thought.

Robert Samek seemed to perceive dialectics at work in legal systems, manipulating and manipulated by the people caught within them:

The legal institutions of a people are part of the myths which shroud reality for them. In the early days of a paradigm, the myths are still an outgrowth of social reality and help to structure life in a constructive way. The inevitable decay in the old institutions gives rise to increasing tensions between the old forms and the demands of new situations. The gap between the institutions and reality widens, and the myths which sustain their relations become increasingly hollow. The old guard seeks to protect them by bringing reality back to the golden days, while the young seek to replace them with myths of their own. Alas, the latter are all too often borrowed from an old repertoire.⁵¹⁵

⁵¹³ Harvey (1993) offers an example: “I breathe in, I reconstitute myself by virtue of the oxygen I transform within me, and I breathe out and transform the atmosphere around me” (at 35). But this is only half the story. I breathe in, and I change the atmosphere/myself by drawing oxygen away from it and into me, I breathe out, and I change the atmosphere/myself by expelling carbon dioxide. The atmosphere and I don’t take turns changing one another; we change one another simultaneously with each breath in or out.

⁵¹⁴ As Webber (2006) allows, normative orders “may well interact in a manner that is not simply hierarchal, one order necessarily granted precedence over all the others. They may contend in a manner more akin to a negotiation... ‘mutual adjustment’, ‘push and push back’ may be better terms to capture the potential openness of the interaction” (at 189).

⁵¹⁵ Samek, 1977:424.

Now that my analysis of some past problem/re-solution formulations is behind me, the ground is littered with old repertoire, with broken rhetoric, some ideas worth reconstructing, others better left alone. What do I pick up and take-away?

All of the formulations covered here - except Malthus's *Essay* - link population numbers and consumption/waste (among other factors) to ecological degradation. This is a modest starting point. I take away the idea that population numbers and consumption demands are both relevant to ecological degradation. MEAB and W&R frame population numbers as an indirect or background factor. If my goal is to frame 'p-word' problems/re-solutions constructively, in clear terms that more people in the global North might understand and accept, then the 'p-word' should be foregrounded in my formulation. The concepts of ecological footprint and carrying capacity share a weakness: to focus on footprints means that headcounts can be easily overlooked, and vice versa. I mean to keep both population numbers and consumption/waste within my problem frame. By offering no re-solutions explicitly linked to population numbers, some formulations (e.g. MEAB, W&R) largely de-problematize the 'p-word'. When experts tell us only what is, with no arguments regarding what ought to be, then it can be difficult to perceive problematic gaps between the two. I should offer some re-solutions in order to persuade others that a (re-solvable) 'p-word' problem is worth perceiving.

As a law-and-society theorist, regulatory dimensions of problems/re-solutions are of primary interest. I found no significant regulatory dimension expressly linked to population numbers within the problem definitions offered by the UN, MEAB, or W&R. I did find that Malthus perceived population problems/re-solutions within 'the rules' - although what he perceived as a given (i.e. religious doctrine) I perceive as a problem. In old England, Malthus pushed for population growth (just not too quickly relative to food supplies), pushed against the Poor Laws, and opposed contraception. On Malthus's/God's/nature's law, human populations must grow, up up up, until the world is full. Malthus's work suggests that religions may offer problematic regulations relevant to population growth. The MEAB report also gestures toward religion as relevant, while MEAB and W&R both refer to culture generally.

The UN approach demonstrated that it is possible to frame population concerns with reference to other social problems that are important to address in their own right, and at the same time, in terms that leave room for socially-progressive re-solutions. If population control aimed in an upward direction is part of a problem, then critiquing those rules might be a modest step toward reproductive equality *and* population retreat in Can-America. These social goals are not necessarily mutually exclusive. UN documents also offer evidence that states around the globe generally wish to promote steady population growth, not problematize it. Moderate population growth is widely seen as a panacea, as a propellant to economic growth,⁵¹⁶ and perhaps as a preservative to capitalism.⁵¹⁷ For this reason and many others, I see our governments as spinners of little more than growth-obsessed, preserve-the-status-quo-type re-solutions, generally limited to token gestures and fire-fighting manoeuvres.⁵¹⁸ Like Malthusian thought, state law-makers often distract attention from the suffering caused by capitalism and its growth imperatives. The rule of growth will form part of my problem definition; I will not frame population numbers relative to some idealized number of people as ‘*the problem*’ exonerating everything else.

What do I leave alone? Ehrlich’s early work is a case study in how to draw attention to the ‘p-word’, and not in a constructive way. In 1971, Ehrlich and some colleagues placed a two-page ad in the New York Times, saying that every 7.5 seconds, an American baby is born. The ad continued: “He is a disarming little thing, but he begins to scream loudly in a voice that can be heard for seventy years. He is screaming for 26 million tons of water, 21,000 gallons of gasoline, 10,150 pounds of meat, 28,000 pounds of milk and cream...[and more]. These are the lifetime demands of his country and its economy.”⁵¹⁹ The same line of argument appears in *The Population Bomb*.⁵²⁰ Ehrlich, the scientist,

⁵¹⁶ For further discussion, see Chapter 3, under the heading ‘United Nations Population Division’.

⁵¹⁷ Conversely, a “government that takes significant action directed against the interests of capital will find that an economic crisis will result and that capital will flee from the state territory” (Holloway, 2002:13).

⁵¹⁸ For further discussion, see Chapter 2, under the heading ‘The Rule of Rules’, and see Chapter 4, under the heading ‘Ruling Out State-Made Re-Solutions to Population Demands.’

⁵¹⁹ Ris (1976) describes the advertisement (at 86).

⁵²⁰ Ehrlich, 1968:149.

probably double-checked his numbers with a calculator, but he should have reviewed his rhetoric with a word-smith. He had a point: people must consume *something* to live; people in Can-America (like me) consume *a lot*, and “the capacity of the Earth to produce food and support people is finite”.⁵²¹ But did he have to make his point *that way*? Did he have to describe a baby as a resource-sucking *thing*? And if babies are disarming, should we arm ourselves against them? Ehrlich’s rhetoric, including his scheme for population-down control, opened a dead-end discourse. This broken chalice is not recyclable.⁵²² But from Ehrlich, I can borrow the stigma associated with his brutal population control measures, and try to lend it to population/consumption control aimed up.⁵²³ This is a high-wire act on a regulatory web: too many clumsy moves, and the stigma sticks to me.

⁵²¹ Ehrlich & Ehrlich, 2009:68.

⁵²² To be clear, this thesis does not assess Paul and Anne Ehrlich’s life works (or the life works of any other author or organization). A goal of this Chapter was to study and critique the framing of population problems/solutions presented in the Ehrlichs’ famous 1968 book, *The Population Bomb*, along with other discrete problem-framing pieces authored by other population and/or ecology experts.

⁵²³ Stigmatizing specific ecologically-destructive behaviours shares some common ground with the strategies used by environmentalists to discourage logging in BC’s old growth forests. One activist said: “We want to ensure that in the future consumption of products that are a result of the conversion of old growth or endangered forests is simply considered reprehensible” (Shaw, 2004:379, quoting Berman).

Chapter 4 – The wicked problem of population demands, and ending -UP control

Introduction

“My presence here [just outside the Commander’s study] is illegal. It’s forbidden for us to be alone with the Commanders. We are for breeding purposes: we aren’t concubines, geisha girls...We are two-legged wombs, that’s all: sacred vessels, ambulatory chalices.”⁵²⁴ These are the words of Offred (derived from ‘Of Fred’), the fictional female protagonist in Margaret Atwood’s novel, *The Handmaid’s Tale*.⁵²⁵ Atwood imagines a dystopian future set in Gilead, the area of the US now called Massachusetts. The theocratic government believes that Offred’s ovaries are viable, a rare commodity in Atwood’s imagined future. So instead of internment at a forced labour camp, Offred endures a sentence in the household of a government official, and his wife. Offred faces forced labour of the reproductive kind, if the Commander can impregnate her. “It is a society in which you have a sort of ‘farming’ of women.”⁵²⁶

Atwood claimed that “there is nothing new about the society depicted in *The Handmaid’s Tale* except the time and place. All the things that I have written about have...been done before, more than once.”⁵²⁷ In the “Historical Notes” section of the novel,⁵²⁸ Atwood presents a discussion among fictional academics, as a tool for flagging moments in history that inspired events in *The Handmaid’s Tale*. “Rumania, for instance, had anticipated Gilead...by banning all forms of birth control, [and] imposing compulsory pregnancy tests on the female population”.⁵²⁹ From Atwood’s imagined future speaks the

⁵²⁴ Atwood, 1985:170-171.

⁵²⁵ Atwood, 1985.

⁵²⁶ Atwood, 1985:396. This quote is taken from the end of the novel, where “An Interview with Margaret Atwood on Her Novel *The Handmaid’s Tale*” appears (at 393-398).

⁵²⁷ Atwood, 1985:392.

⁵²⁸ Atwood, 1985:371-388.

⁵²⁹ Atwood, 1985:379. McNeill (2000) adds that Rumania banned abortion, and “subjected women of childbearing age to police surveillance to make sure they were not shirking their reproductive duties” (at 331).

Commander, reflecting on the permissive culture of his past: “Those years were just an anomaly, historically speaking...Just a fluke. All we’ve done is return things to Nature’s norm.”⁵³⁰ But how permissive is our society today, from a first-person perspective?

I bring the novel into my thesis not for its predictive value or historical accuracy, but for the same reason that Atwood brought the novel into the world: as a tool for social examination.⁵³¹ This novel helped me to think seriously about the possibility of population control, aimed in an upward direction. As opposed to one conception of population control, which might be framed as state-made laws aimed at coercively moving birth rates in a downward direction, in Atwood’s Gilead, the government does whatever it can to coercively *boost* birth numbers. What if centralized and de-centralized rule-makers and enforcers are pursuing this same objective, here in Can-America? What if these rules are ruling homes, churches, communities?

Sometimes, breaking a rule is what calls it vividly to our attention.⁵³² When I decided, at age 31, to get a vasectomy without first fathering children, I was afraid to tell my parents; I was afraid of family sanctions. I opened up with close friends; some reacted with shock and disapproval. I shared my secret with Kathy Large on our second date, and she shared her doubts with me about having children. She agreed to a third date; now we are a chosen family.⁵³³ Kathy has been interrogated by friends and colleagues, told she’s making the mistake of her life, told she’ll be sorry, told her body will one day tell her what to do. Based on Catholic doctrine, we are both law-breakers, and face unclear other-worldly consequences. And to anyone who shares the views of Reverend Malthus or Commander Fred, Kathy and I have violated ‘nature’s norm’. We’ve decided never to

⁵³⁰ Atwood, 1985:275.

⁵³¹ Atwood, 1985:394.

⁵³² Schuller & Ogloff (2001) make a similar point, in relation to state-made law: “We often remain unaware of the influence of the law in our lives until one of the rules (laws) has been broken or interactions or behaviour between individuals come into conflict or break down” (at 3).

⁵³³ Not long after our civil union, I assumed Kathy’s last name. Relevant legislation in both Ontario and BC is gender-neutral on this issue: Either spouse may assume the last name of the other (*Change of Name Act*, R.S.O. 1990, c. C.7, s. 3; *Name Act*, R.S.B.C. 1996, c. 328, s. 3). But non-state rules (social norms? ‘family values’? both? other?) are not gender-blind. A widespread obligation for women in Can-America to face change-of-name options, but not men, is an example of relatively strict (and less equitable) non-state rules nested within less constraining (and more equitable) state-made laws.

have children despite a (once) healthy ability to procreate. On the upside, no government official has knocked down our door.

Why share this highly personal information - in violation of social and academic norms? Isn't this a Masters thesis, in law no less? First, if you felt uncomfortable a moment ago, maybe even an urge to correct my deviant writing decision, then you've just felt the power of decentralized rules and your potential role as an enforcer. Second, I'm talking in this chapter, in part, about people's decision to have children, or more precisely, I'm talking about a few rules that I perceive in Can-American society relevant to that decision. These are webs of significance spun around me, around Kathy, strands that you may feel spun around you, strands we ourselves may help spin around others. In short, I get into some very personal business. I don't pretend to be neutral, objective or unbiased; I aim instead for openness and transparency. I am stuck in my own unique tangle of regulatory multi-webs. And I am entangled in debates about what, if anything, to cut.

So why did I make my vas-cutting, life-preventing decision? Believe me, I gave it a lot of thought: three years of thought, reduced to three pages of reasons. None of my written reasons cited eco-degradation; I claim no ecological high-ground. I felt, and feel, deeply uneasy about the future, but mainly, I liked my life the way it was, like it the way it is. I like(d) many degrees of freedom, in relation to work, play, study, mobility. One of my written reasons did cite population numbers: With over six billion people living on Earth at that time, I didn't feel a duty to society to add to that number. To be clear, this is not to say that *nobody* feels that duty, or that *nobody* should have children.⁵³⁴ But my decision puts me at odds with anybody who takes the normative position that *everybody* should reproduce, or that everybody *must*. And those bodies exist, informed, I believe, by rules they perceive for themselves, and try to apply to Kathy and me, not often framed as rules, but as god-given, nature-driven imperatives, as just-the-way-things-are, and therefore as beyond question. But these notions are rules, as I define them in this thesis.

⁵³⁴ If everyone decided not to have children, then needless to say, our species would be extinct within 100-odd years. Surprisingly, a (tongue-in-cheek?) movement called "The Voluntary Human Extinction Movement" advocates a path to self-extinction. See <http://www.vhemt.org/>. I do not share this view.

The Church calls them ‘law’. Kathy and I have acted ‘illegally’, and we have been stung by sanctions. In this chapter, I hit back at some degrading rules, wherever I find them.

But I *must* have some position on *your* procreation, right? I do. My personal view on procreation is that Can-Americans should reproduce *to the extent they genuinely want to*. This is not a rule; I am not prescribing specific behaviours, and my view carries no sanctions. I advocate that potential parents make decisions regarding their own reproduction, this way or that way, based on their own reasons, not on the rules. It’s not particular reproductive decisions that I question in this thesis. It’s the degrading and outdated non-state rules, amounting to population-UP control, that I want to de-construct. If rules are pushing people to create more children than they would otherwise like to have, if people are having children not because they *want to* but because they think they *have to*, then much more than population numbers are at stake. Offred’s fictitious fate becomes all too real, and Fred’s too: *We are for breeding purposes*.

The main purpose of this chapter is to give life to a set of ideas. I aim to frame a ‘p-word’ problem and its re-solutions in more holistic terms than those offered in the works of Malthus and Ehrlich reviewed in Chapter 3, and in more prominent terms than those offered in the reviewed works of the UN, MEAB, or W&R. I’m aiming for a constructive, clear formulation that might appeal to population-minded environmentalists, one that might find purchase with a wider audience in spite of the rules that rule many of us in Can-America. In short, I marry the ‘p-word’ to consumption/waste, and position these material factors as closely related to specific non-state rules.

In the first part of the chapter, I build a problem formulation, piece by piece, called population demands. The word ‘population’ stands for population numbers, and the word ‘demands’ stands for consumption demands. Economists refer to a population’s hunger for goods and services as *demand*; MEAB and W&R draw attention to links between ecological degradation and human *demands* for food, fibre, and other resources.⁵³⁵ So the choice of label – population demands - seems fitting.

⁵³⁵ MEAB, 2005:1; Wackernagel & Rees, 1996:55.

Population numbers and consumption/waste constitute the material dimension of my problem definition, but the regulatory dimension is my focus. Run the label ‘population demands’ backwards: demands population. Can-American culture demands more and more population, demands more and more demand. Some Can-American cultural imperatives demand that population numbers and consumption levels move in an ever-upward direction. I focus on a few of these rules. I characterize and problematize specific non-state rules as population-UP control and consumption-UP control.

The subsequent parts of this chapter explore the gaps between what-is and what-ought-to-be, necessarily drawing attention to potential re-solutions. In the first sub-section, I rule out the state as a source of re-solutions for population demands. In the subsequent sub-sections, proposed re-solutions turn away from the state, and aim to undermine population-UP control and consumption-UP control from the bottom-up. My arguments aim to apply heat to shadowy but severe regulatory strands, to help sever them. I conclude by continuing to spin green legal theory toward a broader legal imaginary.

Population Demands: Population Numbers and Consumption Demands

As argued in previous chapters, population numbers *alone* should not be framed as a problem. People are not “undifferentiated human atoms existing in virtual time and space.”⁵³⁶ It is not our mere existence that drives ecological degradation, and each of us does not impact ecological systems in the same way. It is also a matter of how much each of us consumes and wastes - whether at home, at work, or in other social-ecological contexts - and these behaviours vary widely from person to person, from place to place, and from time to time. As Seager argues:

...[population] numbers alone do not contribute much to environmental explanation. What environmental stresses are imposed by sheer numbers of people? Well, it is hard to say... One hundred lentil-eating, bicycle-riding, solar-powered people are going to put less pressure on the environment than one hundred beef-eating, car-driving, fossil-fuel-dependent people. There is only the loosest correlation between numbers of people and environmental stress. An environmental analysis that focuses on population numbers is largely diversionary.⁵³⁷

⁵³⁶ However, Curtis (2002) takes the critical position that, at the theoretical limit, statistically-driven concepts of ‘population’ construct social relations as equivalent human bodies existing in virtual time/space (at 24).

⁵³⁷ Seager, 2000:1712.

Thus, a defensible framing of a ‘p-word’ problem must link more than population numbers to ecological degradation. Clearly, consumption and waste are also relevant. Still, population numbers are not rendered irrelevant by Seager’s argument. Other things being equal, two hundred beef-eating, car-driving, fossil-fuel-dependent people are going to put more pressure on the environment than one hundred. As Engelman argues:

Population growth constantly pushes the consequences of any level of individual consumption to a higher plateau, and reductions in individual consumption can always be overwhelmed by increases in population. The simple reality is that acting on both, consistently and simultaneously, is the key to long-term environmental sustainability.⁵³⁸

According to Boyd, scientists simplify ecological impact down to this formula: "Human environmental impact = Human population x Consumption of energy and resources per capita", where ‘Consumption’ includes associated waste.⁵³⁹ This formula obscures much complexity, in part because averaging out ‘Consumption’ treats each person as if they consume/waste precisely the same energy and resources. A mathematical representation that maps more tightly onto our society would add up the varying amounts of consumption/waste of each person in a particular population pool. “What matters to the environment are the sums of human pulls and pushes, the extractions of resources and the injections of wastes.”⁵⁴⁰ Nevertheless, on either formula, the ecological impacts of population retreat can be more than offset by increases in consumption/waste; the ecological impacts of reductions in consumption/waste can be more than offset by population growth. Under either scenario, ecological impacts can be expected. To recognize the relevance of both population numbers and consumption/waste to ecological degradation, I include both factors in the material dimension of the concept of population demands. The label ‘population demands’ serves as short-hand for population numbers

⁵³⁸ Engelman, 2009:23. Jacobsen (1995) runs a similar argument in relation to global sustainability, suggesting that North and South must undertake “prompt, simultaneous work on both population and consumption if the world is to move to greater sustainability” (at 259); “[w]ithout action on both fronts, sustainability has only the faintest of hopes” (at 272). Boyd (2003) is in the same camp (at 287).

⁵³⁹ Boyd, 2003:276. However, the concept of population demands is not reducible to a numerical value. As framed here, population demands include population pools/flows, consumption/waste, and underlying rules. The concept is qualitative, and identifies a problem to be re-solved, not an equation to be solved.

⁵⁴⁰ Engelman, 2009:24-25.

and consumption demands. Put simply, problematizing population demands aims to problematize the material scale of the human enterprise.⁵⁴¹

Going forward, hundreds-of-millions of Can-Americans (and counting) need at least a subsistence level of consumption to live, and even subsistence creates demands for food, water, timber, fibre, and fuel, and on waste sinks. Poorer people in Can-America (and elsewhere!) demand a higher material standard of living than subsistence, and the already well-off seek even higher levels of affluence than they enjoy today.⁵⁴² These growing consumption demands translate into heavier demands on ecosystems, and threaten to contribute to further ecological degradation.⁵⁴³ To think of both population numbers and consumption/waste as parts of a problem relevant to ecological degradation seems inescapable. No number of people can be separated from their consumption for long. Like a city enclosed under a tightly-fitting dome, separate me from my immediate material needs,⁵⁴⁴ and my material existence soon ceases. My life ends not long after my consumption does. In macro terms, without consumption/waste, no population pool can sustain itself, and likewise, without population pools, no consumption/waste can occur. The same can be said of ‘p-word’ problem formulations. In relation to eco-degradation, problematizing either population numbers or consumption/waste as if one can exist ‘over there’ without the other is to fatally wound the formulation.⁵⁴⁵

Re-positioning the ‘p-word’ as one part of *population demands*, with consumption/waste as its partner, plants the epicentre of ‘the population problem’ in the US. America is

⁵⁴¹ The material dimension of the population demands concept is similar to what Wackernagel & Rees (1996) call “total human load” (at 127), what M’Gonigle (2002) calls “ecological flows” – “energy and resources (IN), and wastes and toxics (OUT)” (at 164), and what Daly (2008) calls “throughput” (at 512).

⁵⁴² Wackernagel & Rees (1996) see a similar issue meeting the needs of the poor and the wants of the well-off around the globe, in light of growing population pools and tightening ecological limits (at 154-156).

⁵⁴³ MEAB, 2005:80.

⁵⁴⁴ In this paragraph, I use the word ‘need’ in its strict survival sense, not in the loose language of the techno-consumer who ‘needs’ a new iPod or iPad.

⁵⁴⁵ The population demands concept is not intended to suggest that consumption or waste increase in lock-step with population numbers. Although “[s]ome wastes – sewage for instance – are produced in nearly direct proportion to population size” (MEAB, 2005:117), the broader relationship is not so simple.

home to the third-largest population pool on the planet,⁵⁴⁶ and is projected to account for more population growth over the next 40 years, in absolute terms, than China or Bangladesh.⁵⁴⁷ Moreover, the average person living in the US consumes and wastes many times more resources than the average person living in the developing world. W&R's initial calculations suggested that, in the mid-90s, the average American stomped with an ecological footprint almost 13 times larger than the average East Indian.⁵⁴⁸ With its large population pool, significant population flow, and monstrous consumption/waste habits, the population demands exerted by the US on ecological systems around the planet are problematic, to say the least. According to Judith Jacobsen, Americans should not claim that they are exempt from any kind of population problem. Because each person "wields so much power in resource use and environmental harm, each person counts a great deal."⁵⁴⁹ Thus, "[i]f there is any merit in the claim that the United States has 'a consumption problem', then it logically follows that any population growth is an equally important problem."⁵⁵⁰ The same argument applies to Canada. The same argument applies not only to population growth, but to existing population pools. I count, and other high-impact consumers like me count. We count a great deal.

Can-American population demands are of global concern, because "[i]t is widely understood that the industrialized North uses the lion's share of the world's resources and contributes the lion's share of the world's pollutants and other agents of environmental destruction."⁵⁵¹ To put it mildly, "the ecosystems that actually support typical industrial regions lie invisibly far beyond their political and geographic boundaries".⁵⁵² This is not to attack all Can-American reproduction, any more than interrogating our

⁵⁴⁶ As of 2005, China was first most populous at 1.3 billion; India second at 1.1 billion; the US third at 0.3 billion (UNPD Population Database, 2008).

⁵⁴⁷ UNPD Press Release, 2009:5 (at para. 11). To check the math, see UNPD Population Database, 2008: Between 2010 and 2050, on 'medium variant' assumptions, the following growth is expected: USA +86M, from 318M to 404M; China +63M, from 1.354B to 1.417B; Bangladesh +58M, from 164M to 222M.

⁵⁴⁸ Wackernagel & Rees, 1996:85 (5.1 hectares versus 0.4 hectares, respectively).

⁵⁴⁹ Jacobsen, 1995:272.

⁵⁵⁰ Jacobsen, 1995:271.

⁵⁵¹ Jacobsen, 1995:268. Ehrlich & Ehrlich (2009) write that the US share of world population is less than 5%, yet it consumes almost 25% of the planet's resource flows (at 65).

⁵⁵² Wackernagel & Rees, 1996:15, 29.

consumption/waste is to attack everything we do. *People doing* is necessary and desirable. But this line of argument is meant to support the modest claim that, in relation to global ecological degradation, Can-American population numbers and consumption/waste are tightly intertwined. Our “[p]opulation is not a contrasting force to consumption but something very close to its parent.”⁵⁵³

Population Demands: Adding a Regulatory Dimension

“Any proposed description or solution of a population problem that does not include all four of population, environment, economy and culture is incomplete.”⁵⁵⁴ I’ve discussed population numbers, ecological degradation, and consumption/waste as parts of a problem;⁵⁵⁵ now I add a cultural component. I propose a problem formulation with two layers. The first is a material layer that can be seen transforming ecological systems. This layer is composed of population numbers together with consumption/waste - *a number of people doing*. The second is a cultural layer, or more precisely, a regulatory layer. Many rules in force within Can-America aim to steer our bodily numbers and our consumption habits. In my view, a peculiar sub-set of these rules *demand* more children and consumption from many, perhaps all of us. And so, my problem formulation, called population demands, encircles these very specific rules.

Many rules could be important here, to the extent that they attempt to shape people’s reproduction and consumption decisions. Many state-made laws could be judged relevant,⁵⁵⁶ and many non-state rules as well,⁵⁵⁷ some persuasive, some coercive, some old, some new, differing from jurisdiction to jurisdiction, from group to group, from

⁵⁵³ Engelman, 2009:26.

⁵⁵⁴ Cohen, 1995:387.

⁵⁵⁵ Consumption is integral to our economy, and waste is its consequence. Thus, I can check ‘economy’ off Cohen’s list. I discuss economic imperatives as a part of population demands, later in this chapter.

⁵⁵⁶ For example, Quebec has implemented pro-natal policies, including \$7 per day child care, child care services, family assistance, and parental leave (OECD, 2005:23, 100-101, 148, 236-237). In Ontario, my vasectomy was covered by the provincial health care plan, a regulation that might be considered anti-natal.

⁵⁵⁷ For example, rules made by men in relation to their female partners, with the threat of break-up, insult or abuse attached; rules made by parents in relation to their adult children, with the threat of the silent treatment or lost inheritance attached; norms made among friends or community members, with the promise of social approval or the threat of social stigma attached. Like law, specific rules with sanctions made within specific social circles can coerce a person toward a particular reproductive or consumptive decision.

household to household, from person to person.⁵⁵⁸ No researcher could hope to review all state-made laws, or all non-state rules, from anyone's unique perspective, weigh them, and judge their net or overall intent. No person could assess which rules are effective, or which are most effective, in terms of achieving their regulatory intentions. Wide-angle, first-person pluralism, reflecting the complexity, uncertainty, and diversity of perspectives characteristic of large-scale social-ecological systems, simultaneously opens and chokes any thorough regulatory analysis. But it is not necessary to sweep every rule relevant to our reproduction or consumption into my problem formulation. Instead, I focus on the most obvious and egregious society-and-ecology-threatening rules that jump out of my own webs of significance. The next sections focus tightly on these few rules, the way a practising lawyer focuses on a few 'bad laws'. The goal is to persuade others to reinterpret, unmake and/or defy these rules - even if other 'good' ones might mitigate the 'bad'. In short, population-UP control and consumption-UP control are made parts of a problem called population demands.

Population-UP Control: The Rule of the Catholic Church

What is 'population control'? One of the most extreme examples I can imagine is the one that Atwood did. In *The Handmaid's Tale*, a woman, who is a virtual prisoner to an authority figure, must have sex with him when she is ovulating, and contraception is obviously not an option, because the whole point is to produce children in a society where the theocratic authorities judge these rules necessary.⁵⁵⁹ A woman's reproductive wishes are subordinate to the rules. And noncompliance attracts deadly sanctions: in the novel, deviant women are publicly hanged, or simply disappear.⁵⁶⁰ One of the most extreme real-world examples I know is the one-child policy launched in China,

⁵⁵⁸ The rules discussed in rest of this chapter jump out of my own regulatory webs. Your webs of significance will differ, to some degree. My analysis may ring hollow if you were not raised Catholic, or if you are not struck by certain social norms, for example. You may perceive other rules as more important to your reproductive/consumptive decision-making. My problem definition does not aspire to be universal or exhaustive. The concepts and categories presented here are open-ended, and may change radically depending on time, place, circumstance, and especially personal perspective.

⁵⁵⁹ Although Offred herself does not characterize the sex as forced; she believes she had a choice between the Commander's home and something else, something worse? And she chose the former. Nevertheless, sex for the purpose of procreation is clearly her duty (Atwood, 1985:116-118).

⁵⁶⁰ Atwood, 1985:352-359; 368.

beginning in late 1979.⁵⁶¹ “This was to limit family size to one child for all newly wed couples”,⁵⁶² with some exceptions,⁵⁶³ for the purpose of limiting total population in China to 1.2 billion by the year 2000.⁵⁶⁴ Again, a woman’s reproductive wishes (and her partner’s too) were subordinate to the rules.⁵⁶⁵ And noncompliance could attract coercive, even violent, sanctions: stiff fines, later framed as social compensation fees;⁵⁶⁶ coerced sterilizations,⁵⁶⁷ forced abortions.⁵⁶⁸ Millions of women were traumatized.⁵⁶⁹ In the Gilead of Atwood’s imagined future, rules aim to coercively boost the number of births in society; in China, rules aim to coercively hold birth numbers down.⁵⁷⁰

In 1990, Linda Gordon offered the following definition of population control: “the attempt in modern history to lower birth rates on national or regional scales, for the purpose of improving the standards of living of large groups.”⁵⁷¹ Gordon’s definition is too narrow for the purposes of this thesis, because it would exclude attempts to move birth rates UP. At the same time, the definition is too wide because it would catch efforts to distribute free contraception to people otherwise unable to find or afford it, if the purpose is to reduce birth rates. Birth rates can be expected to fall if people without

⁵⁶¹ Liang & Lee, 2006:15; Greenhalgh & Winckler, 2005:93. The policy was rolled-out beginning in late 1979; attempts at severe national enforcement began in 1983 (Greenhalgh & Winckler, 2005:93-109).

⁵⁶² Liang & Lee, 2006:15.

⁵⁶³ For example, by the mid-1980s, a common local exception was to allow rural families with one child to have a second child, if their first was a daughter (Liang & Lee, 2006:16, 18; Greenhalgh & Winckler, 2005:95).

⁵⁶⁴ Liang & Lee, 2006:15. The year 2000 target was later adjusted to ‘about 1.2 billion’, then ‘1.3 billion’ (Greenhalgh & Winckler, 2005:96). In 2000, China projected that its population would peak at 1.6 billion by the middle of this century, then gradually retreat (Liang & Lee, 2006:18).

⁵⁶⁵ And “tension between the government’s demand on local officials and the wish of the rural people boiled” (Liang & Lee, 2006:16).

⁵⁶⁶ Greenhalgh & Winckler, 2005:95, 109.

⁵⁶⁷ Greenhalgh & Winckler, 2005:125.

⁵⁶⁸ “The local enforcement of the one-child policy by the village Party officials was inevitably translated into forced abortion” (Liang & Lee, 2006:15). Fresh efforts to abort all out-of-plan pregnancies were initiated provincially between 1989 and 1993 (Greenhalgh & Winckler, 2005:125).

⁵⁶⁹ Greenhalgh & Winckler, 2005:112. Serious social consequences arose including “infanticide, child-abandonment, and infant sex-ratio imbalance” (at 111).

⁵⁷⁰ Since the mid-1980s, China’s one-child policy has been decentralized to allow for local variations, and reformed to allow for more exceptions and softer enforcement (Liang & Lee, 2006:16). The policy is still ‘population control’, on my definition, but has moved away from its coercive zenith.

⁵⁷¹ Gordon, 1990:387.

access to contraception suddenly receive and embrace it, but without rules to coerce people into contraceptive use, how can simple tool distribution amount to *control*? Making contraception widely and freely available, without any ‘you-must-use-it’ rule-making, is not population control as I define it, because women and men would enjoy a greater degree of control over their own reproductive systems, and therefore more people are in a better position to give effect to their own reproductive preferences.⁵⁷²

To Ehrlich, “[p]opulation control is the conscious regulation of the numbers of human beings to meet the needs, not just of individual families, but of society as a whole.”⁵⁷³ A significant strength of Ehrlich’s definition: It does not exclude schemes that aim to boost birth rates. A serious weakness: It leaves room for ‘death-rate solutions’, because it talks of human numbers as opposed to birth rates. Another weakness: It implies that the needs of families and of society can all be met through population control. But for a population control scheme to have any work to do, authorities must perceive that the needs of society diverge, to some degree, from the needs of families; otherwise, why bother with it?⁵⁷⁴ It’s only when authorities put rules in place to coercively trump reproductive preferences, it’s only when we are pushed and shoved in a particular reproductive direction, that we can talk about attempted control by authorities over people’s decisions. If people enjoy primary control over their own reproduction under a specific regulatory scheme, then it is not the kind of population control that I am talking about. Ehrlich’s definition obscures degree and locus of reproductive control, as does Gordon’s.

For the purposes of this thesis, my definition is this: Population control is an attempt by (de)centralized authorities to move the number of births among people under that authority in a specific direction (i.e. up or down, or held steady), through coercive rules

⁵⁷² Ehrlich (1968) quoted K. Davis with approval: “ ‘By stressing the right of parents to have the number of children they want, it [family planning] evades the basic question of population policy, which is how to give societies the number of children they need. By offering only the means of *couples* to control fertility, it neglects the means for societies to do so’ ” (at 82-83; original emphasis). See Ehrlich, Ehrlich & Holdren (1973): “family planning is traditionally oriented to the needs of individuals and families, not of societies. *Family planning and population control are therefore not synonymous*” (at 239; original emphasis).

⁵⁷³ Ehrlich, 1968:11.

⁵⁷⁴ Despite his definition, Ehrlich (1968) agreed that an objective of population control is to give ‘society’ control over reproductive decisions (at 82-83).

with sanctions applicable regardless of people's reproductive preferences. The authorities might be centralized, like the state or the Church, or might be de-centralized, like dispersed yet respected figures who take an active hand in shaping family rules or social norms. The authorities might create a scheme of population control by way of state-made law, if the authority is the government, as in China. Or the authorities might create a scheme of population control by way of non-state rules, if the authority is not the government, as with the Catholic Church. And again, attempted control over birth rates can be aimed in any direction; the aim of this conception of population control isn't necessarily to lower the number of births. Population-UP control is a rule-based scheme that aims to push a number of births in an upward direction.

On this definition, the heart of population control is coercive rule-making together with sanction-delivery; the intent is to move the primary locus of reproductive control away from potential parents; and a careful consideration of specific rules and their sanctions is crucial to deciding whether a rule deserves the label, and the associated stigma. If control over reproductive decision-making rests primarily in the hands of potential parents, then it is not population control, as I define it. A no-fee nation-wide child care program, for example, is not national population control on my definition, even if explicitly enacted to boost birth rates. Few people would perceive this program as an attempt to wrestle reproductive control away from them, in contrast to the coercive schemes imagined in Gilead or enacted in China. A no-fee nation-wide contraception distribution program is not national population control on my definition, even if explicitly introduced to lower birth rates, for the very same reason. Population control is an attempt by centralized or de-centralized authorities to assume primary control over reproductive outcomes; it grasps at decision-making control over reproduction. On this view, helping people to exercise a higher degree of personal control over their own reproduction, helping them to better realize their own reproductive preferences, is not population control.

In more specific terms, a rule could hit a person's *physical ability* to exert control over their own reproductive systems. For example, if contraceptives are declared illegal and made unavailable in a particular social context, and if the goal is more births than otherwise, then that's an example of population control aimed up, on my definition. If a

rule drives doctors to coercively sterilize people, and if the goal is fewer births than otherwise, then that's an example of population control aimed down, on my definition. In each example, women or men would lose all or much control over the reproductive potential of their own bodies. Some people's reproductive preferences would be trumped by an authority's wish for more or fewer births in society. Alternatively, a rule could hit people's *perceived ability* to choose a reproductive outcome. Women may have access to abortion, for instance, but may believe they 'can't' access it in spite of wishing to do so, thanks to a rule forbidding it. Here, the rule may be characterized as population-UP control.⁵⁷⁵ I assume that these regulatory schemes routinely impose more than small sanctions, either rewards or punishments, for (non)compliance, so that the rules are not easily ignored. For example, Catholic doctrine aims to shift the locus of reproductive control away from potential parents and toward God as decision-maker and rule-enforcer. The goal, I would suggest, is more Catholics. The threat of eternal damnation hits the non-compliant.

It is time to hit those Catholic rules. According to the book of Genesis, the first-ever command issued by God to humans was this: "Be fruitful, and multiply, and fill the earth, and subdue it; and have dominion over the fish of the sea, and over the fowl of the air, and over every living thing that moveth upon the earth."⁵⁷⁶ Later, we're told that our multiplication suffered serious subtractions due to flash flooding, so God re-issued his command to the few remaining survivors, this time with feeling: "Be fruitful, and multiply, and fill the earth. And the fear of you and the dread of you shall be upon every beast of the earth, and upon every fowl of the air, upon all that moveth upon the earth, and upon all the fish of the sea; into your hand are they delivered."⁵⁷⁷ If I had to pick one rule on Earth that best fits peoples' collective behaviour on and toward this planet, the

⁵⁷⁵ Abortion is a much more complicated issue than contraception, in part because of serious debates about when human life begins. If most people in a society are uncomfortable with unrestricted access to abortion in the third trimester, for example, then I would be reluctant to label a law that reflects this consensus as 'population-UP control.' However, if Church or state outlaws all abortion with tough penalties, despite a contrary social consensus, for example, then the argument for framing the rule as 'population-UP control' gains much strength. Debating the abortion issue any further is beyond the scope of this thesis.

⁵⁷⁶ Scofield, 1967:4 (Genesis 1:28). It may be unconventional to cite the bible by reference to its editor, but this document did not write itself, and the editor's name is the only human name on the title page.

⁵⁷⁷ Scofield, 1967:14 (Genesis 9:1-9:2).

multiply-and-subdue command in Genesis would be it. In particular, many European settlers, collectively speaking, have multiplied mightily,⁵⁷⁸ we've displaced Indigenous peoples in Can-America,⁵⁷⁹ we've denuded their lands, we've fouled the fowl, we've fouled the air, we've made it our mission to subjugate just about every other living thing that swims, walks, or crawls. The god of the bible should be suitably impressed.

If the bible's multiply-and-subdue command remained hermetically sealed in a category called 'religious doctrine', if it remained confined to churches and worshipped nowhere else, a theorist may see little cause for concern. But John Locke, a founding father of the capitalist state, relied explicitly on this command to help support his influential argument in favour of private property and colonial domination,⁵⁸⁰ and these regulatory structures help support our hierarchical and exploitative political economy.⁵⁸¹ And Thomas Malthus, a Reverend and economist, relied explicitly on this command to help build his infamous essay opposing contraception,⁵⁸² and advocating population growth in proportion to food growth until the Earth is full;⁵⁸³ incidentally, Malthus was also a

⁵⁷⁸ Heinberg (2005) refers to "the European takeover of most of the rest of the planet throughout the past 500 years", thanks in part to dense populations and powerful weapons flowing out of Europe (at 24).

⁵⁷⁹ "Through centuries of domination, then, Native people have witnessed the decimation of their populations and the loss of land and livelihood. At the same time, they have been spectators to their oppressors' growing numbers, landbase, wealth, and power" (Churchill, 2003:179). In relation to First Nations in BC, Shaw (2004) acknowledges the "massive social disruption at least partly as a result of being denied access to their land" (at 377).

⁵⁸⁰ Locke (1960) writes: "...subduing or cultivating the Earth, and having Dominion, we see are joynd together. The one gave Title to the other. So that God, by commanding to subdue, gave Authority so far to *appropriate*. And the Condition of Humane Life, which requires Labour and Materials to work on, necessarily introduces *private Possessions*" (at 310, s. 35; original emphasis). So "...let him plant in some in-land, vacant places of *America*...[this would not] prejudice the rest of Mankind, or give them reason to complain, or think themselves injured by this Man's Incroachment...Nay, the extent of *Ground* is of so little value, *without labour*..." (at 311, s. 36; original emphasis). "For I aske whether in the wild woods and uncultivated wast of America left to Nature, without any improvement, tillage or husbandry, a thousand acres will yeild [sic?] the needy and wretched inhabitants as many conveniences of life as ten acres of equally fertile land doe in Devonshire where they are well cultivated?" (at 312, s. 37). See ss. 26 and 32 for similar outgrowths from Genesis. It appears that Indigenous peoples, dismissed by Locke as 'needy and wretched', did not count to him as part of mankind, because they were far more than 'prejudiced' by European settlers' mass appropriation of so-called 'wast' land throughout the space I call Can-America.

⁵⁸¹ M'Gonigle, 2002:166-167; Cahn, 1995:5-8.

⁵⁸² Malthus, 1992:368-369.

⁵⁸³ Malthus, 1992:330, 334-335.

righteous defender of private property.⁵⁸⁴ And Julian Simon, a population economist, relied in part on “the best of Judeo-Christian-Islamic culture”⁵⁸⁵ and “this value for more life”⁵⁸⁶ and his faith in “a cost-benefit standard of evaluation”⁵⁸⁷ to argue for more and more people, even if that meant denying women contraception,⁵⁸⁸ because if “some lives are prevented unnecessarily from occurring, that is an obvious loss”.⁵⁸⁹ And Clifford Orwin, a professor of political science at UofT and distinguished visiting fellow at Stanford, relied on this command when he recently and publicly prescribed that people contemplating parenthood have as many kids as they can; God commands it and nature welcomes it.⁵⁹⁰ Religious rules have inspired many people, forming their regulatory bedrock. Religious rules can merge into personal values and/or economic dogma and/or wider culture, as the work of Locke, Malthus, and Simon shows us, and religious rules can cut right through, as Orwin recently announced. By the public confessions of true believers, religious rules govern, even in our so-called secular society. And rules, religious or otherwise, can become detached from their original sources, can be spun out of one social context and into many others, whether or not supported by state-made law. Leane takes this argument a step further:

...the idealized form of any kind of personal or group-held belief can continue to inform our behaviour *at levels too deep for us even to be aware*. They become reified (the abstract made real in the way we think of our ‘other relations’) and hegemonic (a dominating cultural norm). Whether they literally work...is not the point here – the point is whether or not we still believe in them, whether or not they continue to permeate our consciousness and inform our behaviour.⁵⁹¹

The bible’s multiply-and-subdue command is an idealized form of a group-held belief that has been around for so long, passed down through so many generations, that it may inform commonly-and-deeply-held beliefs even among non-religious people. Depending

⁵⁸⁴ Malthus, 1992:58, 64, 210, 331 (defending private property as beneficial to society, even inevitable).

⁵⁸⁵ Simon, 1977:504.

⁵⁸⁶ Simon, 1977:504.

⁵⁸⁷ Simon, 1977:479.

⁵⁸⁸ Simon, 1977:479.

⁵⁸⁹ Simon, 1977:505.

⁵⁹⁰ Orwin, 2009:para. 10 (“My own prescription for those contemplating parenthood is...Go ahead, have kids, the more the merrier. God has commanded it, and nature’s cool with it. Just don’t spoil them”).

⁵⁹¹ Leane, 1998:9 (regarding liberalism in particular, but also other idealized beliefs; emphasis added).

on your perspective, the command may be seen primarily as god-given, or not, maybe as nature-driven, or not, or maybe as just-the-way-things-are and simply beyond question – a dominating cultural norm. For many people, exploring and pursuing diverse personal preferences can slip to second place. From a high-level perspective, my argument aligns with Lynn White’s, written over forty years ago: “Certainly the *forms* of our thinking and language have largely ceased to be Christian, but to my eye the *substance* often remains amazingly akin to that of the past...We continue today to live, as we have lived for about 1700 years, very largely in a context of Christian axioms.”⁵⁹²

Looking ahead, if humanity follows god’s multiply-and-subdue command, (sub)consciously or coincidentally, to its logical conclusion, what command comes next? Once the Earth is fully full and fully subdued, once all wild life is thoroughly delivered to and choked by our hands,⁵⁹³ what is a god-fearing human’s next imperative? The last book of the bible tells us that angels shall defile and dry the rivers, kill the seas, and scorch the people.⁵⁹⁴ In other words, elements of eco-degradation appear: water pollution, water diversion, ocean death, and climate change. Perhaps today’s captains of Can-American industry have decided, in addition to their legal and business obligations, to do the duty of angels. And perhaps the first and last books of the bible, taken together, are the ultimate self-fulfilling prophesy. If our biblical introduction to god is his

⁵⁹² White, 1967:1205 (emphasis added). White and I tell different but compatible stories. The keystone axioms of White’s supporting argument relate to Christianity’s separation of humans from nature, and Christianity’s destruction of pagan animism. For example: “The spirits *in* natural objects, which formerly had protected nature from man, evaporated. Man’s effective monopoly on spirit in this world was confirmed, and the old inhibitions to the exploitation of nature crumbled” (at 1205; original emphasis). My argument focuses on one religious ‘law’: The biblical command to multiply-and-subdue. European settlers in Can-America have behaved accordingly, and often continue to do so, though the command seems to have spilled and morphed into secular rule-making.

⁵⁹³ Plumwood (2002) suspects that “the west’s sado-dispassionate cultural drama of reason and nature may unfold to a conclusion where the Hero of Reason chokes the life from his planetary partner in his final sadistic act of mastery” (at 22).

⁵⁹⁴ “And the second angel poured out his bowl upon the sea, and it became like the blood of a dead man; and every living soul died in the sea. And the third angel poured out his bowl upon the rivers and fountains of water, and they became blood...And the fourth angel poured out his bowl upon the sun...And men were scorched with great heat...And the sixth angel poured out his bowl upon the great river, Euphrates, and its water was dried up...” (Scofield, 1967:1367-1368; Revelation 16:3-16:4, 16:8-16:9, 16:12). Three other bowls of wrath are poured out: the first contains sores; the fifth contains darkness and pain, and the seventh unleashes hail storms and earthquakes (at 1367-1368; Revelation 16:2, 16:10, 16:17-21).

command to raise armies against nature, then our biblical conclusion is easy to foretell: terrible wounds to peoples and planet, and nothing left to do but be judged.

Like Malthus, the Catholic Church has spelled out strict reproduction-related rules as a form of ‘law’. Today, Church law prohibits virtually all forms of contraception, and abortion. But it didn’t have to be that way. The Church’s strict prohibition on abortion is less than 150 years old.⁵⁹⁵ And in the 1960s, a commission established by the Church issued a majority opinion that

the practice of birth control by means other than those involving abortion was wholly consistent with the Catholic view of marriage and sexuality, and that the method of birth control to be used can best be decided by the couple concerned. This opinion, the commission felt, fit directly into the teaching on responsible parenthood of the Second Vatican Council.⁵⁹⁶

The Church disagreed. Instead, it (re)asserted jurisdiction over human procreation, by (re)stating rules to prod people in a particular procreative direction. In July, 1968, Pope Paul VI addressed a doctrinal document to the Church hierarchy, and to the “faithful of the whole Catholic world, and to all men of good will, on the regulation of birth”.⁵⁹⁷

Under the heading “Unlawful Birth Control Methods”, these prohibitions appear:

all direct abortion, even for therapeutic reasons, are to be absolutely excluded as lawful means of regulating the number of children. ...Equally to be condemned, as the magisterium of the Church has affirmed on many occasions, is direct sterilization, whether of the man or of the woman, whether permanent or temporary. ...Similarly excluded is any action which either before, at the moment of, or after sexual intercourse, is specifically intended to prevent procreation - whether as an end or as a means...⁵⁹⁸

Thus, the Church prohibits modern contraception (e.g.’s condoms, intrauterine devices, sponges, spermicides, the pill, the morning-after pill), ancient contraception (e.g.’s coitus interruptus or ‘pulling out’; vaginal pessaries and douches, and other home remedies;⁵⁹⁹ indigenous herbs and methods⁶⁰⁰), temporary or permanent sterilization, and abortion.

⁵⁹⁵ “The Catholic Church did not prohibit abortion before ‘quickening’ – fetal movement beginning around the fourth month of gestation – until 1869” (Davis, 2006:100). See also Ris, 1976:105.

⁵⁹⁶ Ehrlich, 1968:142-143. See references to the commission in Encyclical Letter, 1969:para. 5-6.

⁵⁹⁷ Encyclical Letter, 1969:1.

⁵⁹⁸ Encyclical Letter, 1969:para. 14.

⁵⁹⁹ Davis, 2006:99 (listing ancient contraceptive techniques, but not linked to specific Church doctrine).

⁶⁰⁰ Churchill, 2003:178, 189-190 (access to medicinal plants and traditional knowledge central to Indigenous women’s reproductive freedom suffered when First Nations were cut off from their lands).

All are ‘unlawful’. Apart from periodic abstinence⁶⁰¹ and “unremitting prayer”,⁶⁰² Catholics are left with two narrowly applicable options to help ‘lawfully’ prevent pregnancy.⁶⁰³ On these options, people wishing to prevent pregnancy are going to need those prayers.

No sanctions are set out for rule (non)compliance in this doctrinal document,⁶⁰⁴ but under god’s law, the threat of after-life sanctions is ever-present. A Revelation helps dispel some uncertainty: People will ultimately be “judged out of those things which were written in the books, according to their works...[a]nd whosoever was not found written in the book of life was cast into the lake of fire.”⁶⁰⁵ Earthly sanctions, which are mild in comparison but can pack a punch in people’s perceptions, include gossip, shaming rituals, and social shunning.

These rules and sanctions are population control, aimed in an upward direction; this is population-UP control. Read together with the bible’s multiply-and-subdue command, these detailed Encyclical rules aim to pull reproductive control away from women and men, for the thinly-disguised goal of multiplying the faithful. “The Church...teaches that each and every marital act must of necessity retain its intrinsic relationship to the

⁶⁰¹ Encyclical Letter, 1969:para. 21 (note that “the practice of periodic continence” is acceptable).

⁶⁰² Encyclical Letter, 1969:para. 25 (“husbands and wives should take up the burden appointed to them...[to follow God’s law and] implore the help of God with unremitting prayer”).

⁶⁰³ First, sterilization-as-medical-side-effect, and second, the rhythm method. But read the fine print. First, the Church allows “therapeutic means necessary to cure bodily diseases, even if a foreseeable impediment to procreation should result there from - provided such impediment is not directly intended” (Encyclical Letter, 1969:para. 15). So a fertile person could lawfully undergo chemotherapy for cancer, for example, even if the person is rendered sterile, provided that the person does not wish to be sterile! What is the cancer victim’s duty if they *do* wish to be sterile? Is treatment then rendered unlawful? The Encyclical is silent. Second, if “there are well-grounded reasons...arising from the physical or psychological condition of husband or wife, or from external circumstances...married people may then take advantage of the natural cycles immanent in the reproductive system and engage in marital intercourse only during those times that are infertile” (at para. 16). So if a person is unmarried, the rhythm method is off-limits, or if a married person is able-bodied, able-minded, and otherwise equipped by circumstance to care for offspring, the rhythm method is off-limits. If these two options are labelled as reproductive self-determination, then the concept is nearly empty.

⁶⁰⁴ The Church does set out potential consequences of noncompliance, including marital infidelity, moral decay, and objectified women (Encyclical Letter, 1969:para. 17). By ‘sanctions’, I mean rewards or punishments attached to rule (non)compliance, and handed out by (de)centralized authorities.

⁶⁰⁵ Scofield, 1967:1375 (Revelation 20:12, 20:15). “The dead” will be judged, and Scofield’s footnote explains that “the ‘dead’ can only be the wicked dead, from the beginning of human history to the setting up of the great white throne in space” (at 1375).

procreation of human life.”⁶⁰⁶ And to the Church, people “must also recognize that an act of mutual love which impairs the capacity to transmit life which God the Creator, through specific laws, has built into it, frustrates His design which constitutes the norm of marriage, and contradicts the will of the Author of life.”⁶⁰⁷ These Encyclical rules explicitly aim *to prevent the prevention* of procreation, and shift control toward ‘His design’, ‘His will,’ in part by prohibiting contraception,⁶⁰⁸ in part by coercing pregnant women into carrying pregnancies to term, regardless of the potential parents’ reproductive preferences. Can-America is not Gilead; those two worlds should not be equated. But population-UP control is “a sort of ‘farming’ of women”.⁶⁰⁹

To the extent that fertile, sexually-active, hetero-couples obey a set of religious rules obliging them to reproduce whenever they can manage it, or insofar as they obey a general prohibition on contraception⁶¹⁰ and abortion, then they can expect children, perhaps many children. And that’s the point. On Genesis 1:28, multiplication is God’s first command. God demands larger population pools; the Church codifies his population demands. To the men leading the Catholic Church, and they are all men, and to true believers, this is God’s law. As Catholics, Kathy and I are guilty of breaking laws the Church interprets but denies making.⁶¹¹ And god is the ultimate enforcer.

Consumption-UP Control: A Close Sibling

Both Catholicism and capitalism share reproductive commands; both do more than passively promote the procreation of new church-goers, new consumers. For starters, population-UP control can work to boost total consumption; new church-goers *are* new consumers. To Múnera, “the richest Catholic capitalist owners of resources, are the most conservative defenders of ideological capitalism. Some of them think that Pope John

⁶⁰⁶ Encyclical Letter, 1969:para. 11.

⁶⁰⁷ Encyclical Letter, 1969:para. 13.

⁶⁰⁸ Subject only to two very narrow exceptions described above.

⁶⁰⁹ Atwood, 1985:396.

⁶¹⁰ Subject only to two very narrow exceptions described above.

⁶¹¹ “Since the Church did not make either of these laws [natural or evangelical, being moral law], she cannot be their arbiter - only their guardian and interpreter” (Encyclical Letter, 1969:para. 18). Thus, the Church writes that it is not the maker of the moral law, but its protector, its spokesperson, a sort of conduit.

Paul II in his encyclical ‘Centesimus Annus’ has approved capitalism as a wonderful system.”⁶¹² Further, capitalist dogma appears to be a malignant outgrowth of biblical rules, with private property laws taken as gospel, thanks in part to the arguments of Locke, Malthus, and Simon. The sweeping growth imperatives⁶¹³ promulgated by influential religious and economic officials could easily be interpreted as applicable to both population numbers and consumption demands. Thus, I could characterize both Church doctrine and economic dogma as population-UP control, or as consumption-UP control, or as both; the two blur together. But bundling too many rules together could confound my analysis and tangle my arguments. So, despite obvious overlaps, and for the sake of simplicity and brevity in the service of advocacy, I take the easier case. In this thesis, I frame only specific Catholic doctrine as population-UP control, and only specific economic dogma as consumption-UP control.

For the purposes of this thesis, my definition of consumption control is this: An attempt by (de)centralized authorities to move the general consumption demands of people under that authority in a specific direction (i.e. up or down, or held steady), through coercive rules with sanctions.⁶¹⁴ Again, coercion is key. If a rule simply prescribes that people consume the way they already consumed, it cannot be said to be *control*. The rule must push people toward beliefs/behaviours that would be inconsistent with their preferences, but for the rule; otherwise, why bother with it? Many state-made laws and non-state rules might fit into the category of consumption control,⁶¹⁵ but my focus is on economic dogma. Two new challenges arise. First, to my knowledge, no official regulatory documents exist in relation to this peculiar sub-species of consumption control. Second, sanctions for rule non-compliance are also decentralized and inconspicuous. In other

⁶¹² Múnera, 2000:73 (Múnera argues against this interpretation).

⁶¹³ “Among the swirl of ideas, policies, and political structures of the twentieth century, the most ecologically influential probably were the growth imperative and the (not unrelated) security anxiety that together dominated policy around the world. Both were venerable features of the intellectual and political landscape, and both solidified their hold on imaginations and institutions in the twentieth century. Both, but particularly the growth imperative, meshed well with... trends and trajectories” (McNeill, 2000:355).

⁶¹⁴ This definition runs in close parallel to my definition of ‘population-UP control’, but without the words ‘applicable regardless of people’s wishes’. In contrast to reproductive decision-making, authorities’ demands and peoples’ wishes on consumption seem so well merged as to be virtually indistinguishable.

⁶¹⁵ For example, if immigration laws aim to import more people than are exported, or if state-made subsidies aim to promote local tourism, then a boost to local consumption demands can be expected.

words, I find no centralized set of rules controlling people's general consumption decisions, coercing them to consume more or less, in general, or sanctions will flow. Environmental laws largely ignore unsustainable consumption, focusing in a limited way on consumption *patterns* rather than consumption *levels*.⁶¹⁶ "Consuming better, not consuming less!"⁶¹⁷ To fixate on environmental laws, or state-made laws in general, would miss much of what is going on. De-centralized authorities are spinning specific economic dogma into an insidious and pervasive set of sticky social norms, and (non)compliance invites de-centralized sanctions. In short, our capitalist society demands more demand. This rule is not imposed by statute, but it has not gone undocumented.

M'Gonigle and Ramsay note "the paradigm of continued economic growth...[and] more resource development...[in line with] the industrial worldview...We *do* need more planes, more oil and more coal."⁶¹⁸ That is, we are driven by 'law' to believe we do.

McNeill offers a historical perspective: "The overarching priority of economic growth was easily the most important idea of the twentieth century."⁶¹⁹ And a paramount priority for decision-makers, with the threat of sanctions attached, is a rule.

Daly compares mainstream economics to religion, and the World Bank to a church "peddling its crackpot dogma of salvation by growth."⁶²⁰ In Can-America, this crackpot dogma is peddled and enforced in part by de-centralized authorities.

⁶¹⁶ Salzman, 1997:1243, 1253. At least up to 1997, "no country's laws have addressed the environmental impacts of consumption in a systematic manner. In the United States...laws have largely focused on the impacts of production [e.g. pollution control]. A few regulations directing consumption patterns do exist, such as the mandates for lead-free gasoline and energy appliance labeling, and the recent green government procurement standards, but one has to look hard to find laws of this type...Why are consumption laws such a weak sibling of production [e.g. waste] laws? Primarily because issues of sustainable consumption go to the very heart of societal norms such as lifestyle...that cannot be easily resolved in the legislature or courtroom. As an American diplomat candidly remarked in preparing for the Earth Summit, 'the American lifestyle is not up for negotiation'" (at 1255; footnotes omitted).

⁶¹⁷ M'Gonigle & Ramsay, 2004:337.

⁶¹⁸ M'Gonigle & Ramsay, 2004:334-335.

⁶¹⁹ McNeill, 2000:336.

⁶²⁰ Daly, 2007:35.

Even from the perspective of experts on religion, “Growth is God”,⁶²¹ and we share a collective “*need* for growth: the never-satisfied desire for an ever-higher ‘standard of living’ (because once we define ourselves as consumers we can never have too much) and the gospel of sustained economic expansion (because corporations and the GNP are never big enough).”⁶²² To Loy, our ‘needs’ and ‘desires’ become virtually interchangeable under capitalism;⁶²³ “both are treated as normative”.⁶²⁴

Perhaps Speth hits the nail the hardest. He sees the rule of growth as a partial underpinning for the specific material factors problematized within the concept of population demands: “Behind these immediate drivers – population, affluence [...and others] lie a set of deeper factors...[One of these] is the ‘growth at all costs’ imperative.”⁶²⁵ Crucially, social-ecological degradation flows from following the rule, and social sanctions flow from flouting it.

Who are the rule-makers and enforcers? Many economists⁶²⁶ and captains of industry appear among them. You *must* buy, buy, buy, they tell us, more, more, more. Collectively speaking, tough sanctions follow deviant behaviour: job cuts, for example. Conversely, attractive rewards follow obedient behaviour: jobs for all! The NY Times’ award-winning economist, Paul Krugman, recently asserted that the US suffers no structural problems: “all the facts suggest that high unemployment in America is the result of inadequate demand — full stop”.⁶²⁷ On this view, the regulatory solution is simple: Demand more demand!

⁶²¹ Maguire, 2000:8.

⁶²² Loy, 2000:20 (emphasis added).

⁶²³ “Economic theory, like the market itself, makes no distinction between genuine needs and the most questionable manufactured desires...It makes no difference why one wants something” (Loy, 2000:26).

⁶²⁴ Loy, 2000:26.

⁶²⁵ Speth, 2003-2004:783.

⁶²⁶ McNeill (2000) traces the history of economic thought through the twentieth century, in America and beyond (at 335-336). He argues that American economists “infiltrated the corridors of power and the groves of academe, provided expert advice at home and abroad, trained legions of acolytes from around the world, wrote columns for popular magazines – they seized every chance to spread the gospel. Their priesthood tolerated many sects, but agreed on fundamentals. Their ideas fitted so well with social and political conditions of the time that in many societies they locked in as orthodoxy” (at 335). This orthodoxy included a “growth fetish”, and saw nature “as a storehouse of resources waiting to be used” (at 335-336).

⁶²⁷ Krugman, 2010:para. 2.

I don't deny that consumption demands keep people in their jobs. People keep their jobs to consume more themselves, and more consuming keeps other people on the job. But the demand for demand *is* structural. "Since elaborate machines are expensive, they do not pay unless large amounts of goods are produced. They can be worked without a loss only if the vent of the goods is reasonably assured".⁶²⁸ Service industries are not much better off; without ample consumption demands, profiteers cut people. To the extent that profit-driven innovation displaces workers, it can only be tolerated as long as the whole monstrous machine grows bigger; new jobs are presumed to pop up elsewhere. Conversely, without growing consumption demands, the machine begins to convulse, it begins to eject people. The captains are quick to highlight this hard truth, one they have worked hard to create. They recite the rule, they make the threats, they make the cuts. The rule of growth helps ensure that "at a practical level development interests can subvert such environmental issues as the long-term viability of forestry practices with the simple veiled threat to jobs."⁶²⁹ Simon unveils the threat concisely: "I believe that only the demands placed on people by the necessity of making a living constrain the flights of fantasy and excitement of prophecies" made by environmentalists and believed by others.⁶³⁰ What penalty is worse than a fine, worse than jail time, in the minds of many? Lost livelihoods, and desperate families. Don't defy the rule of growth, or else.

This rule-with-sanctions seems particularly potent at the political level. National and regional politicians tend to watch GDP and unemployment figures like children watch their grades. An axiom, applied to state leaders, that 'you must promote growth, or economic indicators will falter', is analogous to a household rule applicable to children, that 'you must study hard, or your grades will slip.' Poor grades can be ego-bruising, but even stiffer sanctions can flow. If parents judge that their child's failure to study led to poor grades, then the child may be grounded, a form of social ostracization. If voters judge that their elected representative's failure to promote growth led to higher unemployment, then the representative may be voted out of office, an extremely public

⁶²⁸ Polanyi, 2001:43 (footnote omitted).

⁶²⁹ Leane, 1998:25.

⁶³⁰ Simon, 1995:23.

form of social shunning. If business leaders judge *any* elected representative as responsible for a recessionary economy and therefore declining business prospects, then the representative may never see the financial support needed to (re)run for office. Here, withholding a reward can be perceived as another form of public scolding, another shame-inducing sanction. The rule-making, behaviour-shaping potential of these and other sanctions should not be ignored. In effect, the people who vote for pro-growth candidates, and the captains who donate to pro-growth campaigns, are helping reinforce the rule of growth, are helping make and enforce ‘law’ applicable to the very people who lead the state.⁶³¹ Has this ‘law’ aimed at actual and potential law-makers become so powerful that anti-growth or pro-stability political parties are essentially prohibited in Can-America?

But the rule of growth is more dreadful than this. Decades of growth-peddling and fear-mongering have helped cement a rule that is all-pervasive, a hegemonic belief, a blind faith, in never-ending growth. Simply put, “growth is the dominant value around which our society is organized”.⁶³² Relentless public and private rhetoric regarding the need for growth, with (un)veiled threats attached, seem to leave a legacy of toxic social norms. It seems imperative that each of us work ever-harder, to consume not just what we need, not just what we want, but whatever we can afford, and if we can’t afford it, then whatever we can buy by borrowing. It’s not just business leaders who enforce the rule; many people pitch in, with public praise or social shunning serving as sanctions. Many people fawn over the size of a friend’s engagement ring, rewarding the person who wears it with social approval, so that others believe ‘I *must* buy big’. Few dare breathe a word to the ring-bearer about the destructive mining practices perpetuated, in small part, by the purchase. Many people gush over a friend’s shiny new SUV, praising the prowess of the person who drives it, so that others believe ‘I *can’t* buy small’. Few dare say a word to the gas-guzzler about the associated mining of metals and spewing of oils. Every special occasion is a gift harvest driven in part by social norms; some gifts needed, some merely wanted, some promptly discarded, all ultimately destined for waste streams.

⁶³¹ A legal theorist may be tempted to conclude that parent-made rules mimic state-made law, but I would argue the reverse. Surely, parental rules precede state-made law, historically speaking.

⁶³² Daly, 2007:10.

Conspicuous consumption and egregious waste pervade Can-American culture. “[E]conomic rationalism has great power to shape culture; its cultural media and ideals can promote identification with the rich and successful 10 per cent who are winning and reflect their standards and styles of resource over consumption. It can portray poor people and low consumption lifestyles in negative or contemptuous terms.”⁶³³ Often, people who over-consume in our culture are praised, people who under-consume pitied. This polarity must be reversed, and fast.

Many economists and politicians say that endless economic growth is not only possible, not only good - it is the *ultimate* good.⁶³⁴ As Polanyi puts it, a creed born with the Industrial Revolution “was utterly materialistic and believed that all human problems could be resolved given an unlimited amount of material commodities.”⁶³⁵ But after more than two hundred years of industrialization and growth, what stands out most on today’s social-ecological landscapes? Widespread ecological degradation; looming oil and climate crises; a growing gap between rich and poor; two billion people living in abject poverty, *and* a global economic system on the brink of who-knows-what. To be fair, over a billion people live relatively well.⁶³⁶ But “obviously, the dislocation caused by such devices [namely, the transformation of nature and humanity into commodities] must disjoint man’s relationships and threaten his natural habitat with annihilation.”⁶³⁷ Under these conditions, it is no wonder that Daly insists it “incumbent on the North to get serious about consumption control”.⁶³⁸ But in Can-America, we’ve got consumption control already, aimed UP.

⁶³³ Plumwood, 2002:21 (footnote omitted).

⁶³⁴ “Under this belief, [that is, the ideology of neoliberalism,] the ultimate interest of all citizens is economic growth, with all other interests secondary” (Volpe & Shaw, 2008:150).

⁶³⁵ Polanyi, 2001:42.

⁶³⁶ However, in the 1990s, “consumption by the affluent 1.1 billion people alone claim[ed] more than the entire carrying capacity of the planet” (Wackernagel & Rees, 1996:102).

⁶³⁷ Polanyi, 2001:44.

⁶³⁸ Daly, 2007:65.

Population Demands: The Gap Between What-is and What-ought-to-be

A society's population demands are not inherently problematic. Even in Can-America, it is not necessarily problematic that large numbers of peoples exist, and that materially speaking, many of us live large. It is not necessarily problematic that our population demands hit ecosystems. As Leane argues:

Environmental problems are ultimately inevitable – they are simply the result of humanity's impact on the natural world in the course of survival, just as with any other species. But those impacts are being compounded by population growth and technology-driven economic growth, and on a finite planet limits must be approached...*[O]ur impact has reached such proportions in Western industrial societies that our very survival is threatened in the long term, and our quality of life is compromised in the short term.*⁶³⁹

Distilling these ideas and others into the language of this thesis, and setting them on a sliding scale to leave room for dialectical pushes-and-pulls, I arrive at this claim: Can-American population demands become increasingly problematic as we collectively reproduce our selves and our consumption/waste towards, or in excess of, complex and uncertain social-ecological limits, threatening the long-term survival and wellbeing of many peoples, countless species, and our habitats - and *still* (de)centralized authorities demand more population, *still* demand more demand.⁶⁴⁰ Can-American population numbers and consumption demands form a fist powerful enough to punch serious sustainability gaps⁶⁴¹ all over ecosystems, all over Earth. Collectively, these gaps open into an abyss of historic proportions.⁶⁴² And yet, some outdated 'laws' lurking within our social systems appear to be stampeding humanity toward the brink.

We must recount our limits. Only so many hectares of farmland or forestland or tarsands cover a territory, only so many fowl, only so many fish, only so many beasts make a species, only so much ground, air and water to soak up our sins, and on and on; still, we

⁶³⁹ Leane, 1998:3-4 (emphasis added; footnote omitted). And to the extent that we demand more than mere survival, our environmental impacts tend to grow. Volpe & Shaw (2008) analyze BC salmon aquaculture, an industry that unnecessarily prioritizes the production of protein (and profits), with relatively high ecological impacts, over the production of carbohydrates. "The crux of the situation, however, rests in the fact that the activity in question – and virtually all economic activity – has environmental impacts" (at 151).

⁶⁴⁰ Wackernagel & Rees (1996) express a problem that is similar in substance, but dissimilar in semantics and emphasis (at 56-57). As a law-and-society theorist, my language and emphasis often centres on 'the rules'.

⁶⁴¹ Wackernagel & Rees (1996) refer to a global sustainability gap (at 56).

⁶⁴² M'Gonigle (2000) suggests that we are already plunging into an ecological abyss (at 39).

consume and waste ‘resources’ relentlessly, as if infinite.⁶⁴³ Perhaps most pressing: “Peak oil signals the end of the bonanza with no alternative subsidy in sight, either from nature or human invention. And even before the source limit of global peak oil hits, we have begun to experience the sink limit of greenhouse-induced climate change. Not only are the sources emptying, but the sinks are filling up as well.”⁶⁴⁴ The potential implications are startling: “When the flow of fuels begins to diminish, everyone might actually be worse off than they would have been had those fuels never been discovered because our pre-industrial survival skills will have been lost and there will be an intense competition for food and water among members of the now-unsupportable population”.⁶⁴⁵ In short: “We have material progress on a scale that was unimaginable to anyone only a few generations past, but achieved by undermining the conditions for life itself.”⁶⁴⁶ And still ‘we *must* grow,’ the faithful chant together. As a rule, we *must* grow, or else. To those still chanting, as workers, or as managers, or as owners, or as lawyers, or as priests, or as politicians, or as parents, stop and scream: *Enough!*⁶⁴⁷

Growth is aggressively prescribed, but simple maintenance poses a massive problem. Herman Daly considers *two* populations that are generally important to us: our bodies, and our stuff. In order to remain in a steady state, both populations require material throughput from ecosystems for maintenance and replacement purposes. “If these two steady-state populations are so large that the throughput necessary to maintain them requires inputs from nature’s sources and outputs to nature’s sinks at rates beyond nature’s replenishing and absorptive capacities, then the throughput flow becomes ecologically unsustainable, and so do the two populations.”⁶⁴⁸ The biosphere is finite and

⁶⁴³ Because of breakdowns in feedback loops between ecosystems and social systems, among other factors, “users misperceive scarcity and irreversibility and tend to act as if resources are infinite or infinitely substitutable” (Princen, 2002:128).

⁶⁴⁴ Daly, 2007:120.

⁶⁴⁵ Heinberg, 2005:33.

⁶⁴⁶ M’Gonigle, 2008:37.

⁶⁴⁷ “Faced with the mutilation of human lives by capitalism, [we start with] a scream of sadness, a scream of horror, a scream of anger, a scream of refusal: NO” (Holloway, 2002:1). “We are the crisis, we-who-scream, in the streets, in the countryside, in the factories, in the offices, in our houses; we, the insubordinate and non-subordinate who say No!, we who say Enough!” (at 203). But academic study, scientific methods, “a whole structure of thought”, silences screams, disarming we who want radical change (at 3).

⁶⁴⁸ Daly, 2007:9.

non-growing, so “[a]s the world becomes full of us and our stuff, it becomes empty of what was here before”,⁶⁴⁹ including other life forms, and life supports. M’Gonigle adds that “...human society is, for the first time, running out of ecological space which has hitherto been able to absorb the consequences of our historical indifference”.⁶⁵⁰ Witness “the massive scale and frightening pace of environmental decline”.⁶⁵¹ “Every day we read about stress-induced feedbacks from the ecosystem to the economy, such as greenhouse buildup, ozone layer depletion, acid rain, etc., which constitute evidence that even the present scale [of the economy] is unsustainable.”⁶⁵² Some form of regulatory reform seems crucial, to say the least.

From a regulatory perspective, what ought to be? Wapner has argued that “we *cannot* continue using resources and producing wastes irrespective of the earth’s carrying capacity but rather must bring our social and productive activities more into line with the biological limits of the earth.”⁶⁵³ M’Gonigle puts a similar imperative in the positive: “we *need* to take the structure and function of the ecosystem as the given, and to design economic and political processes within that context...the reverse from the way in which environmental values are presently considered”.⁶⁵⁴ Clearly, we must grind down growth imperatives. “The growth fetish...useful in a world with...[robust ecosystems] helped create a more crowded and stressed one...Economic thought did not adjust to the changed conditions it helped to create; thereby it continued to legitimate, and indeed indirectly to cause, massive and rapid ecological change.”⁶⁵⁵ Thus, a wide gap has opened between our myths/regulations, and our reality. In spite of compelling negative feedback from stressed ecosystems, (de)centralized authorities make growth imperative, demanding we amplify our consumption and multiply our selves. Under these social-

⁶⁴⁹ Daly, 2007:13.

⁶⁵⁰ M’Gonigle, 2000:19.

⁶⁵¹ M’Gonigle, 2008:36.

⁶⁵² Daly, 1998:286.

⁶⁵³ Wapner, 1996:1 (emphasis added).

⁶⁵⁴ M’Gonigle, 2000:21 (emphasis added).

⁶⁵⁵ McNeill, 2000:336.

ecological conditions, the least we can do is work to rid ourselves of population-UP control and consumption-UP control in Can-America.

Re-Solution Sets

Ruling Out State-Made Re-Solutions to Population Demands

Earlier in this thesis, I claimed that environmentalists concerned with the wicked problem of *ecological degradation* within Can-American culture should expect modest progressive change, at best, from the state and its laws. Later, I claimed that it would be politically naïve, and perhaps socially suicidal, to lobby Can-American governments to legislate a response to rising *population demands* in our capitalist political economy. Now that my definition of population demands has been laid out, the folly of turning to our state for re-solutions may be virtually self-evident. Although I critique population/consumption-UP control, I do not recommend pursuing Can-American governments for legislated ‘solutions’. To problematize the concept of population demands is not necessarily to politicize it. The reasons for this advice run in many directions at once. I offer some of those reasons in this section. The remaining sections of this chapter will argue in favour of undermining -UP control from the bottom.

First, consider population-UP control, in relation to Can-American governments. When reflecting on decision-making in relation to our reproduction, the role of the state seems dark and cloudy. As discussed earlier, the state has not taken a hands-off approach to reproduction, historically or currently.⁶⁵⁶ Laws, ranging from helpful to brutal to subtle, can hit reproductive decision-making in a wide variety of ways. My vasectomy was readily available and free of charge, under Ontario’s state-made health care system. But abortions remain difficult or impossible to access in some places, most notably New Brunswick and Prince Edward Island.⁶⁵⁷ In the US, the distribution of contraception was once illegal, even up to the early 1970s.⁶⁵⁸ And although President Obama’s 2009 stimulus package included federal funding to improve medicare coverage for

⁶⁵⁶ For that brief discussion, see Chapter 3, under the heading ‘The Biologist Paul Ehrlich.’

⁶⁵⁷ Moore, 2010:para. 3.

⁶⁵⁸ Ris, 1976:87-88, 90, 92.

contraceptives, that measure was quietly dropped before the bill became law.⁶⁵⁹ Ideally, Can-American governments would ensure free and easy access to all modern forms of contraception, and abortion, from coast-to-coast, to support everyone's *physical ability* to exercise control over their own reproductive systems.⁶⁶⁰ This could help counter Catholic doctrine amounting to population-UP control. But two risks would remain. First, any population-minded environmentalist who argues for improved access to contraception/abortion and reductions to birth rates in the same breath risks inadvertently conflating birth control with population control (as others have defined it),⁶⁶¹ thereby tainting the initiative in the minds of many. Second, better access to contraception/abortion may not improve everyone's *perceived ability* to choose a reproductive outcome, because religious and/or other prohibitions may leave large groups of people believing they 'can't' access those tools. As I have defined it, population-UP control enacted by the Catholic Church may be largely untouchable by Can-American governments. It is difficult to imagine state-made laws prohibiting coercive non-state pronatalism (like church bans on contraception or abortion), and it is well nigh impossible to imagine laws voiding biblical verses or Encyclical rules.

Nevertheless, changing the world through the state is the dominant paradigm.⁶⁶² Shaw describes the assumption inherited by political theorists: "politics happens within the sovereign state, and is primarily focused on the negotiation of relationships between sovereign individuals and the government".⁶⁶³ Turning toward consumption, a legal centralist might put state-made law in this light:

The law touches virtually every aspect of our daily lives...much of our behaviour and daily interactions are governed and regulated by laws. For example, consider some of the things you may have done today. You may have purchased this book, for instance, which is copyrighted. ...You may have driven your car, presumably following the traffic laws and

⁶⁵⁹ Bill H.R. 1, 2009:s. 5004; Collins, 2009:1 at para. 11-17.

⁶⁶⁰ Ris (1976) called for "a massive birth-control program that will reach every woman and man, irrespective of race, income, age, or marital status, so that fewer women will become pregnant involuntarily" (at 108).

⁶⁶¹ For an example of this kind of definition, see Gordon, 1990:387. For an example of this kind of conflation, see Ross, 1998:18.

⁶⁶² Holloway, 2002:11.

⁶⁶³ Shaw, 2004:373. Shaw goes on to challenge this assumption, in the context of a multi-pronged fight by environmentalists against clear-cutting practices in the Great Bear Rainforest of BC.

with a valid driver's licence. Or, you may have arrived at your destination by way of the local transit system, having paid the driver the requisite fare...⁶⁶⁴

So state-made law 'touches' many consumption decisions, large and small. But there is a big difference, along a continuum, between touching, nudging, prodding, shoving, and tackling a conspicuous consumption decision. Reflecting more deeply on decision-making in relation to consumption, state-made laws don't appear nearly as prominent or constraining as legal centralists might think. My decision to buy ten books or one, to buy a book new or used, to borrow it, or to forego it; the law does not speak to me loudly or directly. My decision to own one or two vehicles, to buy a big truck or small car, to rent, to ride the bus, or to ride a bike; again, statutes and court cases offer me few prescriptions. There may be taxes or subsidies supporting high-impact industries; funding for highways over transit; rights-of-way for cars over bikes, and other important rules made by governments and aimed at building a consumption-friendly environment for businesses, to varying degrees, in various jurisdictions across Can-America. But Can-American governments generally do not attempt to directly *limit* consumption through law. Arguably, governments *can't*. "The fact that work is organized on a capitalist basis means that what the state does and can do is limited and shaped by the need to maintain the system of capitalist organisation of which it is a part."⁶⁶⁵ As one consequence, changes to legislation tend to be driven by business interests.⁶⁶⁶ Indeed, "it is difficult to even imagine a legal regime aimed at enforcing strict fuel efficiency standards, and it is well nigh impossible to imagine rules to cap car ownership!"⁶⁶⁷ Rising job cuts, falling campaign donations, and declining re-election prospects are among the punishments few governments are willing to risk, and all can be credibly threatened by business leaders if law-makers propose to take aim at conspicuous consumption. "In sum, some spheres of life seem to lie entirely beyond the shadow of the law",⁶⁶⁸ at least in our capitalist political economy.

⁶⁶⁴ Schuller & Ogloff, 2001:3.

⁶⁶⁵ Holloway, 2002:13.

⁶⁶⁶ For further discussion, see Chapter 2, under the heading 'Stressing Sanctions, and the Social-Ecological.'

⁶⁶⁷ M'Gonigle & Ramsay, 2004:337.

⁶⁶⁸ Ellickson, 1991:283.

This is not to say that the state is a dead-letter in relation to all facets of ecological degradation. The state may be the only player with the centralized power to ensure the implementation of lower-impact energy projects,⁶⁶⁹ or the legitimization of sustainable forestry agreements,⁶⁷⁰ or the regulation of harmful fish farms,⁶⁷¹ for example. “The reason why so many laws do not work is not because they are law, but because law is misused. ...It cannot provide a panacea, but properly used, it may play a useful role.”⁶⁷² But, as discussed above, the state and its laws can only go so far. The problem of population demands, as framed in this thesis, problematizes some of the underpinnings of the capitalist state, and therefore points away from the capitalist state as a primary problem/re-solution site. What is the alternative? Wapner advocates an approach that works under, over and around the state to effect change, “on the view that the state system alone cannot solve our environmental woes”,⁶⁷³ “states do not hold a monopoly over the instruments that govern human affairs but rather nonstate forms of governance exist and can be used to effect widespread change”.⁶⁷⁴ In relation to population demands, it seems *necessary* to work around the state partly because our governments dogmatically promote and support growth imperatives. Consider the candid view offered in a 1999 report released by Natural Resources Canada, which identifies “economic growth and population growth as *the main drivers* of increasing greenhouse gas emissions, but admits that these factors ‘are unlikely to be the subject of energy or environmental policy, programmes, or initiatives.’”⁶⁷⁵ This is a state stating the obvious. It is naïve to believe

⁶⁶⁹ During a spring 2010 presentation, Karena Shaw pointed out that big energy projects, like the ‘Site-C’ dam proposed for Northern BC, can mean significant ecological impacts; the provincial government owns this project, and controls the natural resources upon which future power generation projects depend. Thus, some concerned environmentalists make it a priority to engage the state on energy issues.

⁶⁷⁰ Shaw (2004) discusses the challenges related to an environmental campaign working above/below the state to push BC forestry practices in a sustainable direction. In the end, the participation of the BC government helped lend a democratic stamp of approval to processes and outcomes (at 375-376, 382, 388).

⁶⁷¹ Volpe & Shaw (2008) analyze the regulatory paralysis associated with ecologically harmful salmon aquaculture along the BC coast. They suggest non-state strategies as potential responses, while acknowledging a need for appropriate regulatory governance (at 147-149, 150-152, 154).

⁶⁷² Samek, 1977:418.

⁶⁷³ Wapner, 1996:9-10.

⁶⁷⁴ Wapner, 1996:7 (footnote omitted).

⁶⁷⁵ Boyd, 2003:288 (footnote omitted).

“that governments will legislate in ways that restrict its economic lifeblood”.⁶⁷⁶ In response to the global economic meltdown that began in the fall of 2008, the US government dedicated over 700 *billion* dollars to bail out a frozen financial system, and a crashing auto sector.⁶⁷⁷ “World leaders work[ed] relentlessly to put Humpty Dumpty back together again. To stabilize, rebuild and, above all, to re-ignite the fires of production and consumption.”⁶⁷⁸ And in recent UN documents, states around the planet saw only rapid growth, retreat, or ‘stagnation’ in population pools as problematic; steady upward growth was presumably perceived as a panacea.⁶⁷⁹

It seems impossible to imagine Can-American governments responding to growth imperatives relating to population numbers and consumption habits with counter-legislation, when governments do not perceive these imperatives as a problem in the first place. On the contrary, our society’s hunger for economic growth is fed in at least two ways: existing consumers demand more goods and services, and existing consumers procreate new consumers to demand more goods and services. Far from presenting governments with a problem, the potential for economic growth is perceived as *the* solution to many problems; endless growth is seen “as the cure-all to our mistakes and injustices”.⁶⁸⁰ Economic growth is credited with rising employment, spreading wealth, alleviating poverty, lowering birth rates, and cleaning up ecosystems,⁶⁸¹ to name just a few. These claims may hold up historically, but old cause-and-effect arguments don’t necessarily hold as planetary limits exert mounting counter-pressures, and as social-ecological systems deteriorate. Politicians may wish to ignore or deny the fact that endless growth in material and energy throughput is impossible on a finite planet, but “in

⁶⁷⁶ M’Gonigle & Ramsay, 2004:340.

⁶⁷⁷ Bush, 2010:453-469. Under the Troubled Asset Relief Program (TARP), US\$700 billion was made available to buy preferred shares in big banks, in part to thaw out lending practices (at 464-465). Later, US\$25 billion was re-directed as loans to troubled auto companies (at 468-469). Prior to TARP, US\$30 billion was loaned to JP Morgan to facilitate its purchase of Bear Sterns (at 453), a giant failure of a financial institution, and US\$85 billion was loaned to AIG (at 458), a similarly troubled insurance giant.

⁶⁷⁸ M’Gonigle, 2008:34.

⁶⁷⁹ For further discussion, see Chapter 3, under the heading ‘United Nations Population Division’.

⁶⁸⁰ M’Gonigle, 2000:21.

⁶⁸¹ Daly, 2007:10, 12.

the long run the physically impossible is more impossible than the merely politically impossible.”⁶⁸²

One day in Can-America, the politically impossible may become the socially-and-ecologically necessary. At that time, and in the meantime, green legal theory stresses the need to look beyond environmental law and law in general, instead exploring the intersections between law, political economy, culture and sustainability.⁶⁸³ Population-and-consumption-minded environmentalists should consider “how humans collectively self-organize the relations between themselves and their physical contexts”.⁶⁸⁴ We should look for “lessons of how people can create their own social power, and meaning, from the bottom up”.⁶⁸⁵ Instead of burning precious time and energy pursuing the state for solutions to state-supported demands for growth, we can work beneath the state, starting within our own homes, organizations, and social circles, to begin to build “a cultural consensus to grow into a world of non-growth”.⁶⁸⁶

Non-State Re-Solutions to Population-UP Control

What are some potential non-state re-solutions to the scheme of population-UP control enacted by the Catholic Church? More specifically, can biblical verses and Encyclical prohibitions be amended or repealed, on their own terms? Religion often includes some reverence for nature,⁶⁸⁷ and Catholicism is no exception.⁶⁸⁸ A new theology could be developed, based in part on respect for god’s green Earth.⁶⁸⁹ But, on its own terms, the Encyclical *Humane Vitae* represents “the unshakable teaching of the Church”.⁶⁹⁰ And

⁶⁸² Daly, 2007:10.

⁶⁸³ M’Gonigle & Ramsay, 2004:341, 352.

⁶⁸⁴ M’Gonigle & Ramsay, 2004:342 (emphasis removed).

⁶⁸⁵ M’Gonigle, 2006:344.

⁶⁸⁶ M’Gonigle, 2008:38.

⁶⁸⁷ MEAB, 2005:40.

⁶⁸⁸ Múnera (2000) takes the position that: “Practically the whole New Testament is oriented toward love of others and of the whole cosmos” (at 73).

⁶⁸⁹ Múnera (2000) argues for a new Catholic theology based, in part, on the view that “Nature is God’s creation and is worthy of supreme respect and care” (at 76).

⁶⁹⁰ Encyclical Letter, 1969:para. 31.

“[s]ince the Church did not make...these laws, she cannot be their arbiter - only their guardian and interpreter. It could never be right for her to declare lawful what is in fact unlawful, since that, by its very nature, is always opposed to the true good of man.”⁶⁹¹ So the Church sees itself (or at least says that it sees itself) not as a maker of rules, but as a mere conduit. Clearly, a change in position cannot be expected here; even dissent is unwelcome. To its priests, the Church begs “that all of you agree and that there be no dissensions among you [regarding the Encyclical *Humane Vitae*], but that you be united in the same mind and the same judgment”.⁶⁹² Like the state, the Church is a large, rigid, growth-obsessed institution. Church doctrine resembles state-made law, but seems encased in sacred cement. The foundations of the Church are not buttressed if its all-seeing god changes his views.

Clearly, many factors enter into reproductive decision-making, going well beyond Catholic doctrine. In fact, depending on a person’s religious background, Catholic rules may be completely alien, and therefore, devoid of meaning. The same can be said of any subcategory of ‘law’. Many state-made laws are irrelevant to many people, although those same laws hit other people hard.⁶⁹³ To this law-and-society theorist, the question becomes: Is this ‘bad law’? In China, the one-child policy’s effect on fertility is uncertain,⁶⁹⁴ but that is no reason to consider the policy socially irrelevant or exempt from critique. *We are free to judge the ‘law’ on its face, and if we find it to be flawed, work to undermine it.* If the Church won’t amend its own rules, then we can work to pull them down from underneath. We Catholics can *loudly* critique population-UP control, and *openly* defy it. Cotterrell argues that “[l]aw can lose authority by being broken, ignored, [or] ridiculed”,⁶⁹⁵ and arguably, other rules, even religious ones, can be sabotaged in these same ways. Exploiting vulnerabilities through critique can help rob the rules of whatever power they may hold, before the rules can rob us of all we hold sacred in nature.

⁶⁹¹ Encyclical Letter, 1969:para. 18.

⁶⁹² Encyclical Letter, 1969:para. 28.

⁶⁹³ For further discussion, see Chapter 2, under the heading ‘First-Person Pluralism.’

⁶⁹⁴ Greenhalgh, 2008:xii; Greenhalgh & Winckler, 2005:129.

⁶⁹⁵ Cotterrell, 1998:377.

Feminist legal theory offers tools of deconstruction, and I can only scratch the surface here. Many women have long sought sexual freedom and reproductive self-determination.⁶⁹⁶ Population-UP control is vulnerable on the basis that it undermines reproductive self-determination, and does violence to gender equality. The ethic of gender equality has informed both state-made laws and non-state rules, flowing into agreements between life-partners, rules within organizations, and decisions made by the courts, for example. To Fletcher, the main rationale underlying much feminist critique is the value of equality: “Policies and practices which discriminate against women have been criticised on the basis that they deny women equal citizenship and the means to achieve it...The main concern has been how to accommodate and indeed celebrate difference without allowing it to be used derogatively against people.”⁶⁹⁷ Using women’s reproductive potential against them, particularly by denying women access to contraception, by imposing rules that forbid women from using it, or by otherwise coercing any woman to bear children against her own wishes, is not accommodation and celebration; it is the embodiment of derogatory and degrading usage. This usage treats women like “two-legged wombs, that’s all”.⁶⁹⁸ Population control degrades “the vision of reproductive freedom”⁶⁹⁹ shared by many feminists, no matter which authorities pursue it, no matter which direction it points. I hope I don’t live to see a two-child policy in Can-America; I hope I don’t live to see *The Handmaid’s Tale* play out in real life. To dispose of population-UP control and foreclose some frightful futures, women and men can work toward a *thorough* de-regulation of our personal reproductive decisions.

Non-State Re-Solutions to Consumption-UP Control

Another target to tear down is consumption-UP control. Critique and defiance are among the tools available for deconstructing the pervasive rule of growth. The insatiable machine of material progress grinds along on a steady diet of consumption, more, more,

⁶⁹⁶ Gordon, 1990:xv.

⁶⁹⁷ Fletcher, 2002:149.

⁶⁹⁸ Atwood, 1985:171.

⁶⁹⁹ Gordon, 1990:396.

more; the machine is vulnerable to a new mantra: “to ‘reduce, reduce, reduce’.”⁷⁰⁰ “Confronting consumption...is to resurrect seemingly outmoded concepts and norms such as thrift, frugality, self-reliance, simplicity, and stewardship, and put them in the context of ecological and social overshoot.”⁷⁰¹ Consumption-minded environmentalists can look away from the state to non-state rules (re)made by ordinary people. Regulatory alternatives do exist.

In 1991, Ellickson reported that people in Shasta County, California, including cattlemen and their lawyers, were unaware of what the law had to say on local ‘legal’ issues like imposing liability for cattle trespass or sharing costs for boundary fences.⁷⁰² Instead, in this close-knit community, rough-and-ready social norms seemed to govern people’s workaday affairs. Ellickson hypothesized that sufficiently close-knit groups can generate and enforce social norms covering minor irritations, backed by self-help sanctions like negative gossip, public rebukes, and as a last resort, ostracization.⁷⁰³ In this setting (and probably many others), neighbours were “strongly inclined to cooperate, but they achieve[d] cooperative outcomes not by bargaining from legally established entitlements...but rather by developing and enforcing adaptive norms of neighborliness that trump formal legal entitlements.”⁷⁰⁴ In Can-America, governments have left the field of consumption-down control virtually unoccupied, so consumption-minded environmentalists can experiment with planting normative seedlings to reduce excess consumption on a local scale. But how, exactly?

Drawing on studies in game theory, Ostrom concludes that the “rate of contribution to a public good is affected by various contextual factors including the framing of the situation and the rules used...allowing communication, authorizing sanctions, or allocating benefits.”⁷⁰⁵ She emphasizes the importance of information flows in creating,

⁷⁰⁰ M’Gonigle, 2008:38.

⁷⁰¹ Princen, Maniates & Conca, 2002:326.

⁷⁰² Ellickson, 1991:59, 70, 94-95, 144, 256.

⁷⁰³ Ellickson, 1991:219, 282.

⁷⁰⁴ Ellickson, 1991:4.

⁷⁰⁵ Ostrom, 2000:142.

changing, and enforcing norms. This seems intuitive: If people don't clearly communicate *why* they are rewarding or punishing others (and for punishments to be justified, those reasons had better be persuasive), then the development of behaviour-shaping social norms seems unlikely. Ostrom claims that "the world contains multiple types of individuals, some more willing than others to initiate reciprocity to achieve the benefits of collective action."⁷⁰⁶ She calls them 'willing punishers/rewarders',⁷⁰⁷ people willing to hand out rewards, or use tongue lashings and body language as punishments,⁷⁰⁸ in relation to rule (non)compliance by others. I would suggest that anyone can choose to play this social role. Many of us already act as willing enforcers by handing out sanctions in support of the rule of growth, instead of against it. In short, socially-and-ecologically constructive social norms, if clearly communicated and persuasively defended, if enforced with small rewards or mild punishments, if applied within our own close-knit social circles (which overlap with other social circles, and so on), and if otherwise imposed in contexts likely to be judged by bystanders as appropriate, if if if, then social norms stand a chance of evolving into transformative tools for social-ecological change. Rule (re)making cannot be presumed, but it can be pursued.

Lawyers and others in the grip of legal centralism may scoff at any non-state approach to rule-making. But consider the fact that they can *verbally* scoff at all. Language is a rule-based system of communication that does not rely on centralized government to function.⁷⁰⁹ Language is ruled by myriad rules, governing the sounds, spellings and meanings of words, the construction of sentences, the arrangement of symbols on a page, and so on. Children use language effectively, even if they cannot put into words a single rule of grammar. Thus, a rule can govern even if those influenced by it cannot recite it, or even acknowledge its existence. Clearly, specific rules differ from one language to another, and change over time without state intervention.⁷¹⁰ Crucially, language carries

⁷⁰⁶ Ostrom, 2000:138.

⁷⁰⁷ Ostrom, 2000:142.

⁷⁰⁸ Ostrom, 2000:140-141.

⁷⁰⁹ Of course, language may be shaped by people working within government, but the state has no monopoly.

⁷¹⁰ Ellickson (1991) makes a very similar set of points (at 5, 130). And evolutionary theory suggests that "modern humans have inherited a propensity to learn social norms, similar to our inherited propensity to learn grammatical rules" (Ostrom, 2000:143, citing Pinker, 1994). Arguably, grammatical rules *are* social

meaning, and power. Language is the spider's silk we use to spin our rule(s), and reason(s). As one tiny example, I did not capitalize the 'g' in 'God', or the 'h' in 'His' personal pronoun, at times in this thesis.⁷¹¹ Did you feel an urge to correct me, even chastise me, for breaking a rule? But why should I genuflect to god and his pronoun, in writing, if I don't believe in god or his authority?⁷¹² Isn't it striking that people who don't necessarily believe in god(s) will readily follow, and even enforce, a rule like this one? Isn't it startling how some very old power moves can continue to echo through language, through rules, through generations? How many rules influence or even define our so-called personal preferences, long before we are in a position to arrive at our preferences for ourselves? To the extent that rules infuse preferences, that's power.

It is important not to underestimate the complexity and uncertainty associated with norm (de)construction. The process appears to be multilectical. Norm breakers/makers may run into opposition from various directions all at once; arguments may follow with heated gestures toward competing rules and reasons; norm reform may progress/regress in strange and unexpected ways. Ostrom refers to an "immense number of contextual variables" relevant to the formation of norms of cooperation according to many different empirical studies, and offers nearly twenty examples, including the size of the group, common understandings of the group, and the presence of leadership.⁷¹³ Norm creation poses another wicked problem. Just the same, environmentalists and their organizations can consciously experiment with tactics to undermine degrading non-state rules, and to grow greener ones. We might diligently and conspicuously attach small rewards, like open praise, to what we perceive to be the healthiest consumption behaviours, from a

norms: decentralized non-state rules, with tiny sanctions attached to (non)compliance. Ostrom's definition of social norms: "shared understandings about actions that are obligatory, permitted, or forbidden" (Ostrom, 2000:143-144, citing Crawford and Ostrom, 1995).

⁷¹¹ When quoting or summarizing sources like Malthus or the Catholic Church, I respected the traditional rules of spelling because these sources did. When speaking in my own voice, particularly when critiquing, I used the lowercase, in line with my own almost-atheist beliefs. I followed the same approach for '(B/b)ible' and '(B/b)iblical'. I followed a similar approach, but turned upside down, to offer respect to 'Earth'.

⁷¹² Technically, I am Roman Catholic. Substantively, I am almost atheist. I don't believe in god, yet I don't completely rule out the possibility that god exists. The argument that god governs and that one religion holds a monopoly on his/her directives is difficult for me to accept, so I live my life not in strict accordance with Catholic doctrine, but with core ethics in mind, like 'treat others the way I'd like to be treated.'

⁷¹³ Ostrom, 2000:148.

social-ecological perspective. We might attach small punishments, like open criticism, to the most degrading consumption. In short, we might start by turning common reward/punishment urges related to over/under-consumption upside down.

This strategy is not conceived as strictly individualistic. A new norm may start with one person, but it is not enough to quietly make minimalist consumption decisions for ourselves. This strategy is about ‘law’-making, with ‘law’ broadly conceived. Social norms are *collective* tools of cultural self-constitution that can be put to work without state assistance or permission, to shape consumption beliefs/behaviours in ways that may be more life-sustaining, less ecology-destroying. The field is virtually wide open for tougher consumption-related standards imposed by concerned citizens on ourselves, *and on others*, with sanctions attached. Tougher non-state rules can ‘nest’ within lax state-made laws, or stand where state-made laws simply don’t exist. Like Malthus, Ehrlich, and other authorities, we too can become stories of specific people with specific passions and reasons, touting or testing specific rules, jostling for collective allegiance, and obedience. We too can consciously (de)construct and be (de)constructed by culture.

As examples, consider two green ideas. Perhaps the largest ‘commons’ in Victoria, BC, is a patchwork of land, some 300 km long, running in narrow strips between roadways and front yards. If students began converting these grassy boulevards to self-reinforcing food production, how many seeds would have to be planted before a new norm took root?⁷¹⁴ Even if Can-American governments one day enact strict fuel efficiency standards, a small group could theoretically run the largest SUVs off the roads using strategically constructed social norms. If an environmental organization announced that it had bargain-leased used Hummers to convicted pedophiles in a particular province, how many people would want to drive these monstrosities?⁷¹⁵ If a behaviour is already perceived as uncommon and harmful, then people may be quick to judge the behaviour as anti-social/ecological, even quasi-criminal, and may support punishing and stigmatizing

⁷¹⁴ Large (2010) suggests that UVic’s ‘Resistance is Fertile’ movement should move off campus, and into community boulevard gardening (at 10).

⁷¹⁵ This announcement would aim to stigmatize Hummer-driving as a deeply anti-social act. The leases could be subject to termination by the organization on short notice, to pull these Hummers off the road, down the road. This idea came out of a brain-storming session among four GLT students during the spring of 2010.

it. New norms on local scales could cascade into transformative changes higher up.⁷¹⁶ A norm and stigma standing against Hummers might taint tastes for larger vehicles in general, and might spill across wider territories, if more and more people begin to follow and enforce the rule, near and wide.

This is not a risk-free proposition. W&R write that using blame and shame on others produces resentment, not transformation.⁷¹⁷ I agree that blame and shame can be pushed too far, and back-fire. Punishments should be used very cautiously, otherwise an entire movement may find itself socially stigmatized. Ellickson advises that over-punishing others can amount to a violation of remedial norms, and attract harsh counter-punishments.⁷¹⁸ Giving a warning to a first-offender, then gradually escalating punishments for repeat offences, seems like a common practice across regulatory systems.⁷¹⁹ Rewarding pro-social/ecological behaviours may offer a more palatable resolution, at least initially. People seem slow to reward one another; critique seems to come much easier. Perhaps consumption-minded environmentalists can gain a public-image advantage over other activists, by being quick to reward ecologically responsible behaviour. Give a wildflower to a cyclist, say ‘thank-you’ to a bus driver, buy lunch for a vegetarian. Reward whatever seems most ecologically healthy and helpful, from your perspective. Offer small *public* rewards, rewards that other people can see. And following Ostrom, pay close attention to communications: A clear aspirational statement may help lay a foundation for rule formulation. Saying: ‘more of us should take the bus, or ride our bikes’, repeatedly over time, may evolve into: ‘we *must* ride our bikes.’ As a norm gathers strength in numbers, hold-outs may begin to look like deviant wrong-doers. At some point, small punishments may become widely perceived as appropriate.

⁷¹⁶ Holling, 2005-2006:7-8.

⁷¹⁷ Wackernagel & Rees, 1996:137.

⁷¹⁸ “An enforcer who mismeasured remedies would himself be deserving of punishment, as when parents who underdiscipline (or overdiscipline) their children lose status among their adult friends” (Ellickson, 1991:207-208). A similar system of rough justice may be seen when, using tongue-lashings or other social penalties, a community sanctions a criminal court judge who over-sentences, for example.

⁷¹⁹ Ellickson, 1991:219; Ostrom, 2000:151.

Another limitation on social norms is this: They “are harder to verify [than state-made laws] because their enforcement is highly decentralized and no particular individuals have special authority to proclaim norms.”⁷²⁰ Yet, these traits may be viewed as distinct advantages. Unwritten, decentralized rules seem inherently fluid and contestable, and may be more responsive to changing circumstances and fresh arguments than a rigid body of state-made laws aimed at holding in place the status quo of property accumulation and resource exploitation. Social norm reform seems inherently democratic, because people impacted by norms may directly participate in justifying, bending, breaking, (un)making, and/or enforcing emerging rules, and/or counter-rules.⁷²¹ Bottom-up advocacy and activism may work to reform social norms into relatively strict consumption standards, while the state haplessly guards the background law.

The non-state rule-strands recommended here would be law-like: behavioural prescriptions taken seriously with - and perhaps because of – sanctions attached.⁷²² It is the sanction that makes a non-state rule smack of state-made law, even though the state is nowhere in sight. Arguably, a sanction is the ‘bite’⁷²³ that gives a rule its compelling character, and elevates our perception of it from merely something people do, from a mere guideline, to a rule individuals or collectives feel obliged to follow. Conversely, prescription without sanction is, in effect, a mere guideline, something we may follow, but not something we generally ‘must’ do or ‘can’t’ do, *or else*.⁷²⁴ We need new social norms in Can-America, rules that tell us in no uncertain terms that time spent enjoying

⁷²⁰ Ellickson, 1991:130.

⁷²¹ Ostrom (2000) argues that when individuals affected by a resource regime can participate in making and changing the rules, those rules tend to be better tailored to local circumstances, and result in more sustainable outcomes than when rules are imposed by outside authorities (at 148, 150). Butler (2009) argues that shifting control away from the centralized state and toward local inhabitants may prove to be more democratic (at 326). In contrast, Santos (2002) points out that some non-state legal orders, like ‘mafia law’, may work less democratically than governments in countries where those orders operate (at 98). But Santos’s example, like organized religion, is a relatively centralized regulatory order that relies on extreme sanctions, unlike the bottom-up social norms with mild sanctions discussed above.

⁷²² Again, following Ellickson (1991), the word ‘sanctions’ is intended to refer to both rewards associated with following a rule, and penalties associated with breaking a rule (at 128).

⁷²³ Geertz (1983) offers an intimate narrative of the regulatory struggles faced by ‘Regreg’, a Bali villager who faces regulations everywhere, without a state in sight. Geertz sees a legal system here, with “form, personality, bite, and...a firm, developed, almost wilful awareness of itself” (at 179).

⁷²⁴ And here, the ‘or else’ can mean the imposition of some punishment, or the denial of some reward.

free-of-charge, low-impact fun with family, friends, and lovers is praise-worthy, while conspicuously passing needless goods back and forth is a shameful waste of ecosystems. Capitalism's fatal flaw is its unquenchable demand for more bodies, more materials, more energy. Slow the flow, and capitalism begins to break down. It's the same with all Ponzi schemes.⁷²⁵

Whatever other projects environmentalists may be working on, more of us can consciously contribute to the genesis of greener, law-like social structures, on a small-scale. This is green legal theory in practice: growing greener non-state rules for ourselves and others, from the ground up. More precisely, green legal theory *is* practice: "Theory does not stand above the fray but is simply part of the articulation of our daily existence of struggle. It does not look down at society from above, but is part of the daily struggle for emancipation".⁷²⁶ Green legal theory includes, first, a strong critique of law; second, a broad concept of law, and third, a local orientation to law. Green legal theory is socio-eco advocacy embedded not in courtrooms or legislatures, but in culture at large.

Conclusion: Toward a Broader Legal Imaginary

Why take different approaches toward re-solving population-UP control, versus consumption-UP control? In relation to one, my arguments support a thorough de-regulation; no more population control in Can-America. In relation to the other, my arguments support not only grinding down growth imperatives, but also growing greener social norms. In short, I do not advocate for population-down control in Can-America, but I do advocate for consumption-down control.⁷²⁷ The difference in approaches is based on a strong personal ethic, and on a powerful norm in our society - and maybe these two are more or less the same 'thing.' I believe that many people, Kathy and I included, *know* that no one is in a better position to make our own reproductive decisions than we are, and some of us are willing to socially sanction those who disagree. Powerful reasons,

⁷²⁵ Friedman, 2009:para. 7 (quoting Joe Romm, physicist and climate expert, who equates unsustainable resource consumption to a Ponzi scheme).

⁷²⁶ Holloway, 2002:104.

⁷²⁷ To clarify, I am not advocating that every person in Can-America cut their consumption. Some people are barely surviving, or worse. As discussed above, consumption-down control would aim to push people toward beliefs/behaviours inconsistent with conspicuous and excessive consumption/waste.

including equality-related ones, stand in stiff opposition to population control. I advocate against population-UP control in Can-America, relying in part on an ethic, on a norm, on a rule of reproductive non-interference. Better to rely on this rule than self-destructively dash arguments against it. But consumption is different. A person's *conspicuous* consumption decisions invite public viewing and public comment. Those who agree with this proposition may wish to join a norm r-evolution. Those who disagree are free to socially punish rule reformers, and let others be the judge.

Like all rules, the norm of reproductive non-interference has its limits. It is not universal, cutting across all peoples, times, places, or social contexts. In the area now called British Columbia, First Nations were ravaged by smallpox and other diseases, following first contact with European settlers,⁷²⁸ and “there was and still is a hint that the smallpox contaminations...were not an accident”.⁷²⁹ Due to fatal diseases, settler atrocities, and other causes, Indigenous populations plunged.⁷³⁰ I outlined China's one-child policy in this chapter to help explore the concept of population control, and was struck by associated state sanctions and social shockwaves. These diverse nations present fundamentally different social-ecological contexts than what I've been discussing in this thesis. Is population control, up or down, defensible from the perspectives of other peoples? If Indigenous communities self-impose some form of population-UP control, or if China's government maintains some form of population-down control, am I in a position to judge? These questions are beyond my spheres of knowledge and experience, beyond whatever circle of norm authority I may claim. People embedded in their own unique webs of significance, in different social-ecological contexts, may wish to pursue rule (re)formation, in their own ways, times, and places, for their own reasons.⁷³¹

⁷²⁸ Sewid-Smith, 1995:66; Churchill, 2003:180 (for a similar narrative, in America).

⁷²⁹ Sewid-Smith, 1995:65.

⁷³⁰ Churchill, 2003:177-178; Sewid-Smith, 1995:66.

⁷³¹ Churchill (2003) writes that Native people are “understandably resistant to any form of population regulation especially when unequal power relations inform such policies” (at 178). It seems clear that the kind of population regulation that Churchill has in mind is the downward kind (at 181). Some diversity of opinion within and between Nations in relation to population-UP control might be expected, in light of historical events and population devastation, provided Indigenous peoples, not settlers, assume control.

In this thesis, I do not aim to attack religious rules or economic dogma or cultural norms in their entirety, and I am not suggesting wholesale defiance across all rules, any more than a lawyer attacking specific state-made laws is making an argument to disobey all laws or to dissolve the state. Often, part of a lawyer's job is to argue for the reinterpretation, amendment, or repeal of 'bad law'. I leave it to those who maintain, enforce, or observe the peculiar non-state rules I've identified to offer their best defence, or to let these 'laws' wither. In my view, 'bad laws' – specific rules that are socially-ecologically degrading – should be cut and burned, as our wicked problems grow.

Like our webs of significance, wicked problems are all around us, right down to how we conceive our selves, and our nature.⁷³² To M'Gonigle, Descartes's dictum "I think, therefore I am" encapsulates the compulsion to separate self from nature.⁷³³ The dicta "I consume/waste, therefore I am",⁷³⁴ or conversely, "I am, therefore I consume/waste" speaks to the material layer of the population demands concept, and brings together a number of Can-Americans with what we do. And to over-do is not particularly problematic, if only a few people do it. The Earth can provide, absorb. But if hundreds of millions of people are consuming/wasting prodigiously, as in Can-America, then at some points, ecosystems' limited provisioning and assimilating capabilities cannot cope. In relation to global ecological degradation, Can-American population numbers are not distinct from our consumption/waste; these phenomena are life-partners.

From a regulatory perspective, population-UP control and consumption-UP control both appear to be parts of a serious social-ecological problem. In this chapter, when discussing -UP control, I attempted to identify a few striking non-state rules applicable to me and to other Can-Americans, rules that aim to drive endless growth, rules that are indefensible to me and to similarly-situated, like-minded people, at this time and place. I find these rules in Catholic doctrine spinning into economic dogma spinning into social norms. As Eagleton reminds us: "Among the various modes of production of any social

⁷³² M'Gonigle (2000) discusses the implications of conceiving of ourselves as 'rational self-maximizers' versus "beings-in-relation" or "beings-in-community-in-nature" (at 10, 25-26, 35).

⁷³³ M'Gonigle, 2008:37. Holder (2000) elaborates: "This dualism of mind/matter and subject/object implied that nature was composed of reducible objects, metaphysically separated from man" (at 160).

⁷³⁴ The philosopher René Descartes originally opined "I think, therefore I am".

order is the mode of production of human subjects, or forms of subjectivity; and this mode of production is made up of a whole range of institutions, from church and family to school and culture.”⁷³⁵ I see a double-meaning to this insight: It applies to the physical production of human subjects, and to the production of our beliefs/behaviours. The population demands concept holds population numbers, consumption demands, and the peculiar cultural rules that aim to prod them UP, within a problem frame. Population demands sit on a sliding scale, becoming more or less problematic depending in part on our numbers and our beliefs/behaviours. This problem is not strictly categorical.

Categories can clarify, or confound. From a wide-angle, first-person perspective, categories like ‘ethics’, ‘agreements’, ‘norms’, ‘religion’, ‘economy’, ‘law’, ‘culture’, and so on, matter in relation to legal theory, to some degree. Insofar as categories imply logical progressions or fixed hierarchies, or hide specific rules or their evolution or convergence, the categories may mislead and distract law-and-society theorists. But to the extent that categories of ‘law’ point to particular (de)centralized authorities or contexts relevant to rule (re)formation, the categories may be helpful. Degrading rules find hiding places all over our regulatory multi-webs: in our ethics, in our promises to one another, in our social norms, in our non-state organizational rules; in our state-made laws, and who knows where, and sometimes, one rule in various forms runs its way through multiple categories and contexts, times and places. One way to become web-aware, from a first person perspective, is to ask a very specific behavioural question: *Can/must I behave in this particular way?* If the decision I am facing is *Can/must I have a(nother) child?*, I know almost instinctively that I won’t find the answer in a statute or a court case. At least I won’t today in Can-America. And that’s a relief. If my decision is *Can/must I buy a gold ring or a monster truck?*, my instinct says the same. But that is not to say that these decisions are unregulated. Our non-state rules demand attention.

An attentive lawyer, with ‘lawyer’ writ Large, will be mindful of the substance of a rule, the authorities responsible for it, the limits on their spheres of authority, the processes for challenging the rule, the methods of argumentation, the reasons that count, and many

⁷³⁵ Eagleton, 1990:37.

other ‘legal’ considerations. These seemingly clean categories - ‘authority’, ‘process’, ‘reason’, and so on – change with your perspective, and begin to melt around the edges and run into other categories if you stare at them for too long. And each of these soft categories can be governed by its own set of rules. An attentive lawyer, with ‘lawyer’ writ Large, will be very mindful of sanctions. If a person inadvertently or deliberately breaks a rule, what implications flow? Is the rule typically enforced? Is there a big fine to a small one? A few days in jail to life? A dirty look or the silent treatment, through to the end of a relationship? A lost job, or lost jobs? Is some reward denied? These sanctions run along a long continuum. And for a law-and-society-and-ecology theorist, perhaps one of the biggest questions is this: What are the social-ecological implications if too many of us *follow* a particular rule? And of course, life gets much more complicated when more than one rule is at work at once.

Legal pluralism draws attention to many forms of ordering, and their intersections.⁷³⁶ But understanding how various rules intersect seems to depend in large part on how various rule-spinners interact. As people push and pull, as they spin and chew rules, specific strands thicken or thin. For example, if I perceive a rule being imposed on me by other people, a rule that may be socially-ecologically degrading, then it is helpful to know *who* those others might be, in order to consider who/how/where/when to engage in rule reform. Or if I don’t know who lies behind a particular degrading rule, I can try defying it, and see who jumps out of the dark with warnings or sanctions. If my reasons for defying a rule are compelling under the circumstances - in other words, if I have a solid ‘test case’ - then I may *want* others to jump out, the way a person who breaks a law may wish for arrest in order to bring what they see as a solid test case to court. A well-meaning ‘deviant’ *wants* to have that normative debate, with others watching. And whoever mounts the best offenses/defences, and/or whoever tells the best stories, and/or whoever carries more credibility and/or connections, and/or whoever slips the fattest envelope under the right door, and/or and/or, may help (re)form and/or (re)enforce the broken rule, and/or spin new rules of some sort. Some (de)centralized authorities will get the ‘final’ say (always contextual and provisional) on a rule-related matter, and authority

⁷³⁶ Merry, 1988:889.

figures do not come unencumbered; they are never unbiased or neutral. They come to their decisions caught in their own unique regulatory multi-webs.⁷³⁷ Aren't these the basic 'legal' dynamics we see acted out in Parliament, and in court? Isn't this how children struggle with parents when testing boundaries, or how people test limits in personal relationships of all sorts, what people are doing when they engage in heated debate in the public square, even what I do when I go round and round running thought experiments against ethics in my own mind?

To be clear, this regulatory model, this web metaphor, is not predictive. Or rather, it is very modestly predictive. We can expect a strong tug on a well-guarded regulatory strand to mobilize rule-enforcers, large and small. A struggle among many may result, and/or a negotiation, and/or an adjudication, and/or a subjugation, and/or a surrender, and/or a deception, and/or.⁷³⁸ We can expect a strong tug on a poorly-guarded strand to attract little attention thus demonstrating to others that the strand is thin and poses little threat to them. A few strong pulls and that strand may snap. 'Law' failure is a distinct possibility. Can-American governments can be powerful, but are not always paramount. If a government tries to introduce laws that contradict non-state rules, it may be demanding that people compromise their ethics, and/or break their agreements with loved ones, and/or ignore popular norms, and/or re-write organizational rules, and/or forsake religious beliefs, and/or extinguish Indigenous legal traditions, and/or. In this scenario, the state asserts its 'supreme' rule-making authority, but to many, the state may be perceived as the ultimate rule-breaker. Ham-fisted law-making can mean harsh sanctions for state leaders: open ridicule, forced resignation, voter rejection, even violent revolution. The state may ultimately prevail, case-by-case, but not without considerable effort, ranging from passionate persuasion to deliberate deception to physical violence. Or the government may abandon its position, retreat on some laws. No particular rule-related outcome can be predicted with certainty. At the other theoretical extreme, the

⁷³⁷ "We are people whose subjectivity is part of the mire of the society in which we live, flies caught in a web" (Holloway, 2002:140). Holloway applies this web metaphor to the oppressed, victims in the webs of the powerful (at 3), but I say that all of us can help spin rules, and even the powerful are trapped in the mire.

⁷³⁸ In his review of theories of legal pluralism, Cotterrell (1998) recognizes that questions of validity are not the only ones that matter in relation to law; pluralists see dynamics of "competition, struggle, or negotiation over legal authority between a variety of rule-makers, interpreters, and agencies of enforcement" (at 381).

easiest laws to pass and enforce may be the ones that are not needed, because non-state versions of the rule are already widely in effect.

Predictions aside, the model of regulatory multi-webs is mainly intended to be roughly descriptive, and somewhat explanatory. I say ‘roughly’ and ‘somewhat’, because the theory is still too simplistic, and never complete. A full understanding of cultural self-regulation may lie beyond our reach. I’ve spun a complicated image, where beliefs inform beliefs inform behaviours inform beliefs, none of it sitting still under study, but none of it outside of our ability to change if we act in numbers. Much is beyond the reach of any one official, any one individual, at any particular time and place. The good news is that environmentalists may perceive plenty of regulatory options to choose from, on a modest, local scale. There is plenty of room in wide-angle first-person pluralism for human agency, for collective action, for normative disagreement, for human negotiations and interactions of all sorts, for provisional ethics, agreements, norms, laws, and other rules of every flavour interacting and blending into a finite but uncountable number of parts and wholes, for tensions or momentums between peoples/rules running to and fro in multiple directions, even for widespread r-evolution, that is, for reshaping culture in more profound ways.⁷³⁹ Can-American culture has not always been this way, and will not always be. Sticky questions arise: Do we share the judgement and tenacity to resist and reform degrading rules in a multitude of ways, despite much counter-resistance, including push-back from those closest to us? Can we consciously steer our culture toward a greener future, or will we be over-ruled?

⁷³⁹ M’Gonigle, 2008:38.

Chapter 5 – Conclusion: A (hypothetical) letter from a law-and-society theorist to a population-minded environmentalist

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January 31, 2011

PO Box 123, Station Central
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Attention: Chair

RE: Porritt’s ‘p-word’, in perspective

Further to your letter dated September 1, 2009, please find enclosed a copy of my Master of Laws thesis in the Faculty of Law, at the University of Victoria. The thesis is entitled: “Ecological Degradation and Population Demands: Wicked problems and the rule of rules in Canada/America.” As requested, the thesis aims to re-define the ‘population problem’ and related re-solutions in constructive and clear terms that more people might understand and accept. I do this within a broader conception of ‘the legal’ than lawyers traditionally use, taking the position that the notion of a ‘rule of law’ is incomplete, at best. At worst, it is a myth promoted by the already-powerful struggling to be all-powerful. In Canada and America (Can-America, for short), we are ruled by rules, including state-made laws and non-state rules. This is good news, because non-state rules, like social norms, are essentially ‘law’ environmentalists can get our hands on.

This thesis makes four main ‘p-word’-related claims, each closely related to the others:

- Population numbers and consumption demands in Can-America, together with specific non-state rules underlying their scale and growth, may be problematized as one unified concept, a wicked problem called ‘population demands.’
- Our population demands become increasingly problematic as we collectively reproduce our selves and our consumption/waste towards, or in excess of,

complex and uncertain social-ecological limits, threatening the long-term survival and wellbeing of many peoples, countless species, and our habitats - and still (de)centralized authorities demand more population, still demand more demand.

- Specific non-state rules arguably amount to population control and consumption control, both aimed in an upward direction. Grinding at these degrading imperatives with criticism may help undermine them.
- If environmentalists frame *ecological degradation* as a problem, we can expect modest progressive change from Can-American governments and their laws. If environmentalists frame *population demands* as a problem, as defined here, we should not pursue Can-American governments for salvation. Instead, we should experiment with reforming non-state rules of consumption ourselves.

This thesis takes a largely theoretical perspective, with the ‘population problem’ in the foreground and Can-American culture as the context. In relation to reproductive and consumptive decision-making, non-state rules come into focus: the biblical command to ‘multiply and subdue,’ together with Catholic prohibitions on contraception and abortion, amount to population-UP control, and a pervasive rule of growth consumption-UP control. This non-state focus calls for a theory called legal pluralism, which seeks “to uncover unsuspected sources of oppression or of emancipation through law”,⁷⁴⁰ with ‘law’ broadly conceived. A first-person perspective offers a feel for complex micro-regulatory processes, while a wide-angle perspective offers a perplexing look at common rule-strands that disrupt highly centralized and strictly categorical regulatory thinking. Green legal theory and wicked problem theory are also central to this thesis, with panarchic, dialectic, feminist, Indigenous and other teachings playing support roles. Planted together, these theories sprout into green arguments, into green advocacy. This thesis is a law-and-society pleading for a greener, less degrading culture.

Four areas for further research are worth noting. First, immigration. To the extent that lower birth rates and population retreat threaten to undermine our capitalist political economy, Can-American governments will be motivated to import people from other parts of the planet. Although immigration law is relevant to national population numbers, this thesis focuses on rules regarding how people are made, not moved. Second, technology. The thesis does not examine the arguments of those who view technology as a panacea, including the theory that more people means more ideas means more technology means more resources,⁷⁴¹ ad infinitum. The net ecological effects of today’s most helpful technologies through to the most degrading ones are uncertain,⁷⁴² and “[m]ore materials-efficient technologies can be used to destroy nature more

⁷⁴⁰ Santos, 2002:98.

⁷⁴¹ For example, see Simon, 1977:476, 480, 483-484, 496-499. Rees (2002) responds persuasively to the essentials of Simon’s argument (at 252-264).

⁷⁴² Wackernagel & Rees, 1996:24-25. W&R also discuss eco-impacts of trade and technology (at 127-133).

efficiently”;⁷⁴³ thus, blind faith that technology will save ecosystems seems dangerously speculative. Third, equality. Feminist legal theories run diverse and deep, and may offer many more powerful arguments against population-UP control than those included here. And fourth: norm reform. This thesis provides a rough sketch regarding how norms of consumption might be torn down and grown up green, but many factors not discussed here could influence norm progress or regress. The Foundation may wish to allocate funding to further pursue these research areas.

On any amount of research, however, wicked problems defy once-and-for-all definitions/re-solutions. No ‘p-word’ problem definition is safe from dialectical thinking; change is the only constant; a concept can progress and regress, grow and retreat.⁷⁴⁴ If you are persuaded by my arguments, please feel free to promote them in whatever way you constructively can. For example, feel free to name your organization the ‘Population Demands Justice Foundation.’ To be clear: The population demands concept and related re-solutions aim to end some imperative Church and state imperatives, at a time when these institutions struggle mightily to hold in place an inherently unsustainable culture. Our culture imposes degrading rules on many of us, and the longer those rules remain in force, the more dangerous and unstable social-ecological systems become.⁷⁴⁵ M’Gonigle wonders if GLT depends on some degree of systematic collapse before the theory can have an effect.⁷⁴⁶ If ‘the rules’ are like webs hanging around us in thick masses, then perhaps chewing on a few crucial strands, and spinning greener rules from the bottom, can help pull down the most degrading tangles. Who knows what a few good pushes and pulls from below might do?

Church and state cannot embrace these arguments. From their perspectives, growth is gospel. For its part, the state extracts economic rewards from economic growth, and risks political punishments for economic hardship.⁷⁴⁷ If environmentalists consciously work around and against the state to undermine the rule of growth, we may help cause economic ‘stagnation’, or recession. But we should understand that jobs aren’t lost into thin air, without human agency. Jobs are *cut* by profiteers obsessed not only with making profits, but with maximizing them. Environmentalists are not primarily responsible for job cuts, because we are not primarily in control of them. Still, people win few rewards for working against the rules supporting capitalism. Even if an extended economic meltdown is less painful than the social-ecological alternatives, those alternatives would

⁷⁴³ Plumwood, 2002:7. Rees (2002) makes a similar point: “Arguably...technology and more liberal trade have served mainly to accelerate the exploitive depletion of nature’s vast warehouse” (at 261).

⁷⁴⁴ “Change and instability are the norm”, and concepts will be supported or undermined over time by processes of enquiry (Harvey, 1993:36).

⁷⁴⁵ “[T]he longer the system is ‘locked in,’ the greater the vulnerability and the bigger and more dramatic its collapse will be” (Holling, 2005-2006:14).

⁷⁴⁶ M’Gonigle, 2008:38.

⁷⁴⁷ Volpe & Shaw (2008) offer an example of these dynamics in the context of BC salmon aquaculture (at 144, 147, 149-150). A key point: “when this expectation [for continuous economic growth] is not met, we tend to blame the government and to vote a different party into power” (at 149).

remain unrealized, out-of-sight, perceived as merely speculative. No headline will ever read: 'Ecological and Economic Collapse Averted, Great Recession Acceptable Under the Circumstances.' One wide-angle choice seems impossible: Stop the machine early and suffer great pain, great blame, or let the machine run its course to a bitter end. Even after a bitter end, would the powerful assume responsibility, accept accountability, or impose control? Would everyone blame and shame everyone else, until everything under heaven grows still?

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Appendix A - Population Momentum

Sachs and Jacobsen both contribute to a concise description of *population momentum*:

If somehow, miraculously, the [total fertility rate worldwide] were to fall today to the replacement rate, the world's population would still grow by approximately another one billion (depending on the precise assumptions made)...That's true even with the so-called baby bust in the more developed regions.⁷⁴⁸

This is because of the size of the generation of children already born who have not yet begun to bear children of their own. Their ranks are so large, compared with the older generations that supply the most deaths, that their childbearing guarantees some population growth, even if their fertility is low. World population growth is the number by which births exceeds deaths. The young age structure guarantees more births than deaths for some time, even at replacement-level fertility.⁷⁴⁹

On the one hand, population momentum can generate a feeling of inevitability and helplessness: Even with significant drops in global fertility levels, global population growth over the coming decades seems to be a virtual certainty. On the other hand, this demographic phenomenon suggests that "it is still of the utmost importance to work promptly and effectively to reduce birth rates so that the world's ultimate population size is smaller than it would be otherwise."⁷⁵⁰ I don't believe that Can-America is exempt from this principle. Whether undermining population-UP control can have any effect is an open question. Nevertheless, 'bad law' is always open to critique by lawyers and others, even if the law's effectiveness is in question.

⁷⁴⁸ Sachs, 2008:169.

⁷⁴⁹ Jacobsen, 1995:260.

⁷⁵⁰ Jacobsen, 1995:263.