THE ART OF 'GOVERNING NATURE':

'GREEN' GOVERNMENTALITY AND THE MANAGEMENT OF NATURE

by

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Abstract

This thesis seeks to unpack the notions of Michael Foucault's late work on governmentality and what insights it might have for understanding the 'governing of nature'. In doing this it also operates as a critique of what is often termed 'resourcism', a way of evaluating nature which only accounts for its utility for human use and does not give any acceptance to the idea of protecting nature for its own sake, or any conception of a nature that cannot be managed. By utilizing a study of the govern-mentalities emerging throughout liberalism, welfare-liberalism and neoliberalism I argue that this form of 'knowing' nature-as-resource has always been internal to rationalities of liberal government, but that the bracketing out of other moral valuations to the logic of the market is a specific function of neoliberal rationalities of governing.

I then seek to offer an analysis of the implications for this form of nature rationality, in that it is becoming increasingly globalized, and with that bringing more aspects of nature into metrics for government, bringing new justifications for intervening in 'deficient' populations under the rubric of 'sustainable development. I argue, that with this a new (global) environmental subject is being constructed; one that can rationally assess nature-as-resource in a cost-benefit logic of wise-use conservation. This acts to both marginalize those people that have alternative understandings for our relationship with nature is destructive to nature itself, further embedding the more-than-human into the economic rationality of neoliberal resourcism.

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Chapter 1

Introduction

1.1 Modern Environmentalism

In the 21st century, it would seem that 'saving the Earth' has become the duty of governments, corporations and citizens alike. We are told that we need to protect the Earth for future generations,[1] and we are bombarded with dystopic images of what will happen if we do not work together towards our common future.[2] 'Protecting the environment' is never far from national debates, with often 'some aspect' of the environment being in the top five most important issues in national polls; fluctuating in North America between what is termed 'ecosystem services' such as clear air and water, and more systemic issues such as climate change[3]. All the evidence would suggest that preserving the planet is a common goal for 'this generation'. It would seem strange then, that massive deforestation continues, species extinction is on the rise[4], and extractive industries continue to tear up the planet for its valuable resources. Since the 1987 Brundtland Commission set out the goal for the need to 'sustainably develop', which it famously defines as "development that meets the needs of the present without

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[1] World Commission on Environment and Development. *Our Common Future* (Oxford University Press; Oxford, 1987)
[2] Ibid.
[3] Andrew Simms "Climate change: an eye on the storms" *The Guardian* September 1st, 2011, accessed on September 5th, 2011, http://www.guardian.co.uk/commentisfree/2011/sep/01/climate-change-storm-extreme-events
[4] International Programme on the State of the Ocean "Multiple ocean stresses threaten "globally significant" marine extinction" *Press Release on behalf of the International Programme on the State of the Ocean* (2011)

compromising the ability of future generations to meet their own needs", there seems to be little progress even within the parameters that they defined.[5]

However, even if we do assume that 'this generation' has taken up the call for creating a more sustainable relationship with nature, we have to ask ourselves if this is the proper action to be taken. We are told that the destruction of 'the environment' is due to the lack of "comprehensive management tools"[6] for nature, or the inability for us to develop sustainably and therefore the answer in modern society is always better and more *management*. However, some argue that this way of 'protecting nature' is actually placing nature directly into the very metrics that environmentalists once opposed, and implicating nature into a system where it always loses. Environmental Philosophers such as Neil Evernden argue that this approach to 'environmentalism' amounts to a resourcism that "transforms all relationships to nature into a simple subject-object or user-used one."[7]

The problem that this thesis is seeking to examine is why we have come to a place historically, where it would seem that the only way to speak of nature *legitimately* in public discourse is to speak *through* the economic language of costs and benefits. Why it is, that where once "only an anguished cry could be expected in defense of a threatened mountain or an endangered species, now a detailed inventory and benefit-cost analysis are sure to be forthcoming."[8] This thesis argues that the real 'danger' to humans and non-humans is our inability to question if our political systems are at the heart of the

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[5] Volker Hauff. "Brundtland Report: A 20 Years Update" *Key Note Speech, European Sustainability, Berlin 07: Linking Policies, Implementation, and Civil Society Action* (2007)
[6] Ibid., 7.
[7] Neil Evernden, *The Natural Alien: Humankind and Environment* (Toronto: Toronto University Press, 1993): 24
[8] Ibid., 9

continued destruction of nature, and that moral discussions for nature are being sidelined in favour of arguments for optimization.

1.2 Resourcism: Protecting Nature and Economic Growth

If it seems to be that there is some 'common future' and that implicitly we are all supposed to become 'environmentalists' to the degree that we are now 'environmentally aware', there is little common ground for those who argue that the increasing amount to which nature is subsumed within economic rationality is actually the primary reason for concern. As institutions such as the United Nations, environmental organizations and state departments seek to find better ways of articulating why certain aspects of nature are important for our use, as potential medical uses, or tourism, others believe the act of codifying nature into these value categories is itself problematic.[9]

Even under the rubric of 'saving nature', putting nature into a metric that allows for its parts to be assessed vis-à-vis a cost-benefit rationale means that we accept that its use as resource is necessary, and this immediately brackets out the idea of preservation for nature's own sake, or what is the moral problem of attempting to manage nature in the first place, therefore, the "do nothing option"[10] is never brought to the table. To place nature discursively into this frame of 'object to be managed' we are removing any moral standing nature has on its own. When we do this, we are suggesting that in order for nature to be recognized and legitimized, it must be placed into a category where it can be managed, utilized and optimized.

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[9] Ibid.

[10] Anne C. Bell. "Protecting the Tatshenchini: Wild Nature as Resource?" in *Canadian Issues in Environmental Ethics* eds., Alex Wellington, Allan Jacob Greenbaum and Wesley Cragg. (Peterborough Ontario; Broadview Press Ltd, 1997): 220

For this reason, the same conservation groups that would have once argued that economic expansion and large-scale development are at the center of what is wrong with our attitudes towards nature, are now actively seeking these economic developers out as partners. In areas such as the Tatshenshini River in Yukon, Canada, both the conservation groups in the area (World Wildlife Fund and B.C. Wildlife Federation) and mining companies looking to start up a major development project took the same "underlying utilitarian philosophy: the Tatshenshini must be put to its best use – its value must be maximized for the benefit of present and future generations"[11]. The conservationists attempted to provide an account of its unique biological and cultural diversity, its interests for science, and its use as a tourism destination, in order to argue why a mine should not be placed in this specific location (although another would suffice). However, as they demonstrated "the utility of literally all the eye could see"[12] they placed *all* of the area into a cost/benefit rationale for economic benefits (and other social 'goods') that could be had if the mine was not placed there. The mining operation never took place in the area, but it cannot be ignored that this river was once argued for protection on the basis that it is important in and of itself, but when the conservationist took the utility argument to the river, it might have saved the 'health of the river ecosystem' from being impacted by the mine, but it opened up the door for tourism, and other economic benefits that were leveraged against the setting up of the mine.

This is why Neil Evernden regards this form of 'environmentalism' as little more than a temporary fix, whereby "a stay of execution is only as permanent as a government

[11]Ibid., 219
[12] Ibid., 221

committee or a public-opinion poll."[13] Nature is only saved here insofar as it can be used for humans at some later date, for a different purpose. Similar to Evernden I will link this historical shift towards commodifying the 'saving' of nature with the development of ecology, through which "Environmentalists have tutored the developer in the art of careful exploitation." I will show that ecology becomes a conceptual apparatus that gives government the metric for analyzing nature and legitimizing action under the rubric of environmentalism and producing the earth's value within its own logic. Ecology does not remain static and shifts throughout time and becomes internal to the logic of neoliberal (market) rationalities, opening up more of nature to be placed onto the balance sheet with other 'considerations' for development.

1.3 Green Governmentality

The conceptual apparatus I will use to examine the historical shifts towards how we now understand nature-as-resource, is Michael Foucault's analytic of governmentality. This analytic allows for an examination of government that focuses on how differing 'mentalities' of rule, impact upon both how we constitute areas as spaces that need to be managed, and then sets the conditions for how this management will take place. Looking into how varying governmental rationalities use nature, Stephanie Rutherford, argues that "The ways in which the environment is constructed as in crisis, how knowledge about it is formed, and who then is authorized to save it becomes

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[13] Neil Evernden, *The Natural Alien: Humankind and Environment* (Toronto: Toronto University Press, 1993): 13

important for understanding the ways that the truth about the environment is made, and how that truth is governed."[14]

Thus, through this analytic of 'govern-mentalities' we can begin to see how nature was conceived of as a necessary resource to be cultivated, articulated as needing our protection and then codified into the neoliberal market rationality, all through what was argued as necessary to the internal mechanisms of 'how to govern'. I will argue that this 'resourcism' that Evernden speaks to is directly linked to how neoliberal rationalities specifically construct nature as something to be (economically) managed, and then sets the guidelines for how to manage it, through cost-benefit analysis. What is most dangerous, I argue, is that this idea of nature is being used as a technique for intervention into countries that are seen as needing to 'sustainably develop', and what we are seeing is the *globalizing* of the idea of bracketing out moral attitudes that argue for protection of nature for its own sake, rendering more and more of nature as an object to be properly *used.*

1.4 Focus of the Research

Through my thesis I will show how governmentality is constructed as an analytic, how it can be used to understand nature, and how in turn this is becoming globalized. Chapter 2 introduces governmentality in more detail and lays out the ways in which it is used, the emergence of what is now referred to as 'governmentality studies' and how I intend to use it in my study of 'government of nature'. Chapter 3 is the main focus of the study and brings nature into discussions Foucault originally brought out in his lectures on

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[14] Stephanie Rutherford, "Green Governmentality: Insights and opportunities in the study of nature's rule" in *Progress in Human Geography* 31, (2007): 295

security, territory and populations. Here, I will attend to the construction of nature surrounding historical shifts in the 'mentality of government', including lassiez-faire liberalism, welfare-liberalism, and neo-liberalism. Chapter 4 rounds out the argument by showing the implications of this form of nature-as-resource, on current 'development' schemes internationally and how the use of 'sustainable development' is used to define who is authorized to 'act' in the defense of nature. By the end of the thesis I hope to have provided a persuasive study of liberal rationalities for governing nature and what are the dangers for not confronting the contradictories of management approaches to nature and the neoliberal rationalities inherent in them.

Chapter 2

Governmentality

The term *governmentality* first emerged during a lecture series Michael Foucault gave at the College de France between the period of 1977-1978 called "Security, Territory, Population."[15] The college required professors at the university to construct a year-long thematic seminar series, based on the professor's previous year's research. This would occur weekly and allowed Foucault the opportunity to expand concepts he had previously published and work out new conceptual frameworks in 'real time' so to speak; a practice he continued until his untimely death in 1984. In the time period between the lectures on governmentality he was working on his *Histoire de la sexualité* (History of sexuality), with only three of the four volumes being published before his death. Although his lecture notes were seen to be highly-advanced writings on the topics he lectured, Foucault never had the opportunity to write about governmentality in a more succinct fashion.[16]

Governmentality never became a mode of analysis in any of Foucault's written works, and therefore did not get the same in-depth analytical treatment as concepts such as discipline or genealogy. Much of the work on this concept has occurred posthumously and across several different disciplines, and what has occurred from this then is a broad-based group of scholars loosely known as 'governmentality studies'. For many of these

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[15] Michael Foucault, *Security, Territory, Population: Lectures at the College de France* (London, Palgrave Macmillan, 2007)
[16] Ibid.

governmentality studies, the focus has not been to create a 'Foucaultian account'[17] or stay

true to his purpose per se, and in doing so, runs the risk of being presented as a

conceptual toolkit where governmentality can stand in for any number of things. For the

purposes of this thesis, the intention will be to articulate this concept as close to

Foucault's original intention, showing that his work in governmentality is situated as an

extension of his earlier works on madness, and his work on disciplinary societies,

although admittedly this work will be more overtly critical to the practices of government

than Foucault's own work on governmentality.[18] Hopefully this will build into the

governmentality literature in a way that does not compromise Foucault's original

intention and allows for an understanding of how the ways in which we construct nature

are linked to Foucault's ideas about the 'art of government'.

2.1 Governmentality Studies

Since the publication of Foucault's lecture series, the use of governmentality as a

theoretical approach became quite popular through several different disciplines. It has

become primarily popular in the UK and North America, where a group of scholars

began to emerge becoming loosely defined as a 'governmentality school'. I use the term

loosely, because there is little cohesiveness to the very disparate approaches to

governmentality within this 'school'. It began with the first book-length publication to

construct a methodological approach in *The Foucault Effect*: *Studies in*

Governmentality[19], reprinting what they felt was the most pertinent sections of

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[17] Nikolas Rose, Pat O'Malley and Mariana Valverde. "Governmentality" *Annual Review of Law and Social Science* 2006 (2).
[18] Graham Burchell, Colin Gordon and Peter Miller, eds in *The Foucault Effect: Studies in Governmentality with two lectures by and an interview with Michael Foucault*. (Chicago; University of Chicago Press, 1991)
[19] Ibid.

governmentality from Foucault's writing and then attempting to prove its applicability in a variety of places. Since then it has been studied for its usefulness in the disciplines of international relations[20], Cultural Studies[21], Political Science,[22] Management Science, and Sociology[23].

In his lecture series on governmentality, there is a notable absence in terms of value judgements, and they are "devoid of the implicit pejorative sarcasm which Foucault's Nietzschean affiliations have so often led readers to hear in his writing."[24] This does not mean that he was uncritical of the world government mentalities create (especially neoliberal governments), but that his criticisms were not as overt as they were perhaps in his earlier writings. This has led some authors to use governmentality in a very un-Foucaultian way, and in fact present governmentality uncritically as a study of the progress of modern government to its current state, something that is against the critique which is at the core of Foucault's writing.[25] O'Malley, *et al* argue that a large part of the governmentality literature lost its critical stance and in some cases has "in the course of discrediting criticism, ended up implicitly lauding the vocation of bureaucracy… and siding with liberal bureaucratic procedures against the straw figure of radical feminism in

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[20] Wendy Larner and William Walters, *Global Governmentality: governing international space* (London; Routledge, 2004)

[21] Cameron McCarthy, Jack Bratich, and Jeremy Packer. *Foucault, Cultural Studies and Governmentality*. (New York; State University of New York Press, 2003)

[22] Erik Swyngedouw "Governance Innovation and the Citizen: The Janus Face of Governance-beyond the Sate" *Urban Studies* 42(11), (2005)

[23] Peter Miller and Nikolas Rose, *Governing the Present: Administering Economic, Social and Personal Life* (Cambridge: Polity Press, 2008), Mitchell Dean, *Governmentality: Power and Rule in Modern Society* (London, Sage, 1999) and *The Foucault Effect: Studies in Governmentality with two lectures by and an interview with Michael Foucault*. ed., Graham Burchell, Colin Gordon and Peter Miller. (Chicago; University of Chicago Press, 1991)

[24] Graham Burchell, Colin Gordon and Peter Miller, eds in *The Foucault Effect: Studies in Governmentality with two lectures by and an interview with Michael Foucault*. (Chicago; University of Chicago Press, 1991), 6.

[25] Rutherford has a most robust discussion about the various ways in which Foucault's governmentality has been abused in her article: Stephanie Rutherford, "Green Governmentality: Insights and opportunities in the study of nature's rule" in *Progress in Human Geography* 31, (2007).

sexual harassment disputes."[26] This usually takes the form of empirical studies such as Cruikshank[27] who studies how self-esteem has emerged throughout various regimes of governmentality, providing interesting results in the ways that people self-govern, but ultimately offering no critical analysis of neo-liberal forms of government. Other authors such as Zipin and Brennan[28] use the term governmentality as a synonym with 'governance'. They speak of new managerial practices which are embedded in university practices but do not link the discussion with broader discourses of power, or any actual 'governmentalities'. There is no linking into how broader government mentalities are impacting the shifts in management, and governmentality is just used as a stand-in for an oppressive negative form of power.

Other studies maintain a critical analysis, but the emphasis in the analysis is more on the 'micro-level' than what we are looking for in this thesis. Foucault's purpose was to understand how 'arts of government' emerged, and states that he did not want to study "real governmental practice by determining the particular situations it deals with, the problems raised, the tactics chosen, the instruments employed"[29], but it is here that much of the empirical studies on governmentality attempt to construct their methodological apparatus'.[30] Much of this has been used in the anthropology literature, for its usefulness with regards to ethnographic research in studying the relationship between the subject

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[26] Pat O'Malley, Lorna Weir and Clifford Shearing (1997) "Governmentality, criticism, politics" in *Economy and Society* 26(4) (1997): 506

[27] Barbara Cruikshank, *The Will to Empower, Democratic Citizens and Other Subjects.* (Ithaca, London: Cornell University Press, 1999)

[28] Lew Zipin and Marie Brennan "The suppression of ethical dispositions through managerial governmentality: A habitus crisis in Australian higher education" in *International Journal of Leadership in Education* 6(4) (2003).

[29] Michael Foucault, *The Birth of Biopolitics: Lectures at the College de France* (London, Palgrave Macmillan, 2008)

[30] Peter Miller and Nikolas Rose, *Governing the Present: Administering Economic, Social and Personal Life* (Cambridge: Polity Press, 2008)

and the state.[31] However, much of the anthropological research using governmentality

tends to place too much emphasis on the 'local', vis-à-vis institutional practices and how

programmes of government do not have the effects that they intend.[32] However this can

have the effect of causing the state to get almost entirely lost as a form of analysis and

instead other institutional programs are given more theoretical power than they actually

entertain, as Agrawal's research suggests in his treatment of community-forest councils

in Kumaon, India[33]. Sometimes, the use of governmentality can cause authors to gloss

over larger theoretical issues which are sometimes 'lost in the details, as in cases such as

Tanya Li's research in Indonesia, as she attempts to show how practices of government

impacted the lives of those who were being 'developed'.[34] Both of these cases miss the

larger (I would argue global) aspects of neoliberal rule, and its implications by

misinterpreting what appears to be the relocation of state power into non-state actors. I

will argue this is a very particular neoliberal technology of rule, and that the state is still

the central locus of power.

I am using governmentality not only as an analytical foray into the political

constitution of 'government', but also as a method of understanding how the social and

natural sciences become implicated in the very act of governing. In this sense, these

sciences cannot and should not be understood as neutral artefacts lying outside the

purview of political action, but are constituted in a manner which is very much embedded

in various government rationalities. This tension has always been at the heart of

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[31] Arun Agrawal, *Environmentality: Technologies of Government and the Making of Subjects* (Durham N.C.: Duke University Press, 2005)

[32] Tania Murray Li *The Will to improve: governmentality, development and the practice of politics* (Duke; Duke University Press, 2007)

[33] Arun Agrawal, *Environmentality: Technologies of Government and the Making of Subjects* (Durham N.C.: Duke University Press, 2005)

[34] Tania Murray Li *The Will to improve: governmentality, development and the practice of politics* (Duke; Duke University Press, 2007)

Foucault's work, and as we will see, governmentality studies should rightfully be seen as a natural extension of Foucault's earlier work in Madness and his work in disciplinary power.

2.2 Towards a Governmentality

Foucault's 'archaeology', stemming from his work in psychoanalysis was originally intended as,

> "an inquiry whose aim is to rediscover on what basis knowledge and theory became possible; within what space of order knowledge was constituted; on the basis of what historical *a priori*, and in the element of what positivity, ideas could appear, sciences be established, experience be reflected in philosophies, rationalities be formed, only, perhaps, to dissolve and vanish soon afterwards"[35].

Therefore central to the archaeological period of his thought, was to understand how knowledge was constructed vis-a-vis discursive practices, and how and why certain discourses became dominant over others. This, he says, occurs as different epistemes were created through "a system of ordered procedures for the production, regulation, distribution, circulation, and operation of statements."[36] These constructed knowledges are usually thought of as being a product of 'great minds of history', creating what we understand as truth(s). However, Foucault, instead of studying the author in historical context, and mapping history through studying the great philosophers and scientists of various ages, wanted to understand what it was that made the theories of such 'great

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[35] Michael Foucault: *The order of things.* (London: Routledge, 1970) xxiii
[36] Michael Foucault "Two Lectures" in C. Gordon, ed., *Michael Foucault: Power/Knowledge: Selected Interviews and Other Writings 1972-1977* (Brighton: Harvester, 1980)

minds' able to become as influential as they were; to understand history not as a necessary culmination of progress towards the present.

Here, 'discursive formations' existed in specific eras of history and this approach is used to understand how constructs such as madness are set in a very particular set of socio-historical relations, as utilized principally in his books *Madness and Civilization, The Birth of the Clinic* and *The Order of Things,* and refined in his text *The Archaeology of Knowledge*. Within these texts he argued that certain discourses, mainly in the natural sciences, are able to form their own knowledge, or episteme. This in turn allows fields such as psychiatry to construct what is empirically valid, and through these 'discourses of fact' legitimize their own discourse and knowledge. Foucault would argue, constructs such as madness become embedded within this discourse via larger social ideas such as the beginnings of the 'age of reason' and how madness was conceived of as being anti-reason and therefore detrimental to societies working as a whole.[37] What at first is claimed to be situated inside neutral language is caught up, as Foucault argues, in a "compulsion to use the order of words to order things"[38]. Therefore, madness becomes not only a way of understanding a condition, but becomes a way of understanding how to manage it through ideas such as 'confinement'. This is once again set against the enlightenment assumption that scientific knowledge is the *natural* progression of modernity through to some sort of 'best' society.

This archaeological method failed to articulate the fluidity of knowledge/power over time, and how particular forms of knowledge became firmly entrenched into

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[37] Michael Foucault, *Madness and Civilization: A History of Insanity in the Age of Reason.* (London: Tavistock, 1967)
[38] Martin Packer *The Science of Qualitative Research*, (Cambridge; Cambridge University Press, 2011), 348

political relations. That is not to say that archaeology did not have a political argument entrenched, but that it was not an explicit aim of the approach. To correct this deficiency, Foucault reconstituted his ideas to construct a *genealogy* and can be understood as "linked in a circular relation with systems of power which produce and sustain it, and to effects of power which it induces and which extends it"[39]. It is here that other institutional systems, such as the school and the hospital, begin to be understood using his disciplinary approach, and along with the prison emerge as a way of normalizing social control. It is here Foucault says that the constitution becomes articulated in what he:

> "would call genealogy, that is, a form of history which can account for the constitution of knowledge, discourses, domains of objects, etc., without having to make reference to a subject which is either transcendental in relation to the field of events or runs in empty sameness through the course of history"[40].

It is therefore not a wholesale dismissal of the archaeological approach, but instead of a historicism that assumes the systems of knowledge occur *within* a given era, "genealogies typically explore the conditions of possibility of contemporary beliefs and practices, since they uncover the historical contingencies that made it possible for people today to think and act as they do."[41] The genealogical method then seeks to the follow the circular descent of systems of thought, (which would have been discovered through an archaeological approach), and most importantly what the *effects* of these discursive practices have on social relations.[42] Archaeology could describe the systemic underpinnings, but was unable to account for these shifting effects.

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[39] Michael Foucault "Two Lectures" in C. Gordon, ed., *Michael Foucault: Power/Knowledge: Selected Interviews and Other Writings 1972-1977* (Brighton: Harvester, 1980)
[40] Ibid., 117.
[41] Bevir, M. "Rethinking Governmentality: Towards genealogies of governance" *European Journal of Social Theory* 13, (2010): 430.
[42] Martin Packer *The Science of Qualitative Research*, (Cambridge; Cambridge University Press, 2011)

In order to gain a proper understanding of the complex ways in which this knowledge becomes dominant, Foucault used this method for accounting for the conflict and contingent nature of creation of knowledge; indeed something that Foucault asserted was often quite accidental. It is using this idea that Foucault writes in *Discipline and Punish* the ways in which a certain type of power (disciplinary) emerged as a method of controlling populations based on an explicit political desire to correct deviant behaviour vis-à-vis disciplinary systems.[43] It is in his study that Foucault argued that the institutionalization of the prison did not occur as a part of a meta-scheme, but instead:

> "The prison operated as a process of filtering, concentrating, professionalising and circumscribing a criminal milieu. From about the 1830s onward, one finds an immediate re-utilisation of this unintended, negative effect within a new strategy which came in some sense to occupy this empty space, or transform the negative into a positive… this is what I call the strategic completion (*remplissement*) of the apparatus"[44].

What is important in this context is that criminology emerges here as a 'system of knowledge', but *also* can be seen as a system of management, and not only constitutes a new form of knowledge, but ultimately in concert with the school and the hospital, effects the way social control is constituted.

Foucault further examines genealogy in the history of sexuality where he explores how 'technologies of the self' emerge as a way in which normalizing behaviours are reinforced though a historical understanding of how sexuality has been constructed over time, and how this constitutes what we think of as ethics. This 'return to the subject' does not mean centering the historical analysis on the subject itself, but instead, of the effects of how censorship and 'prudishness' emerge as a way of how we understand ourselves

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[43] Michael Foucault, *Discipline and Punish: The Birth of the Prison* (London: Penguin, 1977)
[44] Michael Foucault "Two Lectures" in C. Gordon, ed., *Michael Foucault: Power/Knowledge: Selected Interviews and Other Writings 1972-1977* (Brighton: Harvester, 1980), 195-6

and our sexuality; a way of understanding effects upon the subject.[45] It is not limited to just this two-way relationship however, and the ways in which we are constituted sexually is linked to how power is constructed among people, and this in turn shifts how power is constructed politically, and so forth, as is the point of the genealogical method.

While *Discipline and Punish* was concerned with the ways in which concepts such as imprisonment became an explicitly political project, it did not show how these practices were bound into how we conceive of government and was criticized (especially from the Marxist left) in that it "failed to address or shed light on the global issues of politics, namely the relations between society and the state."[46] Similarly, while the *History of Sexuality* showed the myriad ways in which the subject was constructed, it also did not have an explicit link to modern forms of rule. This is where governmentality emerges; as a method of bridging this theoretical gap and including the 'art of government' as an understanding of the way in which 'government' rationalizes the necessity of its own existence. Embedded in this is the creation of certain discursive formations (such as statistics) that became not only a method for *knowing* a population, but also began to be used as a system of management that provided the basis for governing this population.

2.3 The Art of Government

An analytic of governmentality is a study in "historically how problems and technologies of governance are formulated and addressed"[47] and while Foucault was

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[45] Michael Foucault, *The History of Sexuality, Vol 1: An Introduction* (London: Penguin, 1978)

[46] Graham Burchell, Colin Gordon and Peter Miller, eds in *The Foucault Effect: Studies in Governmentality with two lectures by and an interview with Michael Foucault*. (Chicago; University of Chicago Press, 1991): 4

[47] Majia Holmer Nadesan, *Governmentality, Biopower, and Everyday Life* (New York; Routledge, 2008): 6

attempting to avoid totalizing, or structural accounts of historical processes, he did

attempt to show how distinct 'arts of government' created social fields of visibility and

produced "regularities of conduct"[48]. In doing so, it is not just to suggest a historical

reconstruction of the development of political structures over time, but to view the

"processes of co-evolution of modern statehood and modern subjectivity"[49]. Therefore, to

study governmentality it is necessary to understand that Foucault did not attempt to

comprehend ideas such as liberalism as only a theory or ideology, but liberalism as "a

way of doing things that was oriented to specific objectives and that reflected on itself in

characteristic ways,"[50] operating principally as a political rationality. This 'way of doing

things' is articulated by Foucault as an 'art' of government, in that "governing is an

activity which requires craft, imagination, shrewd fashioning. The use of tactical skills

and practical know-how, the employment of intuition and so on"[51] and it is here, in the

frame of problem-solution thinking, that Foucault's governmentality interrogates.

      Thomas Lemke argues that the concept embodies two of Foucault's projects post

Discipline and Punish and that the idea of 'government' entails a 'link' in Foucault's

thought, bringing together his work on subjectification vis-à-vis the genealogy of the

subject in *The History of Sexuality* with work he had been doing on the 'genealogy of the

State' in his lecture series and interviews. It is a link because "Foucault uses it exactly to

analyse the connections between what he called technologies of the self, and technologies

of domination, the constitution of the subject and the formation of the state."[52] It is here

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[48] Ibid., 6

[49] Thomas Lemke, "Foucault, Governmentality, and Critique", *Rethinking Marxism,* 14(3), (2002): 12-13

[50] Nikolas Rose, Pat O'Malley and Mariana Valverde. "Governmentality" *Annual Review of Law and Social Science* 2006 (2).

[51] Mitchell Dean, *Governmentality: Power and Rule in Modern Society* (London, Sage, 1999), 18

[52] Thomas Lemke, "Foucault, Governmentality, and Critique", *Rethinking Marxism,* 14(3), (2002): 2.

that Foucault begins his study to show how government 'mentalities' are constructed to create rational, effective governments, which in turn can define the ways in which we understand and govern 'population'.

Foucault states that in order to understand properly the modern state, it is necessary to avoid situating the emergence of the state as a necessary progression through a set of institutions and functions that lead towards a Leviathan-like understanding of 'government'. In contrast to this, he argues that "what is important for our modernity, this is to say, for our present, is not then the state's takeover of society, so much as what I would call the 'governmentalization of the state."[53] In order to complete this idea Foucault states that what he means by governmentality can be constituted within three main ideas:

1. 'The ensemble formed by institutions, procedures, analyses, and reflections, calculations, and tactics that allow the exercise of this very specific, albeit very complex, power that has the population as its target, political economy as its major form of knowledge, and apparatuses of security as its essential technical instrument.

2. By "governmentality" I understand the tendency, the line of force, that for a long time and throughout the West, has constantly led towards the pre-eminence over all other types of power – sovereignty, discipline, and so on – of the type of power that we can call "government" and which has led to the development of a series of specific governmental apparatuses (*appareils*) on the one hand [and, on the other.] to the development of a series of knowledges (*savoirs*).

3. By "governmentality" I think we should understand the process, or rather, the result of the process by which the state of justice of the Middle Ages became the administrative state in the fifteenth and sixteenth centuries and was gradually "governmentalized""[54].

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[53] Michael Foucault, *Security, Territory, Population: Lectures at the College de France* (London, Palgrave Macmillan, 2007), 109
[54] Michael Foucault, *Security, Territory, Population: Lectures at the College de France* (London, Palgrave Macmillan, 2007)

With this in mind, liberal governmentality can be best understood as the triad between Discipline, Sovereignty and Government.

Sovereign power is a form of power traditionally associated with the monarchy, and was seen as the right to take life over sovereign subjects. The state in the 15th and 16th century had power that was vested almost entirely in the sovereign-as-monarchy, where the sovereign had absolute power over the right of life of its population. Over time "sovereign power increasingly became subject to juridical concerns pertaining to the rationalization and administration of law"[55]. This form of power is exercised through the judicial and executive arms of the state, in which it uses the law and legislative power to control a territory. Foucault argues that this notion of sovereignty shifts in the modern period, with the 'right to take life or let live' in regards to the social body, being replaced by "to ensure, maintain or develop its life"[56]

Disciplinary power is seen as being almost the opposite of sovereign power, in that it is a more innocuous form of power that exercises itself with the aim of normalizing instead of (outward) punishing. Discipline in this sense refers to Foucault's earlier work in *Discipline and Punish* and is understood as how institutions such as the school, monasteries, the prison, and armies regulate individual bodies by constituting them into aggregate humans, such as classes or armies in order to normalize their behaviour, and define what is considered deviant in society. It does this via the regulation of time and space using 'drills' to normalize people's behaviour, and it's object "is the regulation and ordering of people within [the sovereign] territory"[57]

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[55] Majia Holmer Nadesan, *Governmentality, Biopower, and Everyday Life* (New York; Routledge, 2008): 7
[56] Paul Rabinow *The Foucault Reader* (New York: Pantheon Books, 1984): 259
[57] Mitchell Dean, *Governmentality: Power and Rule in Modern Society* (London, Sage, 1999): 20.

All of this is wrapped in what Foucault terms in his first point a very "complex form of power", is what he refers to elsewhere as 'biopower'. Biopower refers to "knowledge and strategies of power that aim at governing a population's life forces"[58], in which 'government' now has the "task of administering life"[59]. This is in turn expressed through biopolitics, which is implicated in the development of statistical, and quantitative forms of knowledge that allow for the construction of expert authorities working from both public and private institutions who perceive population as their principle "political and scientific problem space"[60]. While Nikolas Rose and Peter Miller discuss how biopolitics is best understood as a "process of optimization", this thesis will follow scholars such as Nadesan in saying that we must be attuned to the fact that biopower "operates as a technology of power that both privileges and marginalizes, empowers and disciplines"[61].

Government is understood here in a particular sense of the term, a term which Foucault uses from pre 18th century understanding of government, and is later termed broadly as the 'conduct of conduct'. This is situated in Foucault's broad use of the term government that unlike its (popular) purely political meaning today, was once "discussed not only in political tracts, but also in philosophical, religious, medical and pedagogical texts."[62] Government was once government of souls, government of household management, government of self-control among others, and combined with the state and administration gives an analytical structure to studying both subjectivity and the modern

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[58] Majia Holmer Nadesan, *Governmentality, Biopower, and Everyday Life* (New York; Routledge, 2008): 8
[59] Michael Foucault, *The Birth of Biopolitics: Lectures at the College de France* (London, Palgrave Macmillan, 2008)
[60] Majia Holmer Nadesan, *Governmentality, Biopower, and Everyday Life* (New York; Routledge, 2008): 8
[61] Ibid., 5
[62] Thomas Lemke, "Foucault, Governmentality, and Critique", *Rethinking Marxism,* 14(3), (2002): 13

state. In this sense, government is not only the political parties of the day, nor the bureaucracy of the nation state, but is also the multivariate amount of agencies and authorities who via "a variety of techniques and forms of knowledge, that seeks to shape conduct by working through our desires, aspirations, interests and beliefs, for a definite, but shifting ends and with a diverse set of relatively unpredictable consequences, effects and outcomes."[63], an idea that is best articulated as the ways in which 'technologies of the self' are constructed through this new understanding of 'government'.

It is here, that Mitchell Dean places this as the modern problem space of rule that is defined by three lineages:

> "The first is that of sovereignty which, having first taken a judicial form, is democratized and anchored in the rights of the legal and political subject. The second is that of discipline which, having arisen in the practical techniques of the training of the body becomes a generalized regulatory mechanism for the production of docile and useful subjects. The third is that of government which, having first arisen in the 'dispositional' problematic manifest in police and state reason of state, becomes a government of the processes of life and labour found at the level of population and in which the subject is revealed in its social; biological and economic form"[64].

It is the coming together of sovereignty, discipline and government that defined liberal governmentality and "combined the individualizing control-strategy of pastoral power with the totalizing control strategy of state power"[65], which created a "secular political pastorate that functions to both individualize and to totalize."[66] Studying governmentality in this capacity means to study the ways in which governing bodies construct certain forms of knowledge and make them calculable (both qualitatively, and quantitatively),

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[63] Mitchell Dean, *Governmentality: Power and Rule in Modern Society* (London, Sage, 1999), 11
[64] Ibid., 102-103
[65] Majia Holmer Nadesan, *Governmentality, Biopower, and Everyday Life* (New York; Routledge, 2008): 9
[66] C. Gordon, "Governmental Rationality: an introduction. In George Burchell, C. Gordon and Peter Miller, eds., *The Foucault Effect* (Chicago University of Chicago Press, 1991): 8

and construct what is understood as a 'rational' form in order to define what is responsible behaviour in relation to a given situation.

As Foucault's earlier work presented the construction of madness as a way to conceive of what a 'healthy' society should look like, his idea of biopower shows how, through the embedded nature of the scientific disciplines, in 'government', through which we have the knowledge for how to administer the 'best, and healthy' society in order to produce the most productive individuals. Because the economy becomes its central base of knowledge it becomes necessary to govern the population vis-a-vis the economy. In order to do this, statistical data needs to be created in order to 'best judge' how to govern, and it is for this reason that things begin to become 'rendered technical'. It is in this context that we begin to see the emergence of the social sciences such as sociology and political science, and with them, the knowledge of how to best manage a society becomes a standardized/normalized part of discourse, and is then utilized in programmable government management. Here, Foucault says that the modern state, "takes what are essentially a political problem, removing it from the realm of political discourse and recasting it in the neutral language of science."[67] To govern then, is to always need to seek legitimization for one's actions.

In modern society, neoliberal rationality is the current governmentality, and will be where most of the focus of this thesis lies. That which is legitimate in a neoliberal society must be constituted so as to be able to be placed against a cost-benefit analysis. Neoliberalism relies extensively on 'governing at a distance' in which subjectification and technologies of government are constructed and must conform to the rationalities of

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[67] Herbert Dreyfus, and Paul Rainbow, *Michael Foucault: Beyond Structuralism and Hermeneutics* (Chicago; University of Chicago Press, 1983)

the market. Neoliberalism is in this sense a reaction of the liberal problematic of governing too much, and therefore instead of attempting to control the subjection of individuals, it seeks to define and control the environment they exist in, and in this sense it "seeks to create neither a disciplining nor a normalizing society, but instead a society characterized by the fact that it cultivates and optimizes differences."[68] This can be usefully defined as an attempt to encode the entire social sphere into a 'cost-benefit' analysis. In the case of this thesis, it is the act of taking nature and placing it into categories where the use-value can be determined. An example of this would be Environmental Impact Assessments (EIAs), that are used by government to determine the cost to 'the environment' (in terms of economics, ecosystem health or services, among others) that are then placed against the benefits, which are generally articulated in terms of economic growth, but this can also include 'non-economic' values, articulated in terms such as spiritual or social 'goods'. This gives the external criteria for which institutions, organizations and subjects can optimize the most beneficial arrangement while setting the benchmark for what is the tolerable amount of damage in terms of costs.

Central to this 'mentality' are 'technologies of the self', or the way in which individuals act upon themselves and are expected to self-regulate. To understand technologies of the self, Mitchell Dean uses the one example of the self-help disciplines and government sponsored seminars to explain how populations come to understand what a fully functioning member of society is.[69] In this understanding, it is not the neutral stance it purports that it is, but instead can be understood as a form of morality – insofar as the 'governors' define both how things currently are and also, how they *should* become.

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[68] Thomas Lemke, 'The birth of bio-politics': Michel Foucault's lecture at the College de France on neo-liberal governmentality" *Economy and Society* 30(2), (2001): 200
[69] Mitchell Dean, *Governmentality: Power and Rule in Modern Society* (London, Sage, 1999): 12

In this sense, they define what can be understood as good conduct, through the aforementioned desires, aspirations, interests and beliefs of people. This 'conduct of conduct' shapes the ways in which humans (either individually or in groups) understand themselves in society, and ultimately leads to what Foucault calls 'self-government' a product of governing in neoliberal societies. The turning to 'experts' in order to self-regulate, Nikolas Rose points out, can be seen in the rise of therapeutics as a method of self-enterprise. As knowledge began to emerge as to what the 'best, healthy' person was, people would go to these 'experts' for self-improvement.[70]

In neoliberal rationality, a certain type of freedom of individuals within this bounded 'mentalities of rule' is presupposed as a necessity of governmentality and "We thus govern others and ourselves according to various truths about our existence and nature as human beings. On the other hand, the ways in which we govern and conduct ourselves give rise to different ways of producing truth"[71]. Deleuze refers to this as a way that institutions become both the language and the light.[72] It is linked therefore to Foucault's earlier concerns with the myriad ways in which power and knowledge are intertwined, produced and are historically situated. With this in mind, this thesis will attempt to include ecological concerns into the governmentality analytical to show how the non-human, is both internalized as a technology of government, but also as a disciplinary technique for the construction of human subjects. However, much the same as Mitchell Dean, my study will focus on a conception of government, in discussing "practices concerned to conduct the conduct of others rather than those concerned to

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[70] Peter Miller and Nikolas Rose, *Governing the Present: Administering Economic, Social and Personal Life* (Cambridge: Polity Press, 2008), 171
[71] Ibid., 18.
[72] Gilles Deluze, *Foucault* (Minneapolis, University of Minnesota Press, 1988)

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conduct one's own conduct."[73] The focus will therefore be on the 'practices of

government', rather than on 'practices of the self'. Yet because government is not only

the relations of power and authority, but also the self and identity, there will certainly be

an account for how governmentality, in connection with nature does indeed work to

construct the subject.

However, I want to show how these 'practices of government' lead to the narrow

conception of nature-as-resource, and how this notion of the environment is then

globalized. Therefore, following Darier[74], Dean[75] and Nadesan[76], my study presents

governmentality as a form of critique, unlike theorists such as Rose, who are attempting

to articulate a neutral methodological approach to studying shifts in governmentality, in

the form of ethnographic research. I am not arguing that this endeavour is not valid, or

important, and indeed one that Foucault himself might have utilized if he had lived

longer. However, as we will see in the following chapters, this study is a way of

understanding how governmentality in its current form (neo-liberal governmentality)

creates a set of power relations whereby knowledge *of* (in this case nature) is always

governmentalized before it can become legitimate knowledge, and link it with current

advances in the eco-governmentality literature.

2.4 Towards an Eco-Governmentality?

Eco-Governmentality emerged in the 90's as post-structuralist approaches to

nature began to become more prevalent within the 'environmental' side of the social

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[73] Mitchell Dean, *Governmentality: Power and Rule in Modern Society* (London, Sage, 1999), 13
[74] Eric Darier, "Foucault and the environment." In Eric Darier, eds, *Discourses of the environment*, (Malden, PA: Blackwell, 1999)
[75] Mitchell Dean, *Governmentality: Power and Rule in Modern Society* (London, Sage, 1999)
[76] Majia Holmer Nadesan, *Governmentality, Biopower, and Everyday Life* (New York; Routledge, 2008)

sciences.[77] Authors such as Timothy Luke argue that the current governmentality has

shifted into a new type of 'green' governmentality, in that during the late 20th century,

with the governmentalization of nature, vis-à-vis legal measures and market mechanisms,

the modern conception of nature became deeply embedded into neoliberal governmental

practices and international regulatory systems[78], which is perpetuated by current

educational systems, especially environmental studies departments.[79] However, in doing

this, the construction of the subject becomes mostly lost in the analysis, and the focus

becomes too heavy on the institutional practices, a problem we will return to in the next

chapter. Arun Agrawal's study in *Environmentality* is closer perhaps to Foucault's

original intention of governmentality in keeping the construction of the self as a central

piece in his analysis. However, he remains almost entirely neutral to the ways in which

people come to understand nature through government practices and therefore does not

have the critical aspect that I believe should be central to governmentality studies.

The point of this study is to posit that perhaps a 'green' governmentality, is

emerging and extending into the non-human, and that the ways in which we understand

nature are undoubtedly being wrapped in the 'art of government'. This shows the shifting

ways in which the social construction of nature has historically been situated, not unlike

other concepts such as sexuality. The point is to extend Foucault's original use of

governmentality or biopower into nature, and to offer an account of Foucault's

governmentality and how the construction of nature as something to be managed can be

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[77] Stephanie Rutherford, "Green Governmentality: Insights and opportunities in the study of nature's rule" in *Progress in Human Geography* 31, (2007)

[78] Timothy Luke, *Ecocritique: contesting the politics of nature, economy, and culture.* (Minneapolis: University of Minnesota Press, 1997)

[79] Timothy Luke, *Environmentality as green governmentality*. In Darier, E., editor, Discourses of the environment, (Malden, PA: Blackwell, 1999)

viewed alongside shifting mentalities of regimes of governmentality. In this manner, this study operates as a critique of neoliberal practices but not necessarily neoliberalism in itself. By this I mean that the ways in which we understand nature are not necessarily embedded in neoliberalism as an ideological structure, but as the (govern)mentalities of rule that operate under neoliberalism, as a way to problematize the governmentalization of nature.[80]

In doing so, it is not only the 'government' response that codifying nature as something to be 'cared' for and managed, but this also emerges through the actions of various environmental movements throughout history. It is important to point out that environmental movements should not be understood as a cohesive movement with a rigid set of demands and tactics, but are a heterogeneous set of actors each with their own motives and objectives. Although the focus of this thesis is on based on understanding the link between government mentalities and the management of nature, I will also show the impacts that various peoples and organizations have had on the way that government co-opts certain knowledges and in doing so I also want to show that these various movements have themselves shifted depending upon the governmentality. Therefore, in modern neoliberal government, Greenpeace acts on the one hand to perpetuate the logic of cost-benefits that are central to neoliberal rationalities, by disciplining subjects into internalizing 'saving nature' as something that they need to optimize, and on the other hand, they also take action against the idea of economic growth that is central to neoliberalism itself through their various campaigns. This is exemplar of the 'environmental movements' themselves, in that some are complicit in the act of

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[80] Mitchell Dean, *Governmentality: Power and Rule in Modern Society* (London, Sage, 1999) : 28

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developing, some are opposed and some, such as Greenpeace can act in some ways against the logic of neoliberalism, while in other ways actively supporting it.

I want to present, using primarily Mitchell Dean's genealogy of government approach, not a green governmentality in the way in which it is sometimes constructed in the literature. My work will be close to Luke's interrogation of the changing conception of nature bound within 'government', but with more focus on the intersections of the existing literature on governmentality for a more robust understanding of the construction of nature. The focus is to show how nature has shifted over time through government practice and what the implications are for the continuation of governmentalities of nature. It remains close to Foucault in this regard – operating as a critical historical account for the construction of nature with a focus on the ethical implications if we do not find a way to find an opening for "the capacities of diverse associations, movements and groups"[81] and allowing for alternative understandings of nature to find a place in the discourse.

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[81] Ibid., 207

Chapter 3

Governmentality and Nature

In the last chapter I discuss the emergence of the theoretical construction of governmentality and its implications for a robust historical understanding of how our current conception of government has shifted through historical ruptures dealing with the practice of government. Central to this understanding is Foucault's use of biopower to explain the shift from the sovereign's uncontested power to rule vis-a-vis its right over death to the post-Westphalian construction of biopolitical power where government must legitimize itself in the form of the more productive power of the 'right over life' [82] Biopolitics is thus the method of administering life in a manner Dean describes as "the administrative imperative to optimize the health, welfare and life of populations"[83], but as stated in Chapter 2, this thesis wants to extend that argument and say that while it is attempting to 'optimize' life itself, it also marginalizes human, non-human and otherwise legitimate forms of knowledge in the aspiration for finding the 'best' method of conducting conduct based on liberal rationalities of rules. It is here for instance, that we see the formation of national statistics to render human bodies themselves 'visible to rule' and thereby making them governable objects and making population a knowable subject.

This chapter seeks to extend the analytical framework of the 'care of the

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[82] Michael Foucault, *Security, Territory, Population: Lectures at the College de France* (London, Palgrave Macmillan, 2007)

[83] Mitchell Dean, *Governmentality: Power and Rule in Modern Society* (London, Sage, 1999): 20.

population' to include the care 'of all life', that is more-than-just human 'nature'. Therefore, with the categories of health, welfare and life we can include concepts such as 'environment', 'nature', 'sustainability' and 'ecosystems' in order to understand the myriad ways in which nature is constructed.[84] It is here that nature *itself* becomes a subject of biopower and liberal governmentalities, and how the conception of nature is bound in varying ways of legitimizing and constructing power relations. What is particular about the governmentalization of nature is that who can and is 'authorized' to speak of it is of paramount importance given that nature, itself, has no voice of which to argue alone.

To this end, we can begin to see how nature becomes constructed vis-a-vis what Dean argues is central to the analysis of government rationality. It should include how nature becomes 'visible'; how certain aspects of it are constructed as 'truth'; how technologies and experts are constructed around it, and how subjects are formed based on these analytics.[85] The point is to explain how our current relations with nature, that are heavily based in scientific knowledge and economic rationality, are very much a product of the historical transition as various 'arts of government' become forms of rule.

3.1 Nature and the State

Foucault situates the beginnings of the art of government (in opposition to) in the 18th century, when sovereign powers needed a way of governing based upon the conception of a population. This is inextricably linked to enlightenment and the treaty of Westphalia in 1648, where the basis for the modern nation state was born. It is here that the power of the pope is greatly diminished in Europe, and the pastoral power situated in Christian rationality is joined with the notion of what Foucault terms, the ' *raison d'État*'

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[84] Eric Darier. *Discourses of the Environment* (Malden, PA: Blackwell, 1999)
[85] Ibid., 23

(reason of state).[86] The preservation of a balance of powers between European nations as a prerequisite of the Peace of Westphalia treaty led to a shift in priorities, and Foucault argues that it was no longer the accumulation of territory (in Europe) that countries were after, but instead to a growth in state forces, coupled with a constant attention to diplomatic alliances[87]. In order to maintain the balance of power, it became necessary for the newly conceived state to become concerned principally with two broad areas; the external relations, or military-diplomatic[88] and internal relations or those of the police science, a term which is best understood in contemporary English as 'policy' science.

Therefore, the 'reason of state' brought with it a twofold problem; the need to build its population and the need to have legitimacy over its territory. Foucault states that

> "for each state, one's own and the others, one needs to know the population, the army, *the natural resources*, the production, the commerce, and the monetary circulation – all the elements that are in fact provided by science, or domain of knowledge, statistics, which is founded and developed at this time" [89]

Thus, now that governing was based upon rationality of the state instead of divine law, government needed to become the "right disposition of things"[90] in both the relations of the population and the makeup of the territory for which they reside, and therefore needed to determine the needs and interest of the state and needed knowledge to manage this.[91] In order to build this population, it first needed to become knowable internally via the management of the state via the police, defined as, "the ensemble of mechanisms

[86] Elden, Stuart "Governmentality, Calculation, Territory", *Environmental and Planning D: Society and Space* 25(4): 570

[87] Michael Foucault, *Security, Territory, Population: Lectures at the College de France* (London, Palgrave Macmillan, 2007)

[88] Ibid.

[89] Ibid., 315, Emphasis is mine

[90] Ibid., 96

[91] Rutherford, Paul. "The Entry of Life into History" in Eric Darier, eds, *Discourses of the Environment*, (Malden, PA: Blackwell, 1999): 47

serving to ensure order, the properly channelled growth of wealth and the conditions of preservation of health in general"[92], which does *include* what we now think of as police which is tasked with the enforcement of these new areas of visibility. Therefore in order to 'know' these things, the further administrative forms of rule, "required permanent bureaucratic technologies of power that could map, describe, catalogue, inventory, order and arrange the "things" of government."[93] because this administration becomes necessary, they both make this possible, while simultaneously constructing this knowledge. This in turn helped to create the environment necessary for the advancement of the social sciences in order to describe this new way of 'viewing' things, and it is here that the science of statistics first finds its way to nature. Statistics, which literally means 'science of the state' are crucial because they allow the information necessary for the mercantile principle of maximizing the wealth of the state, while fostering individuals in such a way as to add to the strength of the state[94] and therefore, making the territory knowable becomes central for the ability of rule.

What is of importance to us here is that 'nature-as-resource' becomes critical to the governing of the population due to its utility as a natural resource. That is not to say, of course, that the resources of a nation were not of importance to the monarch previous to state rationality, but that when it becomes a calculable entity to the state, a part of the reason of state, this becomes the principle way of 'knowing' nature *legitimately* and becomes an important aspect of the political economy of the nation. Nature in this field of visibility becomes not only a way of understanding nature, but also of acting upon it and

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[92] Michael Foucault "Two Lectures" in C. Gordon, ed., Michael Foucault: Power/Knowledge: Selected Interviews and Other Writings 1972-1977 (Brighton: Harvester, 1980) : 170.
[93] Gearoil O Tuathail , *Critical Geopolitics* (Minnesota; University of Minnesota Press, 1996): 9.
[94] George Burchell, Colin Gordon and Peter Miller, *The Foucault Effect* (Chicago; University of Chicago Press, 1991): 10

managing the population based on this rationality. This essentially entails the use of state

administration for population management and exploitation and resource extraction

which was further embedded into rule during the colonial explorations of these European

countries.

Similar to governmentality, Bernard Cohn discusses how European countries

needed to come up with 'investigative modalities'[95], as the British for instance "embarked

on a project of translation of its colonies into knowledge it could understand"[96]. These

modalities are, as the ways in understanding how this knowledge is "transformed into

useable forms such as published reports, statistical returns, histories, gazetteers, legal

codes, and encyclopaedias"[97]. Imperial countries used the construction of colonial

Forestry departments in their colonies as a form of rule, by constituting first of all what is

a legitimate way of understanding a forest – as a forest of statistics, but also by

constituting the way in which you should act upon it.[98] Statistics allowed forests to be re-

imagined as places that could be named, counted and measured so that they could be

assessed based upon their utility to the empire. Arun Agrawal argues that German

colonial-forest inspectors, saw this task as twofold; to construct forests into a properly

manageable area, otherwise known as 'model forests', and to guide proper human

interactions, making the forest dwellers allies if possible to direct their 'conduct'.[99] This

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[95] Cohn, Bernard, *Colonialism and its Forms of Knowledge* (Princeton; Princeton University Press, 1996):
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[96] Goldmanm Michael "Eco-governmentality and other transnational practices of a "Green" World Bank"
in Richard Peet and Michael Watts, ed., Liberation Ecologies: Environment, Development, Social
Movements (New York; Routledge, 2000): 169
[97] Ibid, 165
[98] Arun Agrawal, *Environmentality: Technologies of Government and the Making of Subjects* (Durham
N.C.: Duke University Press, 2005), James Scott *Seeing Like a State: How Certain Schemes to Improve the
Human Condition Have Failed* (London; Yale University Press, 1998)
[99] Arun Agrawal, *Environmentality: Technologies of Government and the Making of Subjects* (Durham
N.C.: Duke University Press, 2005): 40

conception of nature-as-resources allowed for a disciplinary form of power via insuring that the colonial subject knew how to 'properly' assess forests and a sovereign form of power by physically removing those who did not properly 'care' for the forest. This was all done so that these 'resources' might not be exhausted for the purposes of building the military might of the industrial nation in Europe.

This is largely because during the period of European history where mercantilism is the principle political economy, the proper use of natural resources became paramount for the growth of the state. Government departments for natural resources utilized knowledge gained from colonial excursions in order to build themselves as disciplinary apparatuses. Prussia in the 18th century declared that continuing the economic efficiency of its natural resources was of national interest for a 'war-state'[100]. Using this as it's legitimization, the government attempted to define the best practices for populations managing wood, and if the woodcutters were either inefficient or ignorant of these practices the government would use their sovereign right to remove the peasants from the forests entirely, cut the forests themselves and rationalize the corrective behaviour on the necessity of more prudent forest usage.[101] Forests begin to be seen as being an extension of government rule, instead of places of life, or indeed a place of physical trees – but instead were abstracted onto balance sheets and with this gaze of the state, forests thus became devoid of anything but timber.

3.2 The Birth of Liberalism

Through Foucault's genealogy of the state, we can understand that nature became known as a 'governable space', as natural resources bound within the conception of a

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[100] Radkau, Joachim, *Nature and Power: A Global History of the Environment* (Cambridge, Cambridge University Press, 2008): 201
[101] Ibid., 202

police state with sovereignty and discipline as its principle forms of power. At the end of the 18th century, the art of government can be understood as one that contains political economy as a set of techniques for the best management of the (royal) household, police as the condition of good order of the territory and people as the 'stock of labour' for the strength of the nation.[102] However, there is a rupture in the late 18th century with this mentality of rule, as the problematization of 'governing too much' becomes a central concern in political thought. At the centre of this liberal problematic is a notion guiding from Adam Smith's *The Wealth of Nations,* that the best way to regulate the economy, and indeed the best outcome for the state was to allow it to *self-regulate* according to natural laws of economic relations, as codified in the idea of *homo economicus* as the utility maximizing individual. Government could simply not know all of the best decisions for each person, and thus the 'sovereignty of economy' becomes an impossible position.

This defines the foundations and limits for governmental action and much of the restructuring in the liberal art of government occurs in a manner consistent (although Dean notes not derived from) the principles of the new political economy[103]. What occurs here is that unlike the police version of the external, disciplinary foundation of regulation, liberal government is marked by an attempt to internally regulate society by setting the circumstances under which subjects could and should exercise their liberties by producing the conditions of freedom.[104] The liberal conception of freedom is plagued by the paradox that 'Liberalism must produce freedom, but this very act entails the establishment of limitations, controls, forms of coercion, and obligations relying on

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[102] Mitchell Dean, *Governmentality: Power and Rule in Modern Society* (London, Sage, 1999): 95.
[103] Mitchell Dean, "What is Society? Social thought and the arts of government" *The British Journal of Sociology* 61(4).
[104] Lemke, Thomas, *Foucault, Governmentality and Critique* (London, Paradigm Publishers, 2011): 45.

threats, etcetera"[105] The liberal state must have security as central to its mode of rule, so that the pursuit of individual freedom does not jeopardize the general interest.[106] Therefore, it is here, Foucault argues that as the "Mechanisms or modes of state intervention whose function is to assure the security of those natural phenomena, economic process and the intrinsic processes of population"[107] become a central aspect of liberal governmentality.

The state still needs to legitimate itself, but now as the problematic is to 'not govern too much', while still ensuring the security of the population, that the state begins to articulate its necessity by the need to 'care' for the population through various institutional mechanisms.[108] With advances in biology and public health it was possible to some degree to control the health of populations, but in order to do so there needed to be a way to fully 'know' the population in a territory, and a new political economy emerges as the dominant form of state knowledge in the administration of life itself. The mentality of government shifts from the disciplinary and sovereign power of the right over death, into the biopolitical power of the right over life, giving government the legitimacy it needs to defend its own existence.

It is the emergence of modern medicine that gives the state the knowledge it requires to 'know' this population and it provided a method of understanding individuals as discrete entities with their own mechanics and not merely spiritual vessels, predetermined in their fate. Living bodies are for the first time categorized in terms such

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[105] Michael Foucault, *The Birth of Biopolitics: Lectures at the College de France* (London, Palgrave Macmillan, 2008): 64
[106] Lemke, Thomas, *Foucault, Governmentality and Critique* (London, Paradigm Publishers, 2011): 46
[107] Michael Foucault, *Security, Territory, Population: Lectures at the College de France* (London, Palgrave Macmillan, 2007)
[108] Michael Foucault, *The Birth of Biopolitics: Lectures at the College de France* (London, Palgrave Macmillan, 2008): 69

as self-preservation, reproduction and development,[109] eventually leading advancements

in medical knowledge to be fundamental in helping in the creation of the study of disease

pathology in industrial Europe. In the late 18th century, medical practice "was directed

less toward the concrete body of the patient and more toward the signs that differentiated

one disease from another"[110]. As the knowledge of 'the body' emerged, the study of

disease shifted to the study of pathological similarities and symptoms of diseases and

how it was internal to the human body instead of external circumstances. This in turn

created the need for statistical medical databases to cross-examine patients in order to

make relationships between diseases across the population.

State concern with disease led to the construction of the clinic, and encoded what

Foucault called the "medical gaze", shifting the ways in which the subject views

him/herself and thus acts in accordance with this new knowledge of the self.[111] Sanitation

becomes paramount to the safety of the self, and of the social body as physicians make

the correlation between sanitation and illness. This creates a 'regime of hygiene' that

understands the spread of disease no longer as the consequence of immoral actions as

biological knowledge advanced the idea of the germ as the primary cause of disease and

from this the spread of disease to the *population*, becomes an important area of

intervention as public authorities on health construct the social body as a legitimate site

for government intervention in order to 'help society help itself'. The idea of social health,

with the use of statistics, ultimately led to the creation of epidemiology as a state

apparatus for the study of how disease and population affect the entirety of the health of

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[109] Thomas Lemke, *Foucault, Governmentality and Critique* (London, Paradigm Publishers, 2011): 44
[110] Majia Holmer Nadesan, *Governmentality, Biopower, and Everyday Life* (New York; Routledge, 2008): 98
[111] Michael Foucault, *The Birth of the Clinic: An Archaeology of Medical Perception* (London: Tavistock, 1973): 90

the population. Government plans, structures, processes for the government of health became situated within the discursive practice of epidemiology, which is turn allowed liberal government to access what could be understood as acceptable 'risks' to the population's health, allowing for a certain amount of medical surveillance.

Andrews and Radkau argue that this shift towards urban sanitation is actually a key point in environmental history, as physicians, engineers and social reformers argued that protecting the physical world we live in was paramount in order to protect us from contamination, which was in fact directly linked to the population's health. The proliferation of waste could be directly linked to the new knowledge of germs in diseases and a way to clean contaminated areas and procure clean-water sources became central ways of 'talking of the environment'.[112] Here, 'the environment' enters the 'medical field of vision' and it becomes a 'problem of government' insofar as it is a place of potential contamination and knowable as a space we must protect in order to be protected. This interveniable space also has the side effect of focusing the protection on the human and therefore Neil Levy contends that what emerges in this discourse is a place where the non-human becomes something that needs to be controlled as much as possible, but no actual validity is given to the idea that we should attempt to also mitigate ourselves in how we affect the world disconnected from how this might affect us.[113] This entails one of the bi-products of the governmentalization of scientific knowledge, because potentially moral actions are circumscribed into an anti-politics vis-a-vis the necessity of

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[112] Radkau, Joachim, *Nature and Power: A Global History of the Environment* (Cambridge, Cambridge University Press, 2008)

[113] Neil Levy, "Foucault's Unnatural Ecology" in E. Darier, ed., *Discourses of the Environment* (Malden, PA: Blackwell, 1999): 212

government action, under the 'neutral' language of science.[114] Our further control over human life entails the biopolitics of all life, in order to governmentalize and control as much of nature as possible so as to reduce 'environmental' harm to us. This is either in terms of our health, or in terms of our dependency on it as a source of resources and our economy.

3.3 Liberalism and Nature

The other way in which nature re-enters government rationality in liberal governmentality is a new discourse that "had as its object *the environment*"[115]. This new discourse of 'the environment' emerges in two distinct cases; as a problem of population growth and resource scarcity, and therefore the problem of conservation/preservation of nature. Both largely can be seen as reactions to the industrialization of Europe in the 18th and 19th century with the mainstream discourses of nature being either as an ascetic ideal, or as a usable resource being destroyed by processes of industrial capitalism. Nature as resource scarcity is well situated within the Malthusian discourse of 'limits to growth' and places the need to properly and sustainably use resources as a central need to the wellbeing of the population, as opposed to adding to the fire of a war state, and therefore its protection and intervention can be rationalized based on the fact that the population *requires* nature-as-resources in order to survive.

The conservation of nature itself is also situated in part with the environmental movements as they articulated a need to protect nature against what is perceived of as the

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[114] Ferguson, James *The Anti-Politics Machine: Development Depoliticization, and Bureaucratic Power in Lesotho* (Minneapolis: University of Minnesota Press, 1994)
[115] Paul Rutherford, "The Entry of Life into History" in Eric Darier, eds, *Discourses of the environment*, (Malden, PA: Blackwell, 1999): 51, Emphasis in original

ever encroaching waste of the industrialized nation.[116] This occurs as statistical

knowledge of forests in America for example, allowed for the imaginary of a unified

forest, which gave information as to where forests could be harvested, where forests

needed to be replenished and so on. This also ultimately became a national symbol of the

United States and would play a large part in leading to the preservation of certain areas in

the form of designated parks that held particular ascetic qualities.[117]

This leads to a very particular type of governmental response as conservation

departments in late 18th and early 19th century Europe move to legitimate intervention

into 'environments' as 'saving nature' - a discourse that will remain attached to

environmental movements for the entirety of their existence.[118] While saving nature and

everything in it may seem a noble cause, the problem becomes precisely how it is

entailed as something to be 'saved'. In face of widespread destruction of forests in the

United States, there were two separate philosophies for how to protect nature;

conservation and preservation. Conservation, associated with Gifford Pinchot's ethic of

wise use[119] and John Muir's preservation ethic based on preserving nature not for our use,

but for its own sake.[120] The conservation ethic however, fit neatly into the gaze of the

liberal welfare state and in fact, Demeritt shows that "statistical mapping, graphing, and

visualization techniques used by conservation scientists were originally pioneered by

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[116] David Demeritt, "Scientific Forest Conservation and the Statistical Picturing of Nature's Limits in the Progressive-era United States." *Environment and Planning D* 19, (2001): 437

[117] James Frost "Modernism and a New Picturesque: The Environmental Rhetoric of Ansel Adams" in Nancy Coppola ed., *Technical Communication, Deliberative rhetoric, and environmental discourse: Connections and Directions* (Connecticut; Ablex Publishing Corporation, 2000)

[118] Radkau, Joachim, *Nature and Power: A Global History of the Environment* (Cambridge, Cambridge University Press, 2008): 227

[119] Char Miller, *Gifford Pinchot and the Making of Modern Environmentalism* (Washington D.C.: Island Press, 2001)

[120] Stephen R. Fox, *The American Conservation Movement: John Muir and his Legacy* (Wisconsin; University of Wisconsin Press, 1981)

social statisticians seeking to monitor the condition of the population and improve its health and productivity"[121]. As the 'nation's forests' were reimagined using these quantitative techniques, Demeritt argues that this gave credence to conservationists that were arguing that we must protect nature so that we can 'sustainably' use it. Combined with the reaction against preservation movements, which was being characterized as antihuman, and impractical positions that too readily cherished the non-human over the human[122], conservation became internalized as the principle method for understanding how to govern nature. Soon, conservation departments were set up for the 'proper' preservation and articulation of the 'proper' environmental defense, with the creation of 'conservation experts' as to the best way of managing parkland. The preservation movement, most institutionally associated with the Sierra Club, were marginalized as a form of environmental ethic, although this idea of preserving nature for its own sake would be an important parallel track to conservation in western environmental ethics during the course of the 20th century.

However, because these parks are viewed as a part the national identity, they are advertised as tourist locations, and Neil Evernden argues that because this idea of the park promotes its use by people, "some professionals privately admit that the best way to destroy a natural area is to designate it a park."[123] Joe Hermer discusses how this form of conservation produces "a landscape where the 'wild' qualities of 'nature' are

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[121] David Demeritt, "Scientific Forest Conservation and the Statistical Picturing of Nature's Limits in the Progressive-era United States." *Environment and Planning D* 19, (2001): 437

[122] Stephen R. Fox *The American Conservation Movement: John Muir and His Legacy* (Wisconsin; University of Wisconsin Press, 1981: 373

[123] Neil Evernden, *The Natural Alien: Humankind and Environment* (Toronto: Toronto University Press, 1993)

manufactured by the promotion of quietness, decency and hygiene"[124]. Regulation of

these park lands entails a form of disciplinary power where the experience of 'wild

nature' is mediated by 'controlled drills' in the form of nature interpretation signs,

teaching us the 'important' aspects of nature. Park regulations also promote a form of

self-regulation, "where individuals must constantly exhibit their allegiance to the mission

of parks by conducting themselves in the prescribed way."[125] This conservation ethic of

nature remains an important part of the 'government of nature' even today, as the ideas

about protecting nature are increasingly taken out of the context of protecting it for itself

(preservation) and more into the discourse of protecting nature for *wise use*

(conservation).

In doing this, they also imply that other areas of nature not designated protected

are conceptually 'up for grabs'. Because caring for nature remains firmly situated in the

idea of a 'limits to growth', this becomes the dominant discourse surrounding nature, and

the only reason to limit industrial activity outside of designated parks is to maintain the

'national forest', which requires a balanced statistical knowledge of both the population

and resources to ensure that there is enough to sustain said population. It is indeed this

population-scarcity problem that becomes central to liberal government being able to

establish itself as a legitimate domain of practice.[126] It answers the question that Foucault

poses: "how can the 'population' phenomenon, with its specific effects and problems, be

taken into account? On behalf of what, and according to what rules can it be

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[124] Joe Hermer *Regulating Eden: The nature of order in North American parks* (Toronto; University of
Toronto Press, 2002): 69
[125] Ibid., 89
[126] Mitchell Dean, *Governmentality: Power and Rule in Modern Society* (London, Sage, 1999): 100

managed?"[127] It is in the statistical understanding of nature and its need for management and therefore it is nature that actually brings out economics as a bio-economic reality and technique of security and it is the "rational economic man capable of "economizing": making choices to allocate scare resources among competing ends"[128].

3.4 Ecology: The Farmer and the Doctor

Ecology as a discursive formation emerges distinctly as an approach during the late 19th and early 20th century and can be understood in part as dealing this these two issues that emerge in liberalism, but appeared to offer a discursive space for those who wanted to 'speak of nature' via the state, and outside of nature-as-resources, or nature as a space controlled for our protection. Environmental historian Donald Worster argues that:

> "The romantic view of nature was what later generations would come to call an ecological perspective: that is, a search for holistic or integrated perception, an emphasis on interdependence and relatedness in nature, and an intense desire to restore man to a place of intimate intercourse with the vast organism that constitutes the earth."[129]

Using insights from the newly emerging science of biology it seemed as though it gave life by repopulating the forests which resource departments made bare of anything but timber and pulp, and placed nature firmly under the care of the paternalistic welfare state.

Early forays into this ecological understanding of life included scholars such as Biologist Jacob Uexküll. He had a unique phenomenological interpretation of the biological understanding of life, by extending the mechanical metaphors of the biological sciences, he argued for an understanding of life that included the *Umwelt* (succinctly it is

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[127] Michael Foucault, *The Essential Works 1954-1984,* in Paul Rabinow ed., vol 1. *Ethics, Subjectivity and Truth* (New York; The New Press, 1997)

[128] Michael Watts "Scarcity, Modernity, Terror" in Betsy Hartmann, Banu Subramaniam, and Charles Zerner eds., *Making Threats: Biofears and environmental anxieties* (Oxford; Rowman & Littlefield Publishers): 104

[129] Donald Worster, *Nature's Economy: A History of Ecological Ideas* (Cambridge; Cambridge University Press 1994): 82

an individual field of experience) of each creature as a biologically given fact, and effectively "draws the line between animate and inanimate nature rather than between nature and man"[130]. However, the emerging science of ecology was more focused on the impacts of humans upon their environment, which aside from the language of holism, worked to further entrench the notion that humans and their environments are separate things which enact and react to each other based on a particular set of parameters.

The ecological sciences are predicated on the fields of thermodynamics and systems theories emerging at the time, such as the General Systems Theory (GST) of Ludwig Von Bartalanffy.[131] This 'holistic' way of thinking about nature was of an eco-*system* shifting the fields of vision from a forest as a set of resources to be extracted into a forest as a place which dynamic processes occur in a complex environment. The shift to this view of thinking was not to include nature so that we can re-evaluate the way in which we morally approach or epistemologically encounter nature, but instead was used because the traditional Cartesian way of reducing everything to its constituent parts, was seen as an *insufficient* model for understanding how the world operates. Indeed, Rutherford argues, modern ecology comes with the analytical tools necessary to 'intensively farm' nature, utilizing "economic terms such as *producers, consumers, total energy income, yield, crop, gross and net productivity, nutrient capital, competitive exclusion, energy budget, efficiency, etc.*"[132] The purpose was to be able to conceive of our interaction with nature, in the same ways in which the state conceives of its economic

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[130] John Deely "Semiotics and Jakob von Uexkull's Concept of Umwelt" *Sign Systems Studies* 32(1/2) (2004): 16-17
[131] Lugwig Von Bartalanffy, *General Systems Theory: Foundation, Development, Applications* (New York; George Braziller Inc, 1969)
[132] Rutherford, Paul. "The Entry of Life into History" in Darier, E., editor, *Discourses of the Environment*, (Malden, PA: Blackwell, 1999), p.53, emphasis is her's.

activities with the population.[133]

During the mid-twentieth century in North America, with nuclear waste becoming a large problem and site of anxiety for the population, and the impacts of 20th century 'progress' becoming visible on the landscape, the ever complex socio-environmental relations needed a technical expertise in the form of what Rutherford defines as "regulatory science" which actively defines the scope and nature of public policy decisions.[134] While for most of the 20th century "Ecology was hardly known outside specific scientific circles. Growing awareness of environmental problems brought a sudden change, with the publication of Rachel Carson's *Silent Spring*."[135] It is from here that ecology's "original meaning had been usurped by the wider popular connotation. Ecology has become vaguely synonymous with "environmentalism", even though for decades it was used exclusively to refer to a formal scientific pursuit".[136] 'Scientific ecologists' have been attempting to separate themselves with this part of their history and "was a source of irritation to some ecologists that their discipline, which they endeavor to make as scientific and objective as possible"[137] would come to be associated with the emotional and romantic language of the movement. Being encoded within environmentalism, has, contrary to claims, no doubt actually helped to embed ecosystem ecology directly into legitimacy, as previous to this it was a fairly marginalized scientific endeavor. By having nature reconceived as an ecosystem, through the language of ecology, there were now the technical, analytical tools necessary for liberal government

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[133] Ibid.
[134] Ibid., 56
[135] Kurt Jax, "History of Ecology" in *Encyclopedia of Life Sciences* (John Wiley & Sons, 2011) : 7
[136] David Keller and Frank Golley, *The Philosophy of Ecology: From Science to Synthesis* (Geogia; Georgia University Press, 2000) : 3
[137] Neil Evernden, *The Natural Alien: Humankind and Environment* (Toronto: Toronto University Press, 1993) p.5

to rationalize intervention, and the construction of multiple agencies and experts to mitigate these new environmental risks to society, and to define the appropriate language which with dissenting environmentalists will have to appropriate if they wish to enter the legitimate realm of discourse with the state.

The field of ecology then, answers two of liberalisms pressing concerns with regards to nature, embedded in its construction of the eco*system*. First, in its analytical language it attempts to better understand the relations of human-and-resources so as we can 'sustainably develop' (although it is not conceived as such yet) our resources, and secondly, it provides the tools to 'diagnose' nature for (ill)health, giving an entirely new discourse, later embedded in toxicology, for understanding the threat of how our destruction of nature can medically impact our selves.

3.5 Neoliberal Governmentality

Post World War II, criticisms from the left and the right begin to be levelled at the problem of an over-reaching welfare state. Foucault argued that ultimately that it was the American version of neo-liberalism since the 70s that was the modus operandi of most nation-states,[138] and four decades from then I believe it is fair to say that this American style of neoliberalism has been the most pervasive in global affairs. That is not to say, or assume that neo-liberalism does not manifest itself in very different (and place specific) manners, but that the over-arching problematizing nature of neoliberalism in the 21st century is certainly based strongly on the institutional and governing rationality of America, which is a point we will return to later.[139] Therefore, while acknowledging the

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[138] Michael Foucault, *The Birth of Biopolitics: Lectures at the College de France* (London, Palgrave Macmillan, 2008)
[139] Rose, Mitchell, Pat O'Malley and Mariana Valverde. "Governmentality" Annual Rev. Law Society 2006, 2: 83-104.

place-specific nature of modern, global neoliberalism, the programmable instruments that attempt to make nature intelligible can be seen as largely based on this very particular notion of saving the natural (western) world. Thus, the analysis that follows is largely based on a historical account of the American-British version of neo-liberalism and the manners in which it impacts and constructs 'environmental discourse'.

Government intervention under welfare-liberalism is predicated on the idea that the government 'knows best'. Neo-liberalism occurs as a reaction against the overly moralizing and paternalistic nature of the welfare-state that has as its central assumption the knowledge necessary to produce 'moral' subjects and was, as neo-liberals argued, inefficient in the production of economic relations vis-a-vis "inflationary expectations and currency debasement... and creating a culture of dependency based on expectations that government will do what in reality only individuals can"[140]. Neo-liberalism, thus attempts to redefine the entire social sphere as an economic domain, and "the mode of rational-economic action serves as a principle for justifying and limiting government action, in which context government itself becomes a sort of enterprise whose task it is to universalize competition and invent market-shaped systems of action for individuals, groups and institutions."[141] Economy is therefore no longer a separate sphere which is to be acted upon, but becomes the entirety of human behaviour and action, everything, including government practices are set against market concepts of evaluation so as to produce an external (market) reality that all aspects of life can be assessed.

Rose argues through Foucault that it is not that neo-liberalism emerges as a coherent set of principles that then guides all of the rationalities of rule in the latter part

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[140] Ibid., 79
[141] Thomas Lemke, 'The birth of bio-politics': Michel Foucault's lecture at the College de France on neo-liberal governmentality" *Economy and Society* 30(2), (2001): 197

of the 20th century, but rather that what occurs is a plethora of cost cutting endeavours

and programs to cut the power of professional lobbies that became situated in the logic of

neo-liberalism and then this would be attributed as being a part of this rationality,

retrospectively.[142] In this sense, it **"becomes governmental to the extent that it seeks to**

render itself technical, to insert itself into the world by 'realizing' itself as a practice"[143].

The most significant break with liberal rationality, why it entails a different 'mentality of

rule', is that unlike the liberal idea of the market as a being situated in a *quasi-natural*

reality whose laws must be respected by government; in neo-liberalism "the question of

the political conditions of the market is one of developing the appropriate constitutional

framework according to the rule of law"[144]. For this reason Foucault argues that this

conception of economic rationality cannot be considered *lassiez-faire* specifically

because it required "vigilance, activity and intervention"[145]. In this manner the market is

not a place to intervene directly, but instead the state "must establish the market's

parameters, monitor its outcomes and consequently adjust these parameters to achieve the

most optimal results".[146]

Neo-liberal governmentality subsumes the entire logic of government rule to the

rationality of the market; that is not to say that it is now only directed through the market,

but that those things which encapsulate the logic of the market, such as efficiency,

accountability, programmable management and audit, are not only at the centre of how to

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[142] Peter Miller and Nikolas Rose, *Governing the Present: Administering Economic, Social and Personal Life* (Cambridge: Polity Press, 2008): 211
[143] Ibid., 288
[144] Mitchell Dean, *Governmentality: Power and Rule in Modern Society* (London, Sage, 1999) : 157
[145] Michael Foucault, *The Birth of Biopolitics: Lectures at the College de France* (London, Palgrave Macmillan, 2008): 132
[146] Robert Fletcher "Neoliberal environmentality: Towards a poststructuralist political ecology of the conservation debate" *Conservation and society* 8(3), (2010): 173.

rule, but also how individuals should rule themselves.[147] Important to this is the

"emphasis upon the apparent objectivity and neutrality of numbers underpins the claim

that they are now operating according to an apolitical agenda".[148] To show how this

rationality has changed, Foucault uses the example of the prisoner under neo-liberal

rationality, which sought to distance itself from a moralizing concept of *homo criminalis*

based in psychology, biology or criminology.[149] Instead, neoliberals see the criminal as "a

rationally economic individual who invests, expects a certain profit and risks making a

loss."[150] The appropriate policy response of a neoliberal government is to make the costs

too large for the risk of the benefit.

Dean argues that advanced liberalism brings with it two technologies of rule, the

calculations of risk and basis for intervention into the human and I will argue also the

(non)-human world. The first is what Dean calls technologies of agency[151], elsewhere in

the literature known as, technologies of citizenship[152] and technologies of the self[153] are

all discussing the similar idea that occurs in neoliberal subject formation and that is the

creation of the self-caring, calculable and risk-adverse subject "whose moral quality is

based on the fact that they rationally assess the costs and benefits of a certain act as

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[147] Mitchell Dean, *Governmentality: Power and Rule in Modern Society* (London, Sage, 1999)
[148] Peter Miller and Nikolas Rose, *Governing the Present: Administering Economic, Social and Personal Life* (Cambridge: Polity Press, 2008):213
[149] Michael Foucault, *The Birth of Biopolitics: Lectures at the College de France* (London, Palgrave Macmillan, 2008)
[150] Thomas Lemke, "'The birth of bio-politics': Michael Foucault's lecture at the College de France on neo-liberal governmentality" *Economy and Society* 30(2); (2001): 199
[151] Mitchell Dean, *Governmentality: Power and Rule in Modern Society* (London, Sage, 1999): 168
[152] Barbara Cruikshank, "Revolutions within: self-government and self-esteem." In Barry, A., Osborne, T. And Rose, N., editors, *Foucault and political reason: liberalism, neo-liberalism and rationalities of government*, Chicago; University of Chicago Press, (2001)
[153] Peter Miller and Nikolas Rose, *Governing the Present: Administering Economic, Social and Personal Life* (Cambridge: Polity Press, 2008) and Thomas Lemke, *Foucault, Governmentality and Critique* (London, Paradigm Publishers, 2011)

opposed to other alternative acts."[154] This is done by rendering individual (and collective) subjects as responsible for social risks (such as the destruction of nature) "into the domain for which the individual is responsible and transforming it into a problem of 'self-care'.[155] The subject is thus 'free' to choose the options for action (under cost-benefit rationality) and therefore the consequences of the actions become internal to the subject alone. Ideas such as work become re-articulated as a path to 'self-fulfilment' with ideas such as flexible work hours and performance stimuli are "aimed at the very relation between individuals and their labour. To be more precise: the transformation of structures of production is possible only if individuals 'optimize' their relation to themselves and to work."[156]

This is made possible by the creation of technologies of performance[157] in order to achieve what Rose & Miller refer to as 'governing by a distance'.[158] This in part takes the domains of expertise constructed during liberalism, (the doctor, the ecologist, the professor, etc.) and introduces them to new calculable regimes where their work is subject to benchmarking. It is the setting up of performance mechanisms such as these benchmarks in the form of audits, contracts and privatization of public services that define the moral basis for shaping conduct based on an optimization of performance.[159] In doing this the government is able to govern at a distance by setting the conditions for how agencies and subjects should view themselves, and then judge them based on these 'indicators'. It is here that neoliberalism enters a paradox, or what Dean refers to as

[154] Thomas Lemke, "'The Birth of Bio-politics': Michael Foucault's lecture at the College de France on neo-liberal governmentality" *Economy and Society* 30(2); (2001): 201
[155] Ibid., 201
[156] Ibid., 203
[157] Mitchell Dean, *Governmentality: Power and Rule in Modern Society* (London, Sage, 1999)
[158] Peter Miller and Nikolas Rose, *Governing the Present: Administering Economic, Social and Personal Life* (Cambridge: Polity Press, 1992, 2008)
[159] Mitchell Dean, *Governmentality: Power and Rule in Modern Society* (London, Sage, 1999) p.169

'reflexive government'. Much akin to liberalism "the paradox of neo-liberalism, while it purports to govern through individual freedom, it simultaneously employs diverse and heterogeneous forms of power to establish and preserve "a comprehensive normalization of social, economic and cultural existence."[160] In order for neoliberalism to work then, there needs to be a free calculating subject, but in order to achieve this, there needs to be both incentive structures such as the ones described above, but also disciplinary centres where the subject is taught how to properly become a self-actualizing individual. The nation state therefore "takes on less a directive and distributive role, and more a coordinative, arbitratory and preventative one."[161] So, it is not to say that sovereign power is lost, but instead is re-located within the logical of bio-political authorities.

3.6 Neoliberal Environment, Sustainable Development and Saving the World

Nature continues under neoliberalism to be principally articulated in biopolitical terms, intervened in for the purpose of sustaining and saving all life with the population (human and non-human) as its principle target, and profit as its principle goal. The problematic remains to be that of resource scarcity and population growth, that becomes further and further entrenched in a globalizing socio-economic environment. Ecosystem ecology remains an important biopolitical knowledge/power in neoliberal society, its discursive framing of nature as a resource that was waiting to be encoded and understood properly as to best utilize it. Ecology provided the analytical tools for how best to sustainably *manage* our natural resources, which nature can be bound within a new economic rationality. It is as well, a "scientific ecology that provides the authoritative accounts of the sorts of entities which government must manage: ecosystems, global

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[160] Mitchell Dean "Liberal Government and Authoritarianism." *Economy and Society*, 31,(2002).
[161] Mitchell Dean "Sociology After Society" in David Owen eds., *Sociology After Postmodernism* (Sage: London, 1997)

climatic and atmospheric carrying capacity, and so forth."[162] This occurs in a variety of places as nature becomes further (not less) entrenched in the state as the techniques embedded in this logic become more prolific and specialized. This is more or less where we are in the second decade of the 2000's, with a biopolitical objective for caring for the environment as a fundamental aspect of modern (environmental) rule.

Environmental economics is the most obvious incentive, cost-benefit evaluation of nature, always attempting to convince that we can achieve a 'sustainable society' if only we can get the right calculation, as a greener version of capitalism.[163] This sought to reduce nature to an economic variable based upon a mechanical understanding of nature in ecosystems, and continues to argue that the preservation of nature can be directly linked to the logic of the free market. The environment becomes a 'negative externality' of normal market relations that requires incentives in order to produce more favourable responses. The command and control methods of protecting nature under a more fundamental liberal rationality are rejected by economists as distorting the market. Instead, carbon taxation and carbon credits become economic incentives for which companies will either gain in using more sustainable resources (in a carbon credit economy) or they will be penalized via a carbon tax for producing too much pollution. This abstracts much of the environment in the economic-environmental-health discourse that only 'sees' nature in terms of how we can continue along GDP growth, while protecting nature insofar as we can protect ourselves from it, both in the immediate problems of water quality or air quality and in the more existential problems such as climate change and global warming. This had led to the creation of NGOS, governmental

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[162] Rutherford, Paul. "The Entry of Life into History" in Eric Darier, eds., *Discourses of the Environment*, (Malden, PA: Blackwell, 1999): 117
[163] Paul Hawken, *The Ecology of Commerce: A Declaration of Sustainability* (HarperBusiness, 1994)

agencies and citizen groups that create benchmarks for acceptable environmental qualities and then seek to use this to construct a certain type of 'environmentally aware citizen'.

As an offshoot of this economic valuation of nature, ecological economics has emerged, although arguably too late to have any large impact on the way in which we construct nature economically. Proponents of ecological economics, such as ecologist C.S. Holling argue for a classical liberal approach with a more direct understanding of ecosystem variations to valuing nature that includes questions of quality of life as it relates to GDP growth, and that growth may not be a morally valuable endeavour itself (this is largely inspired by Malthus' limits to growth).[164] They argue that economics is a *natural* part of ecological relations and therefore needs to be further managed and be understood as an ecological relation.[165] Mainstream environmental economists counter again that this would be a distortion of the market, and that "human beings living and caring for each other as well as for their environment is an interesting but unrealistic goal"[166]. It is unrealistic according to Kula because the state cannot possibly manage such things, and it is only through a rationally understood economic subject that harmony with nature can be achieved, rendering this understanding of ecology and economy as unscientific.

Environmental economics, while crucial for our understanding of how the environment is constructed in modern discourse, is a fairly easy point of contention if one is looking for a more complex moral method of valuing nature. It is therefore the true currency of governmentality that the more seemingly innocuous methods of 'saving

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[164] E. Kula, *History of Environmental Economic Thought* (New York; Routledge, 1998)
[165] Ibid.
[166] Ibid., 193

nature' can be understood as being situated in these shifting governmental rationalities, even as "the saving of nature is often taken for granted as an innocent endeavour, never implicated in relations of power and seen as a noble exercise for the good of all life."[167] So it is in particular those areas of defining nature that we must most rigorously interrogate at the epistemological level to fully understand what is being left behind, and as well what is how we conceive of as saving nature is very much situated in neoliberal logic.

Therefore, not all valuations of nature are directly linked to the rationality of neoliberal governmentality in such an overt manner. Paul Rutherford argues that the constitution of Environmental Impact Assessments (EIA) with Environmental Audits act as institutionalizing ecological rationality by both constituting the environment as "an object of knowledge and, through various modes of positive intervention, manage and police it"[168] by constructing powerful incentives forcing a large amount of learning and self-regulation. This creates a public accountability by defining the baseline for how much impact is acceptable in order for progress to continue, all the while normalizing social-environmental relations, into a political rationality. Although, it was originally entailed in command-and-control style of environmental regulation of the welfare state and still includes in the Canadian Environmental Assessment Act, the *sovereign* right of intervention and removal if warranted, at its centre it is a set of "market-oriented cost-benefit calculations"[169].

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[167] Stephanie Rutherford, "Green governmentality: Insights and opportunities in the study of nature's rule" *Progress in Human Geography* 31(3) (2007): 295
[168] Paul Rutherford "The Entry of Life into History" in Eric Darier, eds, *Discourses of the Environment*, (Malden, PA: Blackwell, 1999)
[169] Helga Leitner, Jamie Peck and Eric Sheppard, *Contesting Neoliberalism: Urban Frontiers* (New York; The Gilford Press): 10

The method of environmental governmentality that garners the most attention (I would argue almost all of the attention) is the literature focusing on technologies of agency for how neoliberalism needs to discipline enviro-subjects in order to get them to internalize the environment in cost-benefit rational terms.[170] Forms of subject creation in attempting to create the proper environmental subject can be seen directly from governmental apparatuses such as Canada's Green Plan[171] in which the creation of environmental citizens can "make well-informed decisions"[172]. Unlike providing incentives, such as what we see occurring in regulations surrounding ecological economics and embedded in EIA's, disciplinary environmentality sees the construction of environmental subjects as the primary motivation of its existence. So, as we see in the *Green Plan,* the government of Canada was explicitly trying to articulate a citizen who's moral and ethical understanding of nature was based upon how it defined sustainability and environmental conscience, so that when said subject makes it decisions they are the well-informed and properly encoded ones.

Caring about nature then becomes a way of disciplining citizens. This allows, much like Cruikshank's study of self-esteem and governmentality, the internalization of environmental problems into 'environmental-consumer-citizens' and makes 'sustaining the environment' a project of self-fulfillment and responsibility of the autonomous individual, and allows our understanding of nature to be one based upon assessment. As Rutherford also points out, programs as diverse as Greenpeace and the Sierra Club have guide books for how to treat your local environment and how to be a responsible green

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[170] Robert Fletcher "Neoliberal Environmentality: Towards a poststructuralist political ecology of the conservation debate" *Conservation and society* 8(3), (2010)
[171] Eric Darier, "Environmental Governmentality: The Case of Canada's Green Plan." *Environmental Politics*, (1997)
[172] Ibid., 596

citizen, with "Green tips you can practice every day"[173]. As citizen consumers we can buy 'green' products, boycott companies that pollute or destroy the environment, or recycle goods, among other things to bring us inside of 'green' chains of production and consumption. We can also take part in 'citizen science' whereby non-scientifically trained people can become part of the process of collecting data inculcating them into the proper way of 'rationally' evaluating nature. Bridging directly from Cruikshank, the idea of the self-improving subject that came into being as a governmental technology, can be understood 'environmentally', and living in harmony with nature begins to be seen as vital to self-improvement[174], as ensuring the health of the ecosystem becomes the "problem of health in a broader context, and to make the environment an important concern for individuals"[175]. To make it definable and desirable to live in a 'pristine' environment becomes central to our mental and physical health.

The issue, is that this internalization of environmental issues becomes a blinder to the systemic issues at play as, saving nature becomes less to do with questioning capitalist forms of production, or the conceptual underpinnings of the ways we value nature – they are instead based upon rationally calculating how to best care for nature based on an (ever more complex) cost-benefit analytic. This form of 'government at a distance' allows the creation of the rational environmental subject so that they understand the acceptable ways of talking about nature. Hence, as Evernden argues that "where once only an anguished cry could be expected in defence of a threatened mountain or an endangered species, now a detailed inventory and benefit-cost analysis are sure to be

[173] Stephanie Rutherford, "Green governmentality: Insights and opportunities in the study of nature's rule" *Progress in Human Geography* 31(3), (2007):299
[174] Lawrence Olivier and Isabelle Lanthier in, E. Darier ed., *Discourses of the Environment* (Malden, PA: Blackwell, 1999) :77
[175] Ibid. 75

forthcoming." [176] The system will say all that needs to be said about the mountain – with numbers, and therefore because this is the underpinning of governmental rationality diffused into the individual bodies of the population, this becomes *the* legitimate space for discussing nature. This is therefore not only taken up by government agencies seeking to 'green' government activities so as to remain progressing vis-a-vis GDP growth, but as other NGOs and community based organizations also internalize this understanding of problematizing nature – not that they all agree on the conceptual underpinnings of their actions, but that their way of publically articulating themselves is very situated in neoliberal rationality. I would argue that this is because there is no 'discursive space' for speaking of nature in this manner. That is not to say that there is not a place for a positive articulation of moralizing power in a neoliberal society, but that it is not considered a legitimate space of discourse in neoliberal society – a point I will return to next chapter.

3.7 Towards a Global Systems View

As the entire world begins to be seen as a 'fragile earth', to save nature begins to be a global problem, and it is conceived of as a problem that requires technical expertise and analysis in order to protect (the now global) population. The coalescing moment where this becomes evident is a Brundtland Report[177] regarding the importance of 'sustainable development' as (global) political endeavour, as a direct refutation of the idea of a 'limits to growth'. It is in this new arrangement that ecosystem analysis is seen as crucial for government mentalities to 'properly' understand the relations of humans to the

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[176] Neil Evernden, *The Natural Alien: Humankind and Environment* (Toronto: Toronto University Press, 1993): 9
[177] World Commission on Environment and Development. *Our Common Future* (Oxford University Press; Oxford, 1987)

environment and how we can continue to exploit resources, and remain safe from nature's harm all the while continuing to grow (as defined in GDP).

I will discuss in the next chapter how the rise of biodiversity provides an important *yardstick* for measuring the health of an (or in this case *the)* ecosystem. This provides the ability for an analysis based on cost-benefiting nature itself. I will discuss this in the context of the increasing internationalization of environmental problems and the programmatic endeavours that attempt to codify how various populations around the world should view and react to the environment, based on the neoliberal conception of nature.

Chapter 4

Ecosystem Analysis and Governmentality

 "This regime of representation assumes that it is up to the benevolent hand of the West to save the earth; it is the fathers of the World Bank, mediated by Gro Harlem Brundtland, the matriarch-scientist and the few cosmopolitan Third Worlders who made it to the World Commission, who will reconcile 'humankind' with 'nature'. It is still the Western scientist that speaks for the earth."[178]

- Arturo Escobar

To those who support the liberal conception of nature-as-resource, there may not seem a lot wrong with what was described in the previous chapter. To some, this conception of nature is not itself a problematic idea,[179] and certainly not a *central* reason for why we are continually destroying nature. In the context of western societies, this is cause enough for alarm, but a larger problem is emerging; the internationalization of neoliberal rationalities of nature. The implications of these western constructions of nature is that it has been reconceived as the 'environment' to be packaged and sold internationally under the pretext of 'neutral technical interventions' meant to 'sustainably develop' the population. In order to achieve this, environmental experts, in concert with other 'development experts', are sent in to 'populations in need', presenting their knowledge as 'fact', therefore creating the conceptual field to be acted upon. This form of environmental colonialism (and it should be seen as nothing less) allows for a situation where

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[178] Arturo Escobar "Construction Nature: Elements for a post-structuralist political ecology" *Futures* 28(4) (1996): 329

[179] Arun Agrawal, *Environmentality: Technologies of Government and the Making of Subjects* (Durham N.C.: Duke University Press, 2005)

"previously untapped areas are being opened in the interests of capitalization and chances for commercial exploitation"[180], while simultaneously marginalizing alternative knowledges of nature, all the while under the guise of 'saving Mother Earth'.

Therefore, in the latter part of the 20th century, the entire Earth begins to be articulated as being in a 'fragile state' in need of constant intervention and management on a *global* level. Whereas previously interventions into populations on the basis of conserving the environment would never be taken seriously, under neoliberal environmental rationalities, conserving the environment for *wise use* as resource is seen as a fundamental practice to long-term growth. Environmentalism, once seen as in opposition to modernization, through ecological economics, environmental health and global environmental policy has now become reimagined as internal to it. To modernize in the late 20th century has been recast in the Brundtland report, as 'sustainable development', arguing that global environmental problems are occurring because global society has not taken the responsibility to protect this fragile planet[181]. Nature and life itself are being drawn into the economic discourse of efficient resource management"[182]. This is where we find ourselves in the early 21st century, attempting to find the right set of calculations to best manage humans and non-humans within ecosystems.

4.1 Governing at a Distance: Global 'Liberal Government'

Post World War II, western states began a process of liberal-welfare biopower that saw 'global' populations as its target. Much akin to lassiez faire policies nationally, the effects of colonialism and industrial capitalism on global populations and

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[180] Thomas Lemke, "Foucault, Governmentality, and Critique", *Rethinking Marxism,* 14(3), (2002): 8.
[181] World Commission on Environment and Development, *Our Common Future* (Oxford; Oxford University Press, 1987)
[182] Thomas Lemke, *Foucault, Governmentality and Critique* (London, Paradigm Publishers, 2011): 45

environment(s) was beginning to become clear. Under the rubric of international cooperation international disciplinary institutions such as the United Nations were created as a method of spreading liberalism globally. This also became a strategy of liberal security as the cold war intensified, developing populations became less and less under the purview of welfare biopolitical aspirations and more under the auspices of apparatus' of security. Nonetheless, strategies to 'develop' what was then termed the 'third world' became of national importance in western countries, sometimes in the rhetoric of 'saving souls' in these places, and other times as necessary to stop the spread of communism globally. Either way, the 'gaze' of welfare-liberal rationality was designed to maximize life by lifting the (global) population out of poverty by 'liberalizing' their economy while attempting to discipline global subjects in the 'proper' ways to live through the spread of human rights, democratic freedoms, and other liberal ideals of the 'good life'.

In the 1990s, after the fall of communism the (western)world community began to argue two things; first that liberal democratic societies functioning in late capitalism constitute the end of ideological history, and that therefore, secondly, it is now the solemn duty of these western countries and their disciplinary satellite institutions such as the United Nations, and transnational economic institutions such as the World Bank, IMF and the WTO, to ensure that the rest of the world transitions into this form of governance[183]. This of course can only really be positively understood as a sort of benevolent colonialism, and at worst a project to de-politicize and eject the (im)moral

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[183] Fukuyama, Francis, *The End of History and the Last Man* (New York; Free Press, 1992)

justification for a whole host of otherwise unacceptable acts such as the, displacement of marginalized communities[184], and the destruction of nature[185] among others.

The global nature of neo-liberal rationality essentially retains the same characteristics as it is used nationally, but global government "entails representational practices and governing technologies aiming to visualize and shape transnational regimes of economic, cultural, environmental, and political government."[186] This is done vis-à-vis neoliberalism not only through attempting to create an entirely free market through institutions such as the WTO, but also by embedding the market logic of cost-benefits and external audit to the international organizations themselves. The purpose is to internationally set the conditions for optimization, so that we can understand "non-economic areas and forms of action in terms of economic categories."[187]

It is sometimes assumed that the proliferation of Non-Governmental Organizations (NGOs), International Governmental Organizations (IGOs) and Multinational Corporations (MNCs) has brought about a reduction in the power of the state[188]. Yet, as Rose argues, these new institutions use calculations and other measures in order to perform the techniques of the state all the while espousing an apolitical agenda which can simultaneously construct its own knowledge databases (biodiversity and ecosystem services) and judge the performance of others on these criteria. For this reason he states that "shaped and programmed by political authorities, new mechanisms are

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[184] Tania Murray Li *The Will to improve: governmentality, development and the practice of politics* (Duke; Duke University Press, 2007)

[185] Michael Goldman, "Constructing an Environmental State: Eco-governmentality and other Transnational Practices of a 'Green' World Bank" *Social Problems* 48(4), (2001)

[186] Majia Holmer Nadesan, *Governmentality, Biopower, and Everyday Life* (New York; Routledge, 2008): 36

[187] Thomas Lemke, "'The birth of bio-politics': Michel Foucault's lecture at the College de France on neo-liberal governmentality" *Economy and Society* 30(2), (2001): 198

[188] Ngaire Woods "IPE in the age of globalization" in John Baylis and Steve Smith (eds), *The Globalization of World Politics,* (Oxford University Press, 2001): 10

utilized to link the calculations and actions of a heterogeneous array of organizations into political objectives, governing them 'at a distance' through the instrumentalization of a regulated autonomy."[189]

The discourse of the environment under global environmental neoliberal rationality is then one that needs to be managed. In order to create a 'sustainably developing' world, one in which the exploitation and encroachment of transnational neoliberal capitalism is not hindered, is to re-imagine the 'saving nature' as a method of cost-benefit analysis and it is "The production of this kind of truth about nature [that] necessitates its regulation, management and governing"[190]. The role of audit in global government is important as it entails the central technology for 'governing at a distance'. These provide the 'benchmarks' so that they can decide when intervention is necessary, and what aspects of nature are 'technically' important. Under the auspices of climate change, certain aspects of nature are being recoded as 'ecosystem services' which provide a conceptual balance sheet for what is important to 'conserve'. The objective of neoliberal rationality in this case is to have nature understood as something to be managed (or as a global good). Therefore, subjects can be embedded into broader engagements with governing at a distance as more and more of nature becomes internal to the logic of neo-liberalism. The purpose, therefore, for those governing at a distance is to provide the means necessary for those (constructed) subjects to rationally assess the management of nature as something they need to self-manage, or put another way, to provide the conditions where subjects themselves are responsible for 'saving nature'.

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[189] Peter Miller and Nikolas Rose, *Governing the Present: Administering Economic, Social and Personal Life* (Cambridge: Polity Press, 2008): 213
[190] Stephanie Rutherford, "Green Governmentality: Insights and opportunities in the study of nature's rule" in *Progress in Human Geography* 31, (2007): 295

Therefore the modern 'problem of global government' as it relates to the management of nature, can be conceived as attempting to solve two issues. The first is the construction of the conditions for which nature can be rationally assessed and intervened into, and the second is how to go about cultivating a (global) environmental subject.

4.2 Nature as Global Good

When considering neoliberal practices of the environment, it is important to distinguish that it is not only the internalization of nature to actual market mechanisms that signals a 'neoliberal nature'[191]. Certainly we could point to a proliferation of mechanisms of neoliberal government where nature has become a part of the global market itself. The creation of a global market for carbon credits for example, has been created sometimes informally (in Canada and the United States, through voluntary audits based on provinces and individual states)[192], or also formally (in the case of the EU embedded in the Kyoto Protocol)[193] and stands as an example of nature becoming internal to the market, not just as a 'negative externality', but as a force in itself to help the flows of global capital.

However, other forms of measurement are emerging as the neoliberal rationale for codifying nature and making it accountable to 'audit' and can be seen in terms such as 'ecosystem services'. This has begun to have traction in policy circles as management of entire eco*systems* becomes the mainstream language for dealing with environmental problems. The emerging discourse of the 'health of the ecosystem' or 'ecosystem

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[191] Karen Bakker "The limits of 'neoliberal natures': Debating green neoliberalism" *Progress in Human Geography* 34, (2010)

[192] David B. Hunter "The Future of U.S. Climate Change Policy" in *Globally integrated climate policy for Canada* eds., Steven Bernstein (Toronto; University of Toronto Press, 2008): 97

[193] Jutta Brunnee and Kelly Levin "Climate Policy beyond Kyoto: The Perspective of the European Union" in *Globally integrated climate policy for Canada* eds., Steven Bernstein (Toronto; University of Toronto Press, 2008): 61

integrity' is governmentalized as an important method of thinking about how humans are impacting upon nature[194]. The use of these concepts is important because it purports a method of quantification and the measurement of what aspects of an ecosystem are important to maintain and conserve, and thus allows the neoliberal environmentalist the ability to rationally access it.

For example, in recent years the Liberal government of Canada, released a document named the Green Shift[195], which outlined the government's plans for environmental policy action. In this document, one of the main priorities was the protection of 'ecosystem health' in Canada, which they argue is necessary because the "great ecosystems that Canadians cherish and that support our economy and our rural communities are becoming more vulnerable than ever before."[196] The purpose of protecting nature is rationalized on the basis of what services nature can provide to our economy and communities and ecosystem health gives a conceptual yardstick for how to measure this process. Then, this plan also includes a guide for how Canadians can become environmentally minded citizens through what Eric Darier calls "environmental drills" meant to inoculate the Canadian population into this very specific way of understanding how to care for the environment, in this sense, "the Green Plan contributes to the establishment of environmental self-regulatory mechanisms through the 'regulated autonomy' of the population"[197].

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[194] D.J. Rapport, G. Bohm, D. Buckingham, J.Cairns, R. Costanza, J.R. Karr, H.A.M. de Kruijf, R. Levins, A.J. McMichael, N.O. Nielsen and W.G. Whitford "Ecosystem Health: The Concept, the ISEH, and the important tasks ahead" *Ecosystem Health* 5(2), 1999
[195] Liberal Party of Canada "A Greener Canada: An Action Plan for the 21st Century"
[196] Ibid., 34
[197] Eric Darier "Environmental governmentality: The case of Canada's green plan" *Environmental Politics* 5(4) p.602, 1996

The United Nations Environment Programme World Conservation Monitoring Centre also believes that using these indicators is a necessary step for harmonizing the ways we construct and create programs to fix nature. They have set up a panel to discuss how to overcome the deficiencies in measuring how an ecosystem is doing:

"Biodiversity and ecosystem services indicators are needed on a variety of scales for a variety of uses from measuring national progress to monitoring achievement of international commitments; they are also needed for a range of assessment processes. Currently, however, their development and the metrics and measures that underpin them are incomplete. There are gaps in the thematic and geographic coverage of biodiversity indicators and in particular in the development of ecosystem service indicators other than for provisioning services. Furthermore, current indicators are not yet clearly showing the links between biodiversity and ecosystem services and human well-being"[198].

The central *use* of ecosystem services works to make nature accountable and allow us the set of parameters necessary so that we can manage ourselves (in terms of the self, the municipality, the nation state) in a manner consistent with the rest of the world.[199] In this very real sense, the management of nature becomes central to the neoliberal project helping to create a global 'regulated autonomy', and allowing disciplinary actions in the name of saving the natural (western)world.

These new 'natures' allow for spaces to be opened up for investigation so that they can be 'properly' assessed. In this sense global institutions "makes its objects of study accountable in two senses: first, in being counted and hence made visible locally

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[198] United Nations Environment Programme Third ad hoc intergovernmental and multi-stakeholder meeting on an intergovernmental science-policy platform on biodiversity and ecosystem services *Current and Future Status of biodiversity and ecosystem service indicators* 27 April 2010 (UNEP/IPBES/3/INF/2)
[199] Ibid.

and transnationally, and second, in reference to new environmentalist norms and responsibilities with their institutional policing and extractive capacities. As the unknown gets explored and translated, and as the language of translation gets concretized in this discovery-classification-capitalization process, newly identified citizens gain responsibility to act in specific ways."[200] These methods of qualification such as ecosystem services to measure the 'health' of the ecosystem get codified into neoliberal technologies such as environmental impact assessments as a 'neutral' metric for rationally assessing how to act upon nature.

This is a *method* which neoliberal environmental action and subject creation takes place. Mechanisms for 'documenting' nature such as EIA (Environmental Impact Assessments) become technologies of neoliberalism insofar as they "help clarify who and what is at stake, socially and environmentally, in big infrastructure projects and the role of large capital investments of society as a whole."[201] Therefore, in order to engage, or problematize what the World Bank or other 'developing' agencies are doing, it becomes necessary to adopt their language, and thus largely debate on cost-benefit rationales for how to access nature. Goldman muses, "how else can one assess the cost of relocating a cluster of villages, destroying customary rights to forest resources, and threatening the fate of a fish species or an indigenous language?"[202] It is not to debate the logic of such intervention themselves, but instead sets the criteria to which the debate can and will be held. These environmental 'norms' are actively displacing other values regarding nature and also delegitimizing them as discursive spaces.

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[200] Michael Goldman, "Constructing an Environmental State: Eco-governmentality and other Transnational Practices of a 'Green' World Bank" *Social Problems* 48(4), (2001): 514
[201] Ibid., p.514
[202] Ibid., p.514

Therefore, the reaction is to find better methods for explaining the need for intervention, and better methods of inculcating the population into an understanding of nature that will lead to more (neoliberal) forms of management. In recent years an approach named Resilience has been emerging as a more robust approach to managing humans-in-ecosystems, and fits neatly into neoliberal conceptions of how to guide for the management of nature through promoting self-government to help maintain the self-organizing principles of the external conditions they create. It also meets the requirements of discursively situating the destruction of nature not as fundamental conflicts of our morals, values or actions within a neoliberal system and places it in a more neutral context. Andrew Murray writes,

> "Resilience answers nicely to the real and rhetorical exigence. To be sure, resilience is in one sense merely the capacity of systems to absorb stress and maintain or even repair themselves. But resilience is also *metaphor* that embodies a number of characteristics that Aristotle required of all good figures of speech: it is active, primordial, concise and appropriate… Sustainability by contrast, suggests a defensive posture"[203]

The basis is that the whole concept of resilience is based on a view that social and ecological interactions are all embedded in a common social-ecological 'system'. Ecologists C.S. Holling and Lance Gunderson came up with the idea to "search for an integrative theory and integrative examples of practice"[204] of humans-in-ecosystem as a response to what we have seen as the drawbacks of what has been traditionally the case in studying ecosystems and human systems. Resilience, for social-ecological systems, is related to

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[203] Andrew McMurry, "The Rhetoric of Resilience" *Alternatives* 36, no. 2 (2010): 22.
[204] C.S. Holling, "Understanding the Complexity of Economic, Ecological, Social Systems" *Ecosystems* 4 (2001): 391

"(i) the magnitude of shock that the system can absorb and remain within a given state, (ii) the degree to which the system is capable of self-organization, and (iii) the degree to which the system can build capacity for learning and adaption. Management can destroy or build resilience, depending on how the social-ecological system organizes itself in response to management actions."[205].

As it is constructed, how we impact the 'functions' of the system will define whether or not the system shifts into a different state. Therefore, if too many nutrients are lost the system collapses and 'flips' into an entirely different state (such as a coral ecosystem shifting into an algae ecosystem).[206] This is what is termed Resilience or "the capacity of a system to absorb disturbance and reorganize while undergoing change so as to still retain essentially the same function, structure, identity, and feedbacks."[207] This is used in the same way that other quantitative and qualitative metrics of nature are being used in that it allows for a conceptual yardstick as to figure out what are the important indicators to ensure that a system does not 'flip'. Resilience as management then can include ideas such as how to induce the release and reorganization phases (such as controlled forest fires) so as to ensure that an ecosystem does not permanently flip. Holling and Gunderson extend this to social systems by using examples such as market expansion and free market competition as the exploitation and growth phase, the bureaucracy and government as the conservation stage 'setting the rules' for the market

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[205] Carl Folke, Steve Carpenter, Thomas Elmqvist, Lance Gunderson, C.S. Holling and Brian Walker "Resilience and sustainable development: Building Adaptive Capacity in a World of Transformations", *A Journal of the Human Environment,* 31(5) (2002): 438
[206] Ibid.
[207] Brian Walker, Craig S. Holling, Stephen R. Carpenter and Ann Kinzig, "Resilience Adaptability and Transformability in Social-Ecological Systems," *Ecology and Society* 9, no. 2 (2004): 5.

and then on the back loop recessions are the capital release phases with new market innovation bringing the reorganization of social relations back into the system.

Resilience, based in complexity science, contends that there are fundamental features of social-ecological systems that they have the ability to self-organize. It situates well within neoliberal's desire to have the goal of a social reality vis-à-vis the market system whereby the external conditions are set as self-regulating (or in the case of resilience self-organizing) and therefore, the reaction to this is to create management where subjects will internalize the metrics of resilience and management themselves accordingly. The question they ask is "what to sustain and why?"[208], to which the response becomes at what point in time or space does a social-ecological system 'flip' into a different state, thus the impetus for intervention is to either prevent the flipping from happening, or construct management which will be 'adaptive' to these shifting changes.

The goal is to shift the responsibility for managing nature onto 'collaborators' and partners through a process called 'adaptive co-management.' Resilience scholars argue that (liberal-welfare) conceptions of managing nature that attempt to provide absolute indicators for how to conceive of and act on nature-as-resource are ultimately misguided. Adaptive management seeks to fix this problem by shifting responsibility for managing the resilient ecosystem by laying out a broad-based idea for management based on experimentation and integrative learning with local communities, indigenous knowledge,

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[208] Carl Folke, et al, *Resilience and Sustainable Development: Building Adaptive Capacity in the World of Transformations* (Scientific Background Paper of Resilience for the process of The World Summit on Sustainable Development on behalf of The Environmental Advisory Council to the Swedish Government, 2002): 20

the state and corporations.[209] It seeks to achieve this through an ongoing process of trial

and error based on knowledge-based feedback loops that continually integrate

information from a variety of sources. Based in complexity, the idea is that "(1) sharing

of management power and responsibility through multiple institutional linkages that may

involve government agencies, NGOs, and other communities and (2) feedback learning

and building of mutual trust among the partners"[210]. Already, the Canadian

Environmental Assessment Agency (CEAA)[211] and the Department of Forestry in British

Columbia[212] have officially adopted adaptive management into their environmental

management practices.

This has obvious advantages for governing with the language of management

embedded in it and systems theory allows for a re-constellation of political issues into a

more neutral language of thermodynamics and gives a logical scientific explanation.

Political, moral, environmental and social questions get recast as 'emerging properties' of

the system and in the face of climate crisis, it is argued that planetary management may

be necessary with ideas such as "internationally accepted large-scale geo-engineering

projects"[213]. Orwellian tones aside, the idea of earth systems management has the

potential to allow for the pushing aside of moral action in the face of a worldwide state of

exception; if it can be argued that the entire planet is in peril within the language of

systems, then the appropriate responses are going to be those that are inclusive of the

[209] Melissa Leach, Ian Scoones and Andy Stirling *Dynamic Sustainability: Technology, Environment and Social Justice* (London, Washington D.C.; Earthscan, (2010) p.33
[210] Fikret Berkes "Rethinking Community-Based Conservation" *Conservation Biology* 18(3), (2004): 626
[211] Canadian Environmental Assessment Agency, Operational Policy Statement: *Adaptive Management Measures under the Canadian Environmental Assessment Act* (March 2009)
[212] B. Taylor, L. Kremsater and R. Ellis *Adaptive Management of Forests in British Columbia* (British Columbia Ministry of Forests – Forest Practices Branch. Victoria BC, Canada, 1997)
[213] Eva Lovbrand, Johannes Stripple, and Bo Wiman. "Earth System governmentality: Reflections on science in the Anthropocene" *Global Environmental Change* 16 (2009): 11

science of systems. Resilience constructs social reality so that it seems the most logical response to this ever increasingly complex world. If the problem is not the way we construct nature (culturally) or the fact that resource management *itself* is linked to colonial era dispossession and classism, but instead are factors of the emergent properties of a system that require more 'knowledge-based learning' and more 'resilient institutions'.

This new discourse essentially seeks to embed populations into a situation to combine the way *they* construct nature, such as, "moral and religious belief systems with management."[214] This may seem to coincide with some of the philosophical stances that I have in Chapter one, in that there seems to be the ability to 'speak' for nature in a manner that does not reduce it to parts to be *used.* However, this takes moral ways of speaking for nature and renders them into manageable pieces to be calculated against one another for the best rationale for intervening in nature. In the next section, I will show how this process is also occurring in neoliberal interventions into 'sustainably developing' populations and therefore show the similarities to show how these new management approaches that are attempting to provide new and better alternative ways of managing nature, are also embedding neoliberal logics of self-government and market rationale.

4.3 Cultivating the (Global) Environmental Subject

As sustainable development becomes a vital project in global government, the 'previously untapped areas' begin to include the liberal project of developing the 'underdeveloped' places of the world. In this development system, like most things in a

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[214] Carl Folke, et al, *Resilience and Sustainable Development: Building Adaptive Capacity in the World of Transformations* (Scientific Background Paper of Resilience for the process of The World Summit on Sustainable Development on behalf of The Environmental Advisory Council to the Swedish Government, 2002): 46

capitalist economy, there are multiple hierarchies that decide where money goes, who gets it and how it will be spent. The need for audit, as is made necessary under modern governmentality, is as prevalent in the act of development as it is in state and non-state agencies around the world. David Mosse argues that this is driven by two trends: "a narrowing of the *ends* of development to quantified international development targets… on the other, a widening of its *means*. Whereas until the 1980s technology-led growth or the mechanisms of the market provided the instruments of development, today good government, a vibrant civil society and democracy are also pre-requisites"[215]. The development policy needs to be narrow in its ends to make it as 'fit' and lean' as possible, and it needed to extend its means in order to make societies fully able to join into global flows of goods and services. As policy needs to be implemented it needs quantifiable targets that can meet those needs, in order to show either state agencies such as the Canadian International Development Agency (CIDA) or international donors that the work they are doing is producing tangible 'results'. Therefore, as 'sustainability', 'biodiversity' and 'ecosystem services' becomes a global imperative it can be seen "for the first time to be strategically important" to the project of development.[216]

In order to go about sustainably developing a group of people, first a group of 'experts' needs to construct the aims of the development project. They have what Tanya Li has dubbed 'the will to improve'; these agents wish to improve the livelihoods of some 'underdeveloped' part of the world in order to make them into 'developed' nations. This could include representation from the natural sciences such as biologists, agricultural

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[215] David Mosse "The Ethnography of Aid Policy and Practice" *Development and Change* 35(4) (2004): 642
[216] David Mosse. *Cultivating Development: An Ethnography of Aid Policy and Practice* (London; Pluto Press, 2004)

experts to the social sciences, including cultural anthropologists and political scientists.

One important aspect to consider is that at the project design stage they will most likely

be outsiders from the site they seek to 'improve'. This leads to an apolitical

understanding of nature outside of the realities of cultural constructions and leads to very

narrow conceptions of how nature should be understood and managed. Scott argues that

"If the natural world, however shaped by human use, is too unwieldy in its "raw" form

for administrative manipulation, so too are the actual social patterns of human interaction

with nature bureaucratically indigestible in their raw form."[217] And therefore, in the same

way that Scott talked about scientific forestry, nature needs to be constructed in a way

that can be quantifiably argued as a necessary site of intervention. This comes along with

traditional development techniques such as structural changes to the economy,

microcredit loans, infrastructural investments and education among others, and although

'nature' has not always been internal to the development 'audit', under the rubric of

'sustainable development' it has become an important discourse for these experts. This

can be directly linked to the advancement of sustainability indicators, allowing these

experts the 'targets' for which their improvement programs can be assessed and therefore

allowing the entrenchment of environmentalism in global political discourse.

However, this creates a fundamental tension in global liberal government. As

explained, the neoliberal rationale for 'developing' is to set the criteria to be judged and

then mitigate the responsibility to individuals and communities that will then rationally

assess (themselves) against said criteria. It does call for interventions in the name of

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[217] James Scott *Seeing like a State. How Certain Schemes to Improve the Human Condition Have Failed* (New Haven & London; Yale University Press): 22

development, but does so by seeking 'partners' in order to shift this risk[218], and place the

blame for failures of development on the inability for their 'partners' to become rational

'entrepreneurial' subjects. Therefore, under the neoliberal rationality, it matters little to

the extent of which subjects internalize certain conservation ethics from liberal

environmental thought, so long as they understand nature-as-resource. However, much of

the work by international environmental agencies in 'sustainable development' can be

seen as "social-welfare (liberal) governmental objectives because they aim to engineer

the overall health of the global population"[219] by inscribing liberal environmental values

of conservation onto the developing subjects. However, these values are seen as too

paternalistic, and much akin to national movements away from the welfare state in

Anglo-Saxon countries, a similar shift is occurring internationally in the context of

sustainable development.

4.4 The Deficient Subject

In order to understand how 'constructing the environmental subject' has been

situated within a (global) neoliberal rationality of rule, I will use the example of programs

for development to highlight how the shift in international government towards

'disciplining' global subjects moves from the more paternalistic rationalities of the

welfare state to a more neoliberal logic of rule of the type we see in modern western

society. The logic of welfare in global government as it relates to nature is an attempt to

construct a moral relation with the non-human that has a conservation ethic at its core. As

we will see in the case of Tanya Li's study, the techniques used are both disciplinary

(teaching how *wise use* practices) and sovereign (constructing policies, to empower and

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[218] Majia Holmer Nadesan, *Governmentality, Biopower, and Everyday Life* (New York; Routledge, 2008):
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[219] Ibid., 37

then to remove). In the case of Agrawal's study in *Environmentality*, as a reaction against the paternalistic welfarism towards constructing an environmental subject, neoliberal technologies are used to shift responsibility from the state and transnational organizations to the forest dwellers in order for them to self-manage and internalize nature-as-resource.

In *The Will to Improve,* The Nature Conservancy (TNC) goes into Indonesia with the hopes of creating a new conservation zone to protect an area that "was said to contain the majority of Sulawesi's unique flora and fauna, biodiversity resources of global significance"[220]. The protection of a bio diverse important area and the liberal conservation ethic became the method through which the Nature Conservancy had attempted to construct a reality of nature which gave an understanding that the government, and international agencies could act as trustees over nature in that they knew best how to conserve and protect nature. These ideas are that nature can be constructed and rendered technical "proponents of biodiversity protection felt the conduct of villagers in this "border zone" needed to be reformed"[221] by the state and that these plans can then be used as a reason to 'develop' a certain amount of the population. Nature conservation becomes the meta-narrative of development and in the case of Indonesia gets placed as central to the necessity of shifting people's understanding of nature so that they would learn to exist outside of important areas of the Earth, so as to not inflict damage on it.

The project was interested in creating a designated nature park to protect the biodiversity of the area, and also helping to find more 'sustainable' methods of income and to help with the displacement that the creation of this park would create. However, this land was agricultural land to the 'highland' people that resided in the park and was

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[220] Tania Murray Li *The Will to improve: governmentality, development and the practice of politics* (Duke; Duke University Press, 2007): 125
[221] Ibid., 123

their livelihood. Without an understanding of the relations between the people and their environment already embedded, the liberal approach, already predefined, was to separate people from the Dongi- Dongi region of the park. This resulted in the radicalization of the villagers, which moved to occupy more of the new 'park region', now using the area as a method of protest. In response, TNC moved to dissociate itself entirely from the act of 'developing' and reassert itself as only a conservation authority. TNC's intention was shifted in a way that rejected the political reality it had created. Instead of looking into the structural issues involved, such as the political landscape of Indonesia, the power relations between groups in the region, how nature has been embedded in this society, and so on. The gaze of the TNC was already paternally fixated on a liberal conception of conserving nature and how to protect the environment.

They "did not acknowledge the adverse effects of its failed small projects and their role as a stimulus to the occupation"[222] and upon criticism, started to contend that helping social concerns was outside of their abilities and reconstituted their policy direction to only be concerned with the park. This is further articulated by Li, who says this is a trustee tactic that, "when the boundary is crossed, expertise challenged, and a program forced open by critical scrutiny, the response of trustees is to look for ways to reassert the authority of its own calculations"[223]. In attempting to reconstitute their environmental legitimacy the TNC began to incorporate a neoliberal rationality and went about a new way of participatory governing that allowed the construction of a new type of environmental subject, as one that could be understood as being given a certain amount of agency and ownership over the land in a participatory regime of relations.

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[222] Ibid., 151
[223] Ibid., 282

Here, people were understood and constituted as environmental subjects in that they were "repositioned as "collaborators" and "partners" who thought and acted in new ways"[224].

However, this did not actually solve any of the problems which were present before when a more top-down managerial style was in place. While, now the conservation authority knew the points of contention for the villagers it could not contend with important questions of why a conservation area was even necessary, and in this sense "refused to engage in participation in a political sense"[225]. Of course, once again this goes back to the manner of trustees in that the TNC's entire existence hinges on the necessity of conservation parks. Therefore, when the issue of even utilizing parks given the contestable nature of park politics in this region was breached, the TNC had no 'technical mechanism' to deal with valuations of nature outside of their set criteria. The treatment of nature is always technical, and this rendering creates a situation where the interactions between humans and nature can either be understood as separate or that when they are placed together, it is only modern western scientific understandings of how our interactions with nature should be that are the ones that should be followed. This is echoed in other areas such as migration, or gender dynamics that are only understood within the limitations of government rationality.

Although the shift occurred from contending a liberal-welfare biopower to trying to articulate a neoliberal method of government, it still maintained the liberal assumption of knowledge-of-nature. In this sense, although the responsibility of the park was in fact delegating to the village people it then became apparent that because its function is to promote a liberal-welfare idea of how to care for nature, when TNC attempted to

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[224] Ibid., 217
[225] Ibid., 228

construct a 'entrepreneurial' subject in relation to park management, they could not

answer why this was necessary, and the problem was that they were unable to construct

an appropriate nature that could also fit into the Indonesian's way of life. TNC not only

did not understand the cultural context of forests and their people, but what the power

relations were between the state, the park officials and different social classes in the

Dongi-Dongi region. In Li's work the NGOs were attempting to help the marginalized

people and 'save' nature, while attempting to connect the two ideas. They attempted to

achieve this through protecting biodiversity and ecosystem services; yet what occurred

was a revolt against their methods.

There are constantly pushes to improve 'improvement', and it is tempting to

construct a history that tells of all the ways that improvement has indeed gotten better

over time however, "new programs routinely retain the limitations of the programs they

replace"[226]. They become in their own ways a method of retelling the same story over

again with a new technique, method or even target, but outside of critical circles, the

discussion never leads to problems with the idea of management itself. The problem in

modern global government is that either the criteria for intervention did not have the

proper set of metrics, or that subjects were not cultivated properly so that to give them the

ability to rationally assess nature. The problem, under neoliberal rationality, was not that

IGOs, NGOs and the state did not understand the power relations embedded in

communities, traditional resource cultivation or how these people understood 'nature',

instead the contention becomes that these disciplinary institutions have no business

attempting to guide toward a properly-conceived 'sustainable' relationship with nature,

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[226] Tania Murray Li *The Will to improve: governmentality, development and the practice of politics* (Duke; Duke University Press, 2007) p.275

embedded in a liberal welfare biopolitical gaze that attempts to teach a moralizing understanding of nature. As stated, much akin to the backlash against the welfare state nationally, internationally, environmental policy has begun to shift away from paternalistic technologies for constructing environmental subjectivities, to more neoliberal modes of shifting responsibility to individuals so that they both rationally access nature-as-resource against a host of other social criteria, such as; displacement if the resource is used, further entrenchment in poverty vis-à-vis a lack of ability to enter into the national or global economy among other things *they* deem as important. 'Sustainable development' under a conservation ethic is not something that needs to be disciplined into the bodies of individuals, but instead, in this rationality, what does need to be disciplined is that nature is viewed as something to be managed *economically* and then the task for the neoliberal apparatus is to set the external conditions for which other 'goods' can be assessed in relation. If the proper external criteria are set for the 'best' assessment of nature-as-resource, neoliberals would argue that sustainability (should) happen naturally through the logic of the market.

In Arun Agrawal's work in 'environmentality' what we see that is different from these other studies is the extent to which governmental strategies shift based on the degree to which the subject is constructed. Agrawal's study of the forest people of Kumaon works as a good example of the transition from paternal welfare biopower in the attempt to construct the environmental subjectivities of individuals to the more neoliberal rationality of shifting the responsibility for the forests so that they will ultimately learn to 'care' for nature-as-resource and treat it accordingly. Therefore, in order for people to

internalize any specific indicators of ecosystem management, first they need to conceive of nature as something that primarily needs to be managed and owned.

The national government of India tried years of programs, community government councils, NGO interactions, IGO programs, to get the forest dwellers to sustainably manage their forests. For most of the history of this project this entailed an acidic relationship between these subjects, the state and international agencies, attempting a development program similar to what TNC did in Indonesia. However, after the creation of their own forest councils the forest dwellers 'finally' began to see themselves as responsible for the forest of which they lived. As Agrawal states, "Hukam Singh did not care much about the village forest in 1985 but by 1993 had come to defend the need for its regulation"[227]. Initially the state had attempted a very sovereign form of power by appropriating the forest land from their subjects and then mandating that the forest dwellers protect their forests themselves. In turn the dwellers reacted with indifference and resistance seeing the forest as the government's attempt to control their land and livelihoods. For years international development agencies in concert with the state, attempted to instil a conservation ethic into the ethos of the forest dwellers, through a large variety of consultative measures through councils meant to direct their 'conduct' to understand that the forest should be protected and sustainably used. However, for most of the history of the project, the councils acted as a method for trying to shift their conduct in a liberal-welfare disciplinary fashion, to get them to embed a western form of conservation.

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[227] Arun Agrawal "Environmentality: Community, Intimate Government, and the Marking of Environmental Subjects in Kumaon, India" *Current Anthropology* 46(2), (2005): 162

However, when the forest *ownership* and responsibility was decentralized and was shifted to the community, over time the people began to cultivate the forest based on institutionalized knowledge that had been embedded over several decades through community council based governance initiatives. These communities set up their own forest councils that allowed the community direct access to decision-making processes, and allowed them the ability to figure their own methods of 'best management' practices for *their* forest. Agrawal notes that in communities where there are no forest councils there was still considerable apathy towards protecting the forests, and residents "scarcely attempted any environmental regulations."[228], as these forest dwellers did not perform their own self-government. These councils were supposed to empower the community to take care of their own land and therefore gain a semblance of legitimacy in the eyes of the state. However, even the way of conceiving of empowerment in this instance is "a measure of subjection to, rather than of autonomy from, power"[229]. In fact, what occurred is that the forest dwellers became the self-actualized environmental subjects that the state could not achieve though more traditional (sovereign) coercive power methods.

Agrawal's research explicitly avoids the ethics of this approach to environmental governance, although he does state that "in considering an actor as an environmental subject I do not demand a purist's version of the environment as necessarily separate from and independent of concerns about material interests, livelihoods, and everyday practices of use and consumption."[230] In other words, the liberal view of forest-as-resource does not entail a conflict in and of itself. The problem is that to what extent this

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[228] Ibid., 171

[229] Raymond L. Bryant "Non-governmental Organizations and Governmentality: 'Consuming' Biodiversity and Indigenous People in the Philippines" *Political Studies* 50, (2002).

[230] Arun Agrawal *Environmentality: technologies of government and political subjects.* (Durham, NCL Duke University Press, 2005)

revising of Indian attitudes towards the environment embeds them and nature into unequal capital relations that are endemic to the construction of alternative understandings of 'the environment'. Coming from a critical perspective with regards to governmentality of nature, the construction of environmental subjects as such described in Agrawal's environmentality does not register as a success story. However, it is difficult to ascertain to what level people have come to only care about their environment as a function of their economic well-being. This is partly in the method for which Agrawal goes about his study- that his survey questions create a binary where the respondent's only options for caring for the forest are "economic" or "non-economic", which the latter includes things such as clean air, and other western indicators of a healthy environment.[231] These issues are over-shadowed because this is hailed as a success story of decentralized natural-resource planning with community-led initiatives.

Agrawal posits that what was most successful about the method of environmental management that took place was that in decentralizing forest management from the state, it empowered the local communities by allowing them the ability to take part in the regulatory process of defining how forests should be managed. No doubt this resulted in a very real shift in power nationally so that the 'forest people' were able to impact the decisions of the state in a manner they were never able to before. However, this is the form of freedom that neoliberal rationality espouses – one that situates the individual so that they can be seen as 'entrepreneurial' "with full responsibility for their own investment decisions and endeavoring to produce surplus value; they are the

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[231] Ibid.

entrepreneurs of themselves."[232] They are now implicated into the global flows of capital, and embedded in an entirely different set of power relations, one that will set the external conditions of either commodity markets, carbon markets or other markets where the placement of nature has become internal to the logic of global neoliberalism.

While this is a broad overview of both the project of development in Indonesia and Kumaon, they both speak to the broader set of issues set out in this thesis. Both projects had very different sets of concerns and it should not be seen that just decentralizing nature-as-resource will ultimately cause the creation of 'environmental subjects' who will self-govern their own 'piece' of nature. In the context of Kumaon, the gaze of resourcism has been embedded since colonial times when the British were parcelling up their land, but it is difficult to say as to what degree this understanding of nature was previously internalized by the forest people. That being said, when the process does have these results it shows that it is possible when attuned to the power relations between communities, the state and international organizations for example such as forest councils to emerge and be told as success stories to decentralized governance. However, this misses a lot of what is lost in the process of this development strategy, and as Agrawal himself states, his study does not engage in "the friction and heat that discussions about Foucault's ethics often generate."[233] What the reader is left with is the impression that this is a 'completed' neo-liberal project, and yet it is not clear exactly if for one this actually produced more 'sustainable' practices, and more importantly in the light of this work, how this understanding of self-managing the forest will impact the

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[232] Thomas Lemke, 'The birth of bio-politics': Michel Foucault's lecture at the College de France on neo-liberal governmentality" *Economy and Society* 30(2), (2001): 199
[233] Ibid., 180

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ways in which these people understand and value nature and what impact that will have on the non-human.

This is really the fundamental tension in current mainstream discourse surrounding the management of nature. Increasingly more and more of the planet is being 'opened up' both physically and metaphorically, in terms of extraction processes and new ways of 'seeing nature' as management. Therefore, as more of nature is coded in places like the United Nations as 'ecosystem services' it allows for another metric that international agencies can use to intervene to protect some other aspect of (western) nature. This has a dual process of both entering more and more of the Earth into the government of liberal nature *within* western institutions, but also in setting the conditions for what metrics will be used for determining the cost-benefits at a 'partnership' level between the agents of government and their subjects. In this sense, these new (environmental) subjects are now open to global flows of capital and are entrenched into a system whereby international financial institutions (and the Anglo-Saxon government mentalities who wield the most influence over them) have an inordinate amount of power over the direction and regulation of global capitalism. Here, neoliberal forms of self-governance of nature can be seen as a form of empowering now, to disempower later.

Conclusions

"Didier Éribon's biography of Foucault recounts a car trip through the Italian alps that Foucault took with a colleague, Jacquesline Verdeaux, which revealed his attitude to nature "[Verdeaux] remembers… that Foucault detested nature. Whenever she showed him some magnificent landscape – a lake sparkling in the sunlight – he made a great show of walking off toward the road saying 'my back in turned to it"

- Eric Darier quoting from Didier Éribon's biography of Foucault in *Foucault and the Environment*[234]

Although Foucault himself might have had his back 'turned' to nature, it does not mean that his theoretical contributions do not have implications for those of us who wish to fully embrace nature in our work. I have contended in this thesis that the ideas of a governmentality of nature allows for a conception of 'the environment' that stresses the very political nature of ideas commonly articulated as neutral technical solutions to technical problems. It is to challenge the way we think about 'the environment' in mainstream western discourse, that is presented as something to be dissected as parts, or as processes, and then given to the appropriate authority who will provide 'expert advice' to those in political office.

Governmentality challenges this distinction as being a fabrication of how we have 'progressed' throughout history. We are told a story of the progress of scientific discovery, and the successful struggle of liberalism to come out on top of totalitarianism, dictatorships and Communism. But these two stories are kept separate, as though we should not understand that certain types of knowledge that are constructed, in this case

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[234] Eric Darier "Foucault and the Environment" In Eric Darier, eds, *Discourses of the environment*, (Malden, PA: Blackwell, 1999)

nature, will not be *implicated* in how a thing is constituted as something to be used, and as I have shown, managed under the various rationalities of government.

I have tried to create using governmentality something similar to what Foucault constructed in his history of madness, to understand the history of nature through government, not as a "critical history which has as its aim to demonstrate that behind this so-called knowledge there is only mythology or perhaps nothing at all. My analysis is about the problematization of something which is dependent on our knowledge, ideas, theories, techniques, social relations and economical processes."[235] Instead of viewing the way we think about the 'governing of the environment' today as the necessary culmination of scientific knowledge, combined with prudent policy making, my study, through governmentality attempted to challenge this in saying that when these 'neutral' ideas of nature are taken internal to the art of governing it produces a situation in which in the long-term nature is always going to lose.

Starting from Chapter 3, I showed how to speak of nature through government first came to fruition in liberalism with the necessity to manage a newly conceived population, and the creation of scientific forestry and statistics became necessary and governmentalized in order to provide a solution to what was called a population – territory problem. As the liberal welfare state emerged in the 20th century, government took on the 'caring for nature' as a method of creating the proper moral attitude towards protecting nature for its *wise use*. Finally, neoliberal rationalities show how as a backlash against this paternalistic government creates a set of technologies that places the primacy of moral evaluation on the ability for individual subjects to rationally assess their own

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[235] Michael Foucault, *Madness and Civilization: A History of Insanity in the Age of Reason.* (London: Tavistock, 1967)

'government'. Therefore, to speak of nature under neoliberalism is *always* to place it into a cost-benefit rationale where 'free' individuals can rationally assess how to protect nature against a host of other options.

Finally, in my last chapter I showed how the creation of an environmental subject that can rationally assess nature becomes global as neoliberal market technologies seek to construct a 'free market', one that requires a very specific sort of subject. As nature gets further carved up into these transnational organizations, more and more of the global population is understanding nature in terms that can be expressed on a balance sheet. What this leads to is what I expressed in the introduction as a resourcism that always puts nature into a conceptual framework where nature-as-resource is already predefined. As more of the world's countries become 'neoliberal states', the ability for arguing for the preservation of nature for its own sake is eroding, as neoliberal environmentalism becomes more legitimate. This becomes destructive not only to alternative cultural understandings of nature, but also to nature itself, that through the rubric of neoliberal resourcism, as increasingly new aspects of the more-than-human are brought into the governmental framework of 'saving nature', and the ethical responses to nature are further marginalized or lost in the name of efficiency and optimization.

That is not to say that there are still not significant demonstrations, actions and research being done in the name of saving the more-than-human for their own sake, and perhaps studies like this one can help to remind environmental movements that they have become embedded in the very thing they should be contesting.

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