

Environmental Governance in China: Creating Ecologically Civilised Environmental Subjects

by James Oswald

Thesis submitted for the degree of
Doctor of Philosophy in Asian Studies
School of Social Sciences
University of Adelaide
February 2017

Contents

Abstract.....	己
Declaration.....	辛
Acknowledgements	壬
Background to this Study.....	癸
Guide to In-Text Use of Chinese Sources, Chinese Terminology, and Footnotes.....	11
List of Abbreviations	12
Introduction	1
PART 1 – Environmental Degradation, Environmental Consciousness and Civilisation	
Discourse.....	4
Chapter 1: Environmental Degradation	5
China’s History of Environmental Degradation	5
Ancient Trends Toward Environmental Degradation	5
China Encounters Western Forces	6
China in the Modern Era	9
The Negative Impact of Development on the Environment.....	11
Global Environmental Disasters	11
China’s Environmental Woes	12
International Nature of the Environmental Crisis	14
How Development Leads to Environmental Degradation	15
Cost-Transference	16
The Problem of Consumption	18
WTO Entry and Environmental Degradation	20
Chapter 2: The Rise of Environmental Consciousness in China	22
Environmental Consciousness in the Chinese Party-State	22
Environmental Consciousness in the Early Years	22
The Increasing Importance of Environmental Issues.....	24
The CCP Updates Environmental Law	26
Xi Jinping’s “Two Mountains Theory”.....	28
Chapter 3: The Concept of <i>Wenming</i> and the Rise of Ecological Civilisation	31
Civilising Discourse	31
The Introduction of Ecological Civilisation	31
What is <i>Wenming</i> ?	32
Usages of <i>Wenming</i> in CCP Discourse	35
The Origins of Shengtai <i>Wenming</i>	36
CCP Adoption of Ecological Civilisation	38
PART 2 – Literature Review and Methodology	40
Chapter 4: Literature Review	41
Key Themes and Questions	41

Environmental Degradation in China, Ancient and Modern	41
Causes of Environmental Degradation	44
Ecological Civilisation as a Post-Industrial Society.....	48
Ecological Civilisation as an Ethical Standard of Behaviour	51
Ecological Values	55
Governance in an Ecological Civilisation	57
Working Towards a Solution – How to Realise an Ecological Civilisation	59
Research Question	63
Chapter 5: Methodology.....	65
Trying to Understand STWM	65
Rationale for Choice of Sources	65
Conceptual Approach	65
Methodology for Each Case Study	66
Policy	66
Pujiang.....	67
Hong Nong.....	68
Rationality for Dissertation Methodology.....	69
PART 3 – Theoretical Framework: Environmentality and Paternalism	71
Chapter 6: The Governmentalisation of China and Environmentality.....	72
The Governmentalisation of the State	74
Foucault and Government.....	74
Pastoral Power and the Welfare-State.....	75
Biopolitics and Environmentality.....	77
Governmentality	79
Chapter 7: On Paternalism.....	82
Mill and Paternalism	82
Paternalism in China.....	82
Paternalism Defined.....	84
Categories of Paternalism	86
Justification for Paternalistic Governance.....	87
Paternal Environmental Governance	88
How Ecological Civilisation Creates the Environmental Subject.....	90
PART 4 – Case Studies: Policy, Pujiang County, and Hong Nong Academy	92
Chapter 8: Ecological Civilisation Policy.....	93
Introduction to First Case Study.....	93
Specific Guidelines Introduced for Ecological System Reforms.....	93
Eco-Civilisation from 2015.....	95
“The CCP Central Committee and State Council’s Suggestions on the Hastening and Promotion of Becoming an Ecological Civilisation”	96
“An Overall Plan for Ecological Civilisation System Reform”	97
Ecological Civilisation Experiments	98

Promoting Green Lifestyles	99
Significance of Ecological Civilisation in Chinese Government Policy	99
Chapter 9: Fieldwork in Pujiang County, Zhejiang Province	101
Introduction to Second Case Study	101
About the Crystal Glass Manufacturing Industry	101
Environmental Issues	103
The Eco-Tourism Industry in Pujiang	106
An Analysis of Pujiang County’s Environmental Remediation Efforts	108
Five Waters Administered Together.....	108
The Eight Great Engineering Projects.....	110
Three Transforms and One Demolish.....	111
The Lesson of Pujiang County	111
Chapter 10: The Case of Hong Nong Academy.....	114
Introduction to the Third Case Study	114
Hong Nong Academy and New Rural Reconstruction	114
Hong Nong Academy.....	115
Why Hong Nong was Established	117
Reviving Rural Moral Culture.....	117
Establishing Rural Cooperatives	118
Developing Ecological Technology	119
Imparting Traditional Medical and Hygiene Knowledge	119
The Future of Hong Nong	120
The Lesson of Hong Nong	121
Conclusion.....	122
Appendices.....	125
Appendix 1 – Glossary of Chinese Terms.....	126
Appendix 2 – Evolution of Environmental Discourse Used By Chinese Government.....	135
Appendix 3 – Paraphrased Ecological Civilisation Documents	136
Suggestions	136
“The CCP Central Committee and State Council’s Suggestions on the Hastening and Promotion of Becoming an Ecological Civilisation”	136
Plan	140
“An Overall Plan for Ecological Civilisation System Reform”	140
Appendix 4 – Original Chinese Text for Reference.....	144
Footnote 98).....	144
Footnote 100).....	144
Footnote 107).....	144
Footnote 108).....	144
Footnote 129).....	144
Footnote 130).....	144

Footnote 146).....	144
Footnote 170).....	144
Footnote 171).....	144
Footnote 174).....	144
Footnote 337).....	144
Footnote 359).....	144
Footnote 360).....	144
Footnote 365).....	145
Footnote 369).....	145
Footnote 370).....	145
Footnote 380).....	145
Footnote 423).....	145
Footnote 428).....	145
Footnote 433).....	145
Appendix 5 – Photos.....	146
Photo 1).....	146
Photo 2).....	146
Photo 3).....	147
Photo 4).....	147
Photo 5).....	148
Photo 6).....	148
Photo 7).....	149
Photo 8).....	149
Photo 9).....	150
Photo 10).....	150
Photo 11).....	151
Photo 12).....	151
Photo 13).....	152
Photo 14).....	152
Photo 15).....	153
Photo 16).....	153
Photo 17).....	154
Photo 18).....	154
Photo 19).....	155
Photo 20).....	155
Photo 21).....	156
Photo 22).....	156
Photo 23).....	157
Photo 24).....	157
Photo 25).....	158
Photo 26).....	158

Photo 27).....	159
Photo 28).....	159
Bibliography	160

Abstract

Since the European industrial revolution, human society has been developing exponentially, but the resultant acceleration in production and consumption has come at great cost to the global environment. In the case of China, the link between industrialisation and environmental damage created political pressure to the point that in 2007 President Hu Jintao announced that the Chinese government would become an “ecological civilisation,” a sustainable model of economic development that aimed to mitigate the effects of its development on the environment. The incorporation of “ecological civilisation” by the Chinese party-state into its official discourse is of major significance as it marks a unique moral approach to addressing the environmental crisis.

In this dissertation, I trace the origins of this concept and follow its development to the present. The key literature on “ecological civilisation” calls for a shift in ideals toward ecological sustainability, which in turn promotes cooperation, a healthy environment, and the common good. Such a shift from the primacy of rapid industrialisation to a more environmentally balanced approach, implied in “ecological civilisation,” in turn signifies an important shift in governance in China. To analyse the policy change, the thesis utilises a theoretical framework drawn from the Foucauldian concept of governmentality to argue that China’s ecological civilisation campaign is indicative of the environmentalisation of the Chinese state’s pastoral care. This means that the government has extended the biopolitical imperative of securing the health and well-being of the population to include environmental health as an acknowledgment that the wellbeing of the population and the health of the environment are inextricably linked.

From this premise the thesis draws out a larger issue, which is that the process of governmentalisation in the West and in China have an important difference. In China, the particular form of the state-society relationship effects a form of paternalism, which uses moral persuasion as a weak form of governing behaviour—this best describes the governmental techniques utilised by the Chinese government as typified by the ecological civilisation campaign. The object of this paternalism is to change individual consciousness and behaviour toward a sustainable environmental future. However, weak paternalism by its very nature will be insufficient to resolve the coupling of industrialisation and environmental degradation. The Chinese party-state has the power to effect change but the resort to paternalism as a major weapon against environmental degradation and pollution implies a certain constraint on its use in terms of legitimacy and the power of the market economy in shaping political options.

The thesis supports the theoretical perspective through three case studies of how “ecological civilisation” is invoked in China today: the first examines how ecological civilisation is used as the guiding concept for policy development in China; the second draws on a case study in Pujiang County, Zhejiang, to examine how ecological civilisation and related concepts are invoked in environmental remediation efforts; and the third example draws on a case study of the New Rural Reconstruction Movement, by taking the example of Hong Nong Academy in Henan Province.

This research demonstrates that the techniques of governance used by the Chinese government in its environmental remediation efforts are an example of weak paternalism. This is because they are an intervention involving the population’s liberty of action rationalised in terms of ecological values—values that seek to improve the welfare of the population and that concurrently promote moralistic education seeking to create a condition of autarchy, rendering the paternalistic interventions redundant. It is by these parallel processes that the environmentalisation of the Chinese state is taking place, with the object being to turn the Chinese people into “environmental subjects.” My research

examines the different ways these techniques of governance are used in China for policy development, in rationalising environmental remediation projects, and in attempts to imbue people with ecological values. If the ecological civilisation campaign is to be successful, it needs to institutionalise ecological values so as to create “environmental subjects,” which, guided by these values, will conduct themselves in a manner that can reverse the current direction toward environmental destruction.

Declaration

I certify that this work contains no material which has been accepted for the award of any other degree or diploma in my name, in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text.

In addition, I certify that no part of this work will, in the future, be used in a submission in my name, for any other degree or diploma in any university or other tertiary institution without the prior approval of the University of Adelaide and where applicable, any partner institution responsible for the joint-award of this degree.

I give consent to this copy of my thesis when deposited in the University Library, being made available for loan and photocopying, subject to the provisions of the Copyright Act 1968. I acknowledge that copyright of published works contained within this thesis resides with the copyright holder(s) of those works.

I also give permission for the digital version of my thesis to be made available on the web, via the University's digital research repository, the Library Search and also through web search engines, unless permission has been granted by the University to restrict access for a period of time.

I acknowledge the support I have received for my research through the provision of an Australian Government Research Training Program Scholarship.

Signed: _____

_____ Date: 27/02/2017

Acknowledgements

In a letter to Robert Hooke in 1676, Sir Isaac Newton wrote something along the lines of: “If I have seen further, it is only because I have stood on the shoulders of giants.” It only seems appropriate to expropriate this expression in relation to my dissertation—this work, with my name on the cover, has come about just as much through my own *nuli* as it has from the hard work, support, and insight from those surrounding me while it happened.

First and foremost, I want to acknowledge my supervisors: Professor Mobo Gao, Professor Gregory McCarthy, Dr. Xianlin Song, and Professor Wen Tiejun. To Professor Gao, I offer special thanks. As my main supervisor throughout my candidature, he has been an endless source of wisdom and inspiration, and his perspicacity and depth of knowledge never cease to amaze me. All of my supervisors in their own ways have given intellectual guidance for someone who never imagined becoming an academic—someone from a small Australian city that like the rest of the world has had to think and rethink the China question. The respective strengths of these supervisors in engaging with my research shows that a genuine engagement with China and its diversity requires people who ask the researchers to challenge the norms and probe the deeper questions that create new and original knowledge.

Second, the institutions and organisations that funded me: To the University of Adelaide for the generous APA scholarship and to the Australian government for the munificent Endeavour scholarship that have funded my work during my candidature. To the Chinese National Office for Teaching Chinese as a Foreign Language (Hanban) for another generous scholarship that, aside from financial assistance, gave me valuable office space at Renmin University, and provided the opportunity to meet so many amazing academics and postgraduates from around the world. Also to the Asian Studies Association of Australia for the Postgraduate Scholarship that funded my travel, accommodation, and postgraduate workshop at the ASAA Conference in Canberra in 2016.

Third, to all at the Department of Asian Studies at the University of Adelaide: Dr. Gerry Groot, Dr. Shoko Yoneyama, Dr. Delia Lin, Professor Purnendra Jain, and other staff members who offered their encouragement on my journey of discovery. Also all of the postgraduates from Australia and China as they have come and gone and shared with me ideas, knowledge, and friendship. As an aside, a very special thank you must go to Julia Aristova for locating the original Russian article on “ecological culture” that inspired the Su school of “ecological civilisation.” As well, special thanks to Barbara Rapaport for helping me decipher it. And thanks, too, to all of the academics and budding academics that I have met along the way. You know who you are.

Fourth, to all those from Renmin University and other Chinese institutions: Professor Wen again, Dr. Cathy Zhang, Dr. He Jixian et al. To all of my colleagues from pretty much every continent in the world, it’s been exhilarating.

Fifth, to all of those who participated in my field research: To all of those who helped me with my Chinese. To all those people who were kind enough to share ideas. To all the academics pursuing the dream of an ecological civilisation. And to the many makers of *jianbing*, providing the main source of energy fuelling my research whilst overseas.

And last but by no means least, to family and friends: Mum, Dad, my brothers and, darling sister. My dear Xiaojiao and all of my Chinese family. To everyone who ever asked me “what’s your PhD about?” Especially those who never asked a second time.

My sincere thanks to you all, lots of love and apples. It’s been one heck of a journey.

Background to this Study

Looking back at my original research proposal, my current work has strayed far from that which I had originally intended. This is, in part, due to the fact that the village in which I had initially organised to carry out fieldwork—Caijiaying, the village that was the focus of my Honour's research project—became the site of an intense and protracted protest against the nearby mining company. As such, it was not possible to conduct fieldwork in that village at that time, and it seemed it would remain so for some time. Fieldwork in a village is difficult to organise, requiring preparation not just in the form of paperwork, but also in the establishment of relationships with locals—especially well-informed locals. Although I had all the paperwork and interviews prepared, alas, I had no village to go to. Fortunately, I had another topic that had piqued my curiosity, which was the concept of “ecological civilisation.” I encountered this expression while reading some articles on rural China and the New Rural Reconstruction Movement, and it garnered my interest as it did not immediately make sense. After looking at various uses of the term, mostly in Chinese as at the time it was not widely used in English, I thought an exploration of this concept would result in interesting and valuable research. Thus, I approached my external supervisor, prominent academic Professor Wen Tiejun, about this term, and so began my quest to understand the origins and meaning of ecological civilisation. And as the years have ticked on, this topic has become more widely promoted, showing that original research can have many starting points.

Guide to In-Text Use of Chinese Sources, Chinese Terminology, and Footnotes

In this dissertation, I draw on English and Chinese language sources in building my argument; as such, the text contains Chinese terms that are relevant to the study. As is generally the convention, I use the standard Romanisation of Chinese called pinyin when using Chinese language in this dissertation, in italics but without tone markings, for the benefit of readers who do not read Chinese. For the benefit of those who read this dissertation and are learning Chinese, I have included the Chinese terms in Appendix 1 in pinyin, with tone markings and characters. I have not included a translation of the terms in the appendix as the explanations of the terms are in-text. All translations are the author's own.

On a few odd occasions, I have slipped a Chinese character in-text; this is because it is relevant to that particular discussion. Where I have, I have attempted to do so in such a way that it does not interrupt the flow of the text.

Chinese language sources have been cited in Chinese characters, without pinyin, as it takes up too much space. Besides, if you are unable to read the characters, you would be unable to read the source; hence I leave the source in Chinese with an English translation of the author in the footnote, and an English translation of the title and author in the bibliography.

With regard to Chinese names, some can cause confusion when reading in English. The most salient example, is without doubt, the Chinese surname He. In these instances, I have capitalised the whole name as HE so as to differentiate it from the English pronoun he.

Many of the resources used in this study can be readily found on the internet, but I have excluded URLs and access dates from the footnotes as they take up too much space and look untidy. The URLs and access dates for these sources can be found in the bibliography.

List of Abbreviations

APEC	–	Asian Pacific Economic Cooperation
CASS	–	Chinese Academy of Social Sciences
CCP	–	Chinese Communist Party
CNKI	–	China National Knowledge Infrastructure
CSA	–	Community Supported Agriculture
DEPVA	–	Dalian Environmental Protection Volunteers Association
DSP	–	Dominant Social Paradigm
EGEP	–	Eight Great Engineering Projects
EPA	–	Environmental Protection Agency
EPL	–	Environmental Protection Laws
FWAT	–	Five Waters Administered Together
GDP	–	Gross Domestic Product
GMD	–	Guomin Dang (Chinese Nationalist Party)
GMO	–	Genetically Modified Organisms
GONGO	–	Government-Organised NGO
NDRC	–	National Development and Reform Commission
NIMBY	–	Not In My BackYard
NEP	–	New Environmental Paradigm
NGO	–	Non-Governmental Organisation
NPC	–	National People’s Congress
NRRM	–	New Rural Reconstruction Movement
PM2.5/10	–	Particulate Matter; the number refers to the size of particulates in $\mu\text{g}/\text{m}^3$
PRC	–	People’s Republic of China
RMB	–	Renminbi, the Chinese Yuan
ROC	–	Republic of China
RUC	–	Renmin University of China
SARD	–	School of Agricultural Economics and Rural Development (at RUC)
SEZ	–	Special Economic Zone
TMT	–	Two Mountains Theory
TTOD	–	Three Transforms and One Demolish

UK	–	United Kingdom
UN	–	United Nations
US	–	United States
USSR	–	The former Soviet Union
WHO	–	World Health Organisation
WTO	–	World Trade Organisation

Introduction

This primitive accumulation plays in Political Economy about the same part as original sin in theology. Adam bit the apple, and thereupon sin fell on the human race.¹ - Karl Marx

The sin to which Marx refers is the inequality and exploitation inherent in the process of capitalist-led industrialisation and development; what Marx neglected to foresee was the devastation this process would wreck on the environment. Nowhere is this effect more salient than in present-day China. Environmental problems in China have become an issue followed closely by a global audience. From polluted rivers and cancer villages to the chronic air pollution epitomised by the ominous "Airpocalypse" of October 2013,² it seems that the government has its work cut out in its bid to rectify these problems. It is without a doubt the acceleration of China's industrialisation and modernisation programme since the establishment of the People's Republic of China (PRC) that has led to the extent and severity of environmental degradation seen today.

China was a late-comer to industrialisation, the process starting in the late nineteenth to early twentieth century but interrupted by the frequent civil wars and power struggles between the fall of the Qing Dynasty and the rise of the Chinese Communist Party (CCP), with the country remaining mostly agrarian well into the latter half of the twentieth century. However, due to the sheer size of the population of China and its adoption of market reforms to bring foreign capital in for its development, China rapidly industrialised to the point that in the present day, hundreds of millions of Chinese citizens have been lifted out of poverty and in absolute terms many people in China's larger cities enjoy a material standard of living akin to that of any of the more affluent, developed countries. This rapid development saw China's growth as measured in terms of gross domestic product (GDP) rise by almost 10 percent per annum (9.91 percent) between the years 1978 and 2010. It also saw China transforming from one of the most egalitarian societies – albeit equally undeveloped—to a country with one of the highest levels of income disparity in the world as measured by the Gini coefficient. These achievements, hailed by some as an economic miracle that have resulted in poverty alleviation and modernisation, have also left in their wake environmental destruction hitherto unmatched in human history.

In this dissertation, I take as a starting point the fact that the extent of environmental degradation has become so significant as to undermine the very stability of Chinese society. Whilst anthropogenic environmental degradation has been a common theme throughout Han Chinese history, by far the worst environmental issues plaguing China today have mostly occurred during the sixty-five years since the establishment of the People's Republic of China. Environmental degradation has occurred as a direct result of the industry-led modernisation of China, a goal relentlessly pursued by China's leadership. Initiated by Mao Zedong's socialist modernisation programme and then exacerbated by the reforms of the Deng Xiaoping era, it developed by imitating the model used by Western developed nations. The drive for modernisation was grounded in the perception of China's academics and leaders that China must find its own place in the international system of nation-states so that it could learn to compete with and defend itself against an international system that it was compelled to join.

¹ Marx, Karl, *Das Kapital*, (1999), <https://www.marxists.org/archive/marx/works/1867-c1/index.htm>., Part VII, Chapter 26. Accessed 14/04/2015.

² Demick, Barbara, "'Airpocalypse': Severe Pollution Cripples Northeastern China," *LA Times*, 22nd October. Accessed 07/12/2015.

The problem of environmental degradation has become so intense that it is perceived as a potential threat to social harmony (*hexie shehui*); to combat this, the Chinese government introduced the concept of ecological civilisation into its official discourse, which has since been touted as a priority objective to be achieved and has been enshrined in the CCP's constitution. Thus, the chief focus of my dissertation is the notion of ecological civilisation: its origins, how it developed, what it means, and how it is invoked. The notion of ecological civilisation has been around for some time, but has not received the attention it deserves, especially among so-called China watchers. The aim of this study is to reverse this situation, by highlighting the importance of the notion not only for China's environmental remediation efforts, but for the global environmental movement more generally.

This dissertation is divided into four parts, with each part being separated into several chapters. The first part is a general overview of the environmental problems facing the world in general and China in particular. Chapter 1 provides the background information surrounding environmental degradation in China, its specific manifestations and its links to development and the modern lifestyle. Following, in Chapter 2, I examine the growth of environmental awareness in modern China, from the country's early participation in environmental fora to the introduction of ecological civilisation, and beyond. The third and final chapter of part one follows the Chinese notion of *wenming*, or civilisation: its origins, developments, and its incorporation as part of the Chinese push toward environmental remediation.

Part two consists of the literature review and methodological components of the dissertation. Chapter 4 explores the pertinent literature related to China's environmental crisis in general, and ecological civilisation in particular. Beginning with the key themes and questions that guided my research, I divide this chapter into seven themes that I gleaned from my reading of key sources, leading toward the research question that forms the basis for this dissertation. This question is: what does the concept of ecological civilisation tell us about environmental governance in China? Chapter 5 outlines the methodology for my research, including rationalities behind my choice of sources, approaches to interpretation of sources and findings, and the methodology behind each of the three case studies that make up part four.

Moving on to part three, we find the theoretical framework that I use to understand the research question. From the literature review, I learned that the notion of ecological civilisation is better defined as ecologically civilised than it is as a post-industrial society. On this basis, then, I understand ecological civilisation as a rationality of governance invoked to extend the realm of the biopolitical to include the environment as essential to ensuring the well-being of a population. This places it in line with the Foucauldian notion of governmentality, and its eco-friendly cousin, environmentality. These ideas are explored and elucidated further in Chapter 6. Chapter 7 looks at the notion of paternalism, important as the methods by which the Chinese government implement environmental remediation are paternalistic in nature. Significant in this chapter is the realisation that the paternalistic methods belong to the realm of weak paternalism, as they work in conjunction with moralistic education that would make us ecologically civilised.

The final part of this dissertation, part four, brings together the practice with the theory, consisting of three chapters that are case studies presenting unique invocations of the notion of ecological civilisation. Chapter 8 examines the ways in which ecological civilisation is invoked in Chinese governmental policy documents; chapter 9 considers the case of Pujiang County, a typical example of the tension between development and environmental degradation; and Chapter 10 contemplates the case of Hong Nong Academy, part of the New Rural Reconstruction Movement (NRRM), to see how ecological civilisation is invoked at the grassroots. From these three very different case studies, I show that China's environmental governance utilises paternalistic measures—designed to intervene with the liberty of action of the people being governed, and rationalised in terms of ecological values—that

seek to improve the welfare of the population being compelled. However, as these measures are examples of weak paternalism, they work alongside attempts by the government to educate the population in ecological values, thus creating autarchic environmental subjects, who thereby render such paternalistic measures redundant.

PART 1

Environmental Degradation, Environmental Consciousness and Civilisation Discourse

Chapter 1: Environmental Degradation

The Industrial Revolution is often regarded as a turning point in world history as seen from an economic and social point of view. It is even more clearly a turning point from the point of view of environmental history. – Frank Uekötter³

China's History of Environmental Degradation

As will be discussed in greater detail later, China's quest to create an ecological civilisation claims to draw on ancient Chinese philosophical notions of harmony between humankind and nature to address their environmental problems. This claim, then, may lead some to infer that ancient China was an ecological utopia; far from it—the history of the Chinese civilisation is also a history of protracted and sustained anthropogenic environmental degradation. Some salient examples are the over 4 million tonnes of copper smelting waste at Tonglu Mountain dating from as far back as the Western Zhou dynasty,⁴ or the vast environmental degradation of southwest China during the Han dynasty caused by salt mining and deforestation linked to the Han Chinese migrants' cultural and economic practices.⁵ Another example of this is the deforestation and denuding of the Loess Plateau of modern central China in the areas of modern Shanxi, Shaanxi, Henan, Ningxia, and Gansu that occurred in ancient times for a variety of reasons, however largely led by human activity⁶— indeed, it was the denuding of the Loess Plateau during the Han dynasty that resulted in the silting up of the Yellow River (*huanghe*), giving it its distinctive yellow colour and thus its name.⁷ A long history of water diversion and excessive damming for agricultural or other purposes has also meant that the Yellow River often runs dry before it reaches the ocean. These areas of central China were the cradle of Chinese civilisation, providing its people with abundant resources to raise a powerful and lasting empire—but years of human exploitation have had a devastating effect on local ecosystems.⁸ With its long history of civilisation being well-documented, the environmental impact of human settlement in China has been deciphered through ancient texts—notable examples are the works of Marks and Elvin—clearly demonstrating the relationship between civilisational expansion and environmental degradation in ancient China.

Ancient Trends Toward Environmental Degradation

Although there was a distinct tendency toward environmental degradation in ancient times, the propensity was gradual in comparison with today. Traditional Chinese society existed as a largely agrarian society for thousands of years, with the agricultural practices closely approximating what today is called organic farming. This so-called “agriculture of circularity”—meaning that very little waste was generated and agricultural practices were adapted to suit the local ecosystem⁹—was somewhat effective at returning nutrients to the soil. However, Liu's 1971 study, *China's Fertiliser Economy*, showed that by the PRC-era almost all of China's cultivated land was depleted of nitrogen,

³ Uekötter, Frank, *The Turning Points of Environmental History* (Pittsburgh, Pa.: University of Pittsburgh Press, 2010), p25.

⁴ Brahic, Catherine, "The Five Oldest Acts of Environmental Destruction," *New Scientist*, 3rd November.

⁵ Elvin, Mark, *Retreat of the Elephants: An Environmental History of China*, 1st ed. (New Haven: Yale University Press, 2004).; see also Wei, Lia, SOAS PhD dissertation, 2017 (unpublished).

⁶ Fang, Jinqi and Zhiren Xie, "Deforestation in Preindustrial China: The Loess Plateau Region as an Example," *Chemosphere* 29, no. 5 (1994): pp983-99. See also: Bao, Maohong, "Environmental History in China," *Environment and History* 10, no. 4 (2004).

⁷ Marks, Robert, *China: Its Environment and History*, World Social Change (Lanham, Md.: Rowman & Littlefield, 2012), p49.

⁸ Spence, Jonathan D., *The Search For Modern China*, 3 ed. (New York: W. W. Norton and Company, 2013), p14.

⁹ Wen, Tiejun, "Four Stories in One: Environmental Protection and Rural Reconstruction in China," *Position* 16, no. 3 (2008).

demonstrating that these traditional techniques merely slowed the rate of degradation.¹⁰ It must also be noted that ancient technologies and lifestyles in general did not generate as much pollution and waste as modern technologies and lifestyles do. The clearing of the Loess Plateau may have released such large quantities of silt into the river as to change its hue; however, it did not taint the water to the point that it became unpotable; nevertheless, human development and population growth in ancient China had a distinct impact on the environment.

This phenomenon is hardly unique to China, however, as environmental degradation contributed by population movement and growth, agricultural practices, and other human activity is a worldwide phenomenon. It has been a common occurrence throughout the world in areas inhabited by humans; some salient examples are those civilisations in the Near East and Mediterranean regions whose agricultural practices, when coupled with a fragile ecosystem, led to widespread desertification.¹¹ A relevant recent case of anthropogenic environmental degradation is the Dust Bowl or Dirty Thirties of the plains region in the central regions of the United States (US) and Canada where inappropriate agricultural methods catastrophically combined with meteorological phenomena, leading to widespread land degradation and dust storms for almost a decade. In modern China, the phenomenon of environmental degradation became prominent during the Qing dynasty when the population of the empire swelled from 150 million during the Ming dynasty to over 400 million in the late Qing.¹² This population growth during the eighteenth century was largely owing to the introduction of new crops from the Columbian Exchange.¹³ This refers to the event by which New World crops from the Americas were introduced to Europe, Africa, and Asia (and vice-versa)—such as potatoes, peanuts, and maize—which were able to be grown in hitherto unproductive areas and hence increased the caloric intake of the people. At the same time, this significant population increase led to the exploitation of new lands for agriculture, which in turn led to further deforestation, soil erosion, silting river systems, and other negative environmental effects.¹⁴ At the same time, the Europeans were heading West, they were also heading East; Qing-dynasty China was experiencing increasing maritime visits from foreign interests keen to open up Chinese ports for trade, by force if necessary. The threat of colonisation by Western powers thus created the impetus for China to modernise and industrialise, setting the scene for further environmental degradation of the Chinese mainland.

China Encounters Western Forces

The industrialisation and modernisation of China began in the Qing dynasty from the need to counter the power of the industrialised West and their traders who were supported by large armies. The rulers of the Qing dynasty were initially unwilling to engage in the large-scale trade desired by the West. In the early years of interaction with Western traders the Qing leaders refused the foreigners' requests for trade at ports along China's eastern coasts, preferring instead to limit trade solely through the port of Canton.¹⁵ Though it is widely contested as to why, one of the main arguments for this refusal is put forward as stemming from traditional Chinese views that regard merchants as of low social standing—in the traditional Chinese hierarchy they were the lowest of the four social groups—namely scholars, farmers, workers, and merchants (*shi nong gong shang*). Qing officials sought to strictly limit and

¹⁰ Liu, Jung-Chao and Social Science Research Council (U.S.). Committee on the Economy of China, *China's Fertilizer Economy* (Edinburgh,: University Press, 1971), p104-5.

¹¹ Diamond, Jared M., *Guns, Germs, and Steel: The Fates of Human Societies* (New York: W. W. Norton, 2005), p312.

¹² Spence, *The Search For Modern China*, pp76 & 202.

¹³ Crosby, Alfred W., *The Columbian Exchange: Biological and Cultural Consequences of 1492*, Contributions in American studies, no. 2 (Westport, Conn: Greenwood Pub. Co., 1972).

¹⁴ *Ibid.*, pp77-8.

¹⁵ Modern day Guangzhou.

control the amount of trade conducted with foreign nations as the merchant class were perceived as unproductive and lacking in morality. However, persistence and belligerence from Western powers eventually saw an increase in interaction between the two worlds. In turn, dealings with foreigners also led to cultural misunderstandings on both sides. Misunderstandings on the part of the Qing were not only due to a lack of experience dealing with foreign customs and culture, but also their system of international relations. This meant that Qing-dynasty China treated foreigners as they had traditionally treated nations in accordance with their tributary customs, as opposed to those customs observed in Europe. There were of course also misunderstandings on the part of the European powers whose international dealings were based on laws and precedents established in Europe and hence largely unknown to the Qing. To address these misunderstandings, and to provide official avenues for dealing with the Western powers, the Qing established the *zongli yamen*, or Ministry of Foreign Affairs in 1861. This event marks the official acknowledgment by the Qing of Western customs regarding international relations.

After its establishment created formal channels for interactions with foreigners, various Qing scholars began to take a keener interest in Western ideas—this is in no small measure due to the fact that China was such a large country by comparison to the countries of Europe that had so decisively succeeded in defeating China's military. For example, Qing scholar Feng Guifen saw that the answer to surpassing the strength of the foreign forces was to learn from them, especially in four main areas—utilisation of manpower resources, agricultural practices, governmental practices, and in carrying through words with deeds.¹⁶ And the main way in which this would be achieved, he argued, was through “solid ships and effective guns.”¹⁷ Similarly, another Qing scholar keen on “seeing the world with open eyes”¹⁸ was Wei Yuan, whose important text *Illustrated Treatise on the Maritime Kingdoms* (*Haiguo Tuzhi*) is famous for its quote:

Learn the advanced technology of the foreigners, then use it to subdue them.¹⁹

This text is considered the first major Chinese work that analyses the West's international trade and naval might in an attempt to address the Qing's inadequacies in competing against the Western powers.²⁰ The origin of the Chinese drive toward modernisation is found in the works of these nineteenth-century Qing scholars, an imperative created due to perceived weaknesses from their humiliating defeats at the hands of the British during the First and Second Opium Wars;²¹ indeed, it was only twenty years after the publication of Wei's work and only four years after Beijing was marched on by British troops to end the Second Anglo-Chinese war, that official and Confucian scholar Zeng Guofan enlisted the help of US-educated bilingual scholar Yung Wing. Zeng chose Wing to introduce industrialism to China by establishing the first major machine factory that would begin the

¹⁶ Spence, *The Search For Modern China*, p189.

¹⁷ Ibid. Quote taken from Teng, Ssu-yu and John K. Fairbank, *China's Response to the West: A Documentary Survey, 1839-1923* (Cambridge: Harvard University Press, 1954), pp53-4.

¹⁸ This expression comes from a movement started by scholars of the time to reject the preponderance of all things Chinese and begin to understand Western learning and Western society; two of its main proponents were Lin Zexu and Wei Yuan.

¹⁹ The expression in Chinese is: *shi yi changji yi zhi yi*. (Characters in Appendix 1)

²⁰ Twitchett, Denis Crispin and John King Fairbank, "The Cambridge History of China," (Cambridge England; New York: Cambridge University Press, 1978), pp218-9. Volume 10 Part 1, Chapter 5.

²¹ Often referred to as the Second Opium War. There is some debate as to whether or not it deserves this title as it was not chiefly about opium; the conflict started after Qing forces seized the British vessel the *Arrow* for its suspected involvement in acts of piracy and thus is sometimes referred to as the Arrow War or the Second Anglo-Chinese War.

indigenous production of guns, cannons, and steam engines that would be used to counter the power of the West.²²

For many years, the Qing dynasty rejected Western influence and ideas, instead only trading on its own terms. The fate of the Manchu Qing dynasty was sealed when the superior military might of the European forces enabled them to carve up China to create favourable trade deals. This culminated in the division of China by a coalition of colonial forces into trading blocs, turning eastern China into a semi-colonial country. After the fall of the Qing dynasty and the subsequent power struggles, China was left a poor, pre-industrial and largely agrarian nation; at that time, over 90 percent of its population of roughly 400 million still lived in rural areas. During this period, many Chinese scholars believed that China's weaknesses were due to its traditional Confucian ideas. This belief led them to fervently study Western political and economic theories to strengthen China politically in the new world. For example, the first discussions of Marx in a Chinese publication appeared in 1899, espousing notions that in the modern world the poor would be empowered to overthrow the rich, and Marxist theories seemed to offer hope that in time China, too, would be able to enter the modern world.²³ It is debatable that Marx would ever have considered that a Communist revolution would take place in China, as even by 1949 when the CCP had taken power of the Chinese mainland it was bereft of most of the conditions necessary to create a Communist system as envisaged by Marx.^{24, 25} However, Chinese scholars took these ideas of socialism and utopian societies and reinterpreted them so that they were relevant to local conditions; for example, scholar Li Dazhao drew parallels between capitalist exploitation and foreign imperialist exploitation, saying that the workers' surplus value was in effect being seized by the foreign imperialist forces who owned the means of production.²⁶ The rejection of traditional thinking in favour of Western thinking arose specifically from China's weakness in dealing with the foreign invading forces, and the perceived need to strengthen in the face of this threat.

It is reasonable to argue that the process of industrialisation in China was spurred out of necessity to enable China to protect itself from the incursion of aggressive foreign forces seeking to expand their colonial empires and, by extension, their wealth. In the space of a century, China went from being one of the world's most powerful nations to being subjugated by foreign aggressors – an oft-cited example typical of the unequal treatment by Western powers is the Treaty of Versailles which, without consultation with the Chinese government, granted to the Japanese the former German concessions on mainland China. This unequal treatment fostered resentment and increased expressions of nationalism among the Chinese, culminating in the May the Fourth Movement of 1919.²⁷ The period between the fall of the Qing dynasty in 1912 and the rise of the CCP in 1949 was a turbulent period in China's political history, seeing a brief experimentation with democracy, rule by the Nationalist Guomintang party (GMD), increasing Japanese colonisation of northeast China, and the establishment of the Manchukuo puppet-state led by the last Qing Emperor, Puyi. The turbulence was exacerbated by the Second World War and the full-scale invasion of China by Japanese colonial forces.²⁸ These

²² Spence, *The Search For Modern China*, pp189-90.

²³ *Ibid.*, p247.

²⁴ Meisner, Maurice J., *Mao's China and After: A History of the People's Republic*, 3rd ed. (New York, NY: Free Press, 1999), pp247-8.

²⁵ It is important to note, however, that the common assumption that Marx believed a Communist revolution would only come about in the most advanced industrial countries is false. See: McLellan, David *Marx*, ed. Frank Kermode, Fontana Modern Masters (Glasgow, Great Britain: William Collins Sons and Co Ltd, 1975), p7.

²⁶ Spence, *The Search For Modern China*, p285.

²⁷ *Ibid.*, p278.

²⁸ For a revealing insight into China during this period, see: Snow, Edgar, *Red Star Over China*, 1st rev. and enl.

events further exposed China's weaknesses and inability to defend itself in modern warfare, thus further emphasising the imperative to modernise. After the Second World War, the CCP and GMD resumed their confrontation that eventuated in the GMD's military defeat and their flight to Taiwan to establish a new base for the government of the Republic of China (ROC) in Taipei. The CCP then established the PRC on the mainland, left with the unenviable task of building a modern, industrial China that could stand its ground in the modern international system.

China in the Modern Era

The modernisation and industrialisation program that was initiated by the CCP raised the living standards of many, but also took a great toll on the environment. The consolidation of power by the CCP promised an end to the days of China as an underdeveloped and fragmented nation; the CCP aimed to restore the former glory of the Middle Kingdom and create a new China as a modern force able to hold its own in the world without interference from the colonial powers. Years of political instability and warfare had taken its toll on China; as a means of restoring what it perceived to be its proper place in the world, the CCP, led by Mao Zedong, started its modernisation campaign. This campaign, despite its shaky beginnings, would propel the people of China into modernity at a pace hitherto unprecedented in human history. The era of domination by foreign powers has been portrayed as a source of shame for the Chinese people, being referred to locally as the "100 years of national humiliation" (*bainian guochi*).²⁹ This argument is validated by its proponents who boast of China's long and proud history of civilisation defined by its many achievements that have contributed to the advancement of human society in areas such as philosophy, arts, culture, and technology. This modernisation campaign was touted to be an alternative to the capitalist modernisation path followed by the Western nations; in this way, it proposed that it would avoid many of the ills that are caused by capitalist modernisation as outlined in the writings of Marx. Some of the stated aims of this modernisation campaign were to restore China to its rightful place in the global order, or for the "glorious rejuvenation of the Chinese nation."³⁰ From an environmental perspective, the industrialisation of China has differed little from that of the West in its negative impact on the environment.³¹

The historical experience of China's industrialisation differs in important ways from that of the West. To industrialise the mainland, the PRC faced a quandary—the economy was left devastated by decades of political instability, civil war, and the Japanese invasion. After the CCP had established their base of power, they (akin to the Soviet model) adopted pro-capital investment policies, which were deemed necessary to build a strong industrial base. This began the process of what Marx called "the primitive accumulation of capital." In *Das Kapital*, Marx describes this process as "the expropriation of the agricultural producer, of the peasant, from the soil, [which] is the basis of the whole process."³² In China, in contrast to the European model, the peasant was not expropriated from the soil; however, they were still the source for the capital accumulation for industrial development under CCP economic policies. Unlike in Europe, however, the CCP's revolution was built upon land reform that ensured that rural Chinese—called *nongmin* in Mandarin and often referred to as such in writings on China so as to distinguish them from the European concept of peasant—would still retain usage rights over their land. This is in contrast with the European serfs that were removed from their land leaving them no

ed. (New York,: Grove Press, 1968).

²⁹ Wang, Zheng, *Never Forget National Humiliation: Historical Memory in Chinese Politics and Foreign Relations*, Contemporary Asia in the world (New York: Columbia University Press, 2012).

³⁰ Wang, Zheng, "Not Rising, But Rejuvenating: The "Chinese Dream", " *The Diplomat*, 5th February 2013.

³¹ Smil, Vaclav, *The Bad Earth: Environmental Degradation in China* (Armonk, N.Y; London: M.E. Sharpe; Zed Press, 1984).

³² Marx, *Das Kapital*. Part VII, Chapter 26.

choice but to move into the cities to find employment as part of the newly formed proletariat. Despite these differences, China's development and modernisation were initiated in a similar way to that of the West, through the industrialisation by means of the primitive accumulation of capital of a formerly agrarian economy— but in which the state rather than the capitalist benefited from the accumulation process.

It is also important to understand that China's industrialisation took place under extraordinary circumstances where it lacked the resources—and indeed many of the conditions necessary—for it to take place. The process of industrialisation is capital intensive—it requires investment, and the CCP inherited a country that was distinctly lacking in capital. This significant point guides the thought of prominent Chinese academic Wen Tiejun, especially in his ground-breaking work *Eight Crises*.³³ Wen argues that, aside from limited resources, China had two other severe institutional constraints. The first limitation was that capital accumulation relied on agriculture, and the Chinese *nongmin* were very highly geographically dispersed. In 1950, China's population was still largely agrarian, with around 80 percent of its 500-million-strong population classified as *nongmin*. Not only this, but agriculture was still of the kind that had existed in China from ancient times, small-scale farming and animal husbandry. These methods did not in any way conform to an industrial model that would be conducive to the extraction of the large surplus necessary for the accumulation of capital. The second constraint that Wen contends is the scarcity of capital. Some capital for this process was attained through the sale of government bonds as well as by encouraging contributions from wealthy citizens.³⁴ However, these sources proved inadequate, so the CCP looked towards the US for help to supply economic support to facilitate this process. But, US hostility toward Communist governments—influenced in no small part by the pro-GMD China Lobby—saw the US and its allies place economic sanctions on China that left the CCP little choice but to turn to the USSR for help.³⁵ Further, at the time, the USSR were generally only interested in trading agricultural products. The problem with this, as mentioned above, is that the large-scale production necessary to meet USSR demand was difficult to achieve as Chinese agriculture at the time was small-scale and of a dispersed nature. Placing further constraints on the PRC was that, unlike the Western powers, China was unable to exploit colonies to accomplish primitive accumulation. This left it under constant severe economic and political pressure, and has also exacerbated the environmental impact—especially locally—of China's industrialisation program.³⁶

Though the historical conditions and local circumstances in which China's industrialisation took place were different from those of the West, its development model differed little and achieved the same result. In the initial stages of China's development, the CCP introduced an interim constitution that they called the Common Program that, alongside stipulating the structure of government, allowed for some measure of private enterprise as well as guaranteeing private property. These policies were introduced to advance a gradual industrialisation under state-led capitalism. In this way, commodities would circulate between light industries in the cities and the rural sector through the promotion of private industry and commerce in the cities, serving to expand the industrial base and facilitate the development of large industry.³⁷ The PRC actively sought help from the USSR which was, initially at least, willing to assist the Chinese government in rebuilding its nation. Soviet technical advisers were

³³ 温铁军, *八次危机: 中国的真实经验 1949-2009* (北京: 东方出版社, 2013).

³⁴ Spence, *The Search For Modern China*, p488.

³⁵ Zhang, Shuguang, *Economic Cold War: America's Embargo Against China and the Sino-Soviet alliance, 1949-1963*, Cold War International History Project series (Washington, D.C.: Woodrow Wilson Center Press; Stanford, Calif.: Stanford University Press, 2001).

³⁶ These ideas come from both Professor Wen's *Eight Crises*, and from the many lectures and discussions of his that I attended during my time at Renmin University.

³⁷ Again, this information comes from Professor Wen's lectures.

sent in the thousands to assist with many aspects of infrastructure and industry construction such as extending the railway network and building factories and power generation plants. The technique for rapid industrial growth employed by the Soviets at that time is summarised by Spence as consisting of five key elements: an emphasis on high growth, heavy industry as the chief indicator of growth, high rates of saving and investment, transformation of agricultural institutions, and a preference for capital-intensive measures.³⁸ Indeed, during the Mao period gross industrial output grew by a factor of thirty-eight and heavy industry by a factor of ninety, and all this starting from a meagre industrial base that had been devastated by the effects of many years of civil war and foreign invasion.³⁹ Further, between the years 1952 and 1977, Chinese industrial capacity grew at a rate of 11.3 percent per annum on average,⁴⁰ indicating that the industrial base for China's post-Mao reforms was clearly set during the Mao era. It was this emphasis on heavy industry that would wreak havoc on China's environment. Consideration of the methods by which China has increased its industrial capacity in the post-Mao era seems to indicate that this pattern persists even to the present day. The link between development—especially when led by heavy, dirty industry—and environmental degradation is undeniable, and China's developmental model differs little from that followed by the West. There have been several significant events that have marked an increase in the rate and extent of environmental degradation in China. One such event is the consolidation of power by the CCP in 1949, the point at which the PRC began its move toward socialist modernisation. Another key point is the reform and opening up period, during which Deng Xiaoping opened up China's domestic market to global market forces. Another still is China's accession to the WTO. These key economic turning points have had distinct negative impacts on the environment; before I discuss these events, however, I will examine in greater detail the ways that development leads to environmental degradation and sometimes even environmental disaster.

The Negative Impact of Development on the Environment

“Environmental ugliness and the rape of nature can be forgiven when they result from poverty, but not when they occur in the midst of plenty and indeed are produced by wealth.” – René Dubos⁴¹

Global Environmental Disasters

From an environmental perspective, the history of economic development occurred at the expense of the environment—causing disasters with dire consequences. In the Chinese literature on the topic, the negative effects of global economic development on the world's environment are often demonstrated by referring to the Eight Great Public Disasters⁴² (*ba da gonghai shijian*),⁴³ each of which arose from the process of industrialisation and development. The eight are: first, the Meuse Valley Smog in Belgium, 1930, arising from industrial emissions being trapped in a layer of fog leading to respiratory illnesses among thousands of people, causing death among people and livestock; second, the Donora Smog of Pittsburgh, 1948, also caused by industrial emissions, causing death and illness among the populace; third, the photochemical reactions in Los Angeles, first occurring in the 1940s but still a problem today, caused by a combination of automobile usage (ozone and nitrogen-dioxide

³⁸ Spence, *The Search For Modern China*, p487.

³⁹ Meisner, *Mao's China and After: A History of the People's Republic*, p415.

⁴⁰ Ibid.

⁴¹ Dubos, René J., *So human an animal* (New York: Scribner, 1968), p3.

⁴² Great meaning large or immense. They mean it in the pejorative sense.

⁴³ 李宏伟, "生态文明建设的科学内涵与当代中国生态文明建设," *求知月刊* (2011/12).

production), automobile exhaust emissions (carbon monoxide) and geographic and climatic conditions; fourth, the Great Smog of London, 1952, infamous for its death toll of 4,000 in the first few days and likely inducing thousands more in the months that followed; fifth, the Yokkaichi City pollution incident, starting as early as 1959 and continuing through the 1970s, in which noxious sulphur-oxide emissions from a local smelting plant caused a condition dubbed Yokkaichi asthma, leading to environmental pollution, deaths, and even suicides among the population and also affecting fish and livestock; sixth, the Rice bran oil incident in which chemicals used to reduce production costs of edible oil led to a condition known as Yusho disease—this happened in Kyushu Japan, 1968, and then later in 1979 in Taiwan (where it was called Youcheng disease);⁴⁴ seventh, the Minamata disease incident in Japan, 1956, in which the population, the environment, and animals within the environment contracted mercury poisoning from a local fertiliser company directly discharging untreated waste water into Minamata Bay; and eighth, Itai-itai disease (cadmium poisoning), the first incident of which happened as early as 1912 in Toyama Prefecture, Japan, caused by a nearby mine dumping cadmium into the local river.⁴⁵

It is to be noted that the Chinese literature highlights these eight incidents, specifically occurring in the industrial societies of the West and Japan, all leading to death and environmental destruction. They are demonstrative of the potential for development to lead to human and environmental catastrophe. Though none of the major disasters referred to as the Eight Great Public Disasters occurred in China, industrialisation and development has nonetheless given rise in China to many environmental problems; some of these problems are comparable to these historical disasters in both form and effect.

China's Environmental Woes

Industrialisation and development without consideration for the environmental consequences has unleashed a veritable Pandora's box of environmental issues in mainland China. These problems have arisen as a direct result of its development and modernisation, and they have come at a huge cost to human health. For example, one of the most visible and hence notorious problems with which China is now dealing is the problem of smog. Many of China's cities are infamous for chronic problems with airborne pollutants that are visibly present and of great detriment to human health. In 2013, China was reported to have seven out of ten of the world's top polluted cities as judged by air pollution.^{46, 47} Beijing's infamous smog event in late 2013, dubbed by the media as an "Airpocalypse," saw pollutants as measured by particulate matter (PM)2.5 readings above 1000 in some parts of northern China—over forty times the World Health Organisation's (WHO) recommended level. The causes of this extensive problem are many, being attributed to steel production, coal-fired power plants, automobile usage, and seasonal agricultural burn-offs, among other factors. Chai Jing's documentary *Under the Dome* created a political controversy with its open discussion of this most pressing issue. In 2014, former health minister for the PRC Chen Zhu declared that air pollution was responsible for up to half a million premature deaths in China each year.⁴⁸ The effect of this problem on human health is extensive and presents a significant challenge to the Chinese government, which must balance the imperative of development and economic-political stability on one hand and the imperative of ensuring a healthy population and clean, liveable cities on the other.

⁴⁴ 潼泽行雄, "台湾中部地区发生的第二油症事件," *新疆医学院学报* (1982).

⁴⁵ Liu, Zongchao, *An Outlook on Ecological Civilisation* (Xiamen: Xiamen University Press, 2010), pp76-94.

⁴⁶ Staedter, Tracy, "7 of 10 Most Air-Polluted Cities Are in China," *Discovery*, 16 January 2013.

⁴⁷ By 2016, although still a huge problem, many of the worst cities are now in India. See: "Four out of Five Most Polluted Cities in the World Now in India," *The News Minute*, 12 May 2016.

⁴⁸ Moore, Malcom, "China's 'Airpocalypse' Kills 350,000 to 500,000 Each Year," *The Telegraph*, 07 January 2014.

The Chinese government has shown it is sensitive to this issue and the international image it presents. For example, pollution and therein smog was effectively controlled at the time of the Beijing Olympics. Traffic control methods were then implemented following the Beijing Olympics. Similarly, the term APEC blue has become popular (for something beautiful, yet ephemeral) based on the extensive efforts to clean up Beijing's air pollution for the 2014 Asian Pacific Economic Cooperation (APEC) summit. APEC blue was achieved through drastic measures shutting down factories, closing construction sites, and restricting vehicle traffic—however as soon as the restrictions were relaxed, the smog quickly returned.⁴⁹ Though these drastic measures had their immediate benefits, a more gradual policy approach is the one preferred by China's leaders. For example, by the year of this writing (2016), all major coal-fired power plants in Beijing are due to be closed and replaced with cleaner, gas-fired plants.⁵⁰ Other measures being implemented will, however, just serve to move the problem elsewhere; recent studies show that strict measures on pollution control implemented by the Chinese government have seen a steady shift in pollution from China's east to its west.⁵¹

China's rapid industrialisation and urbanisation has also produced new threats to the environment—for instance, the issue of tropospheric ozone concentrations in large metropolitan areas. Increases in carbon-dioxide levels attributed to human activity has led to warmer temperatures and a subsequent increase in the growth of vegetation. Natural emissions from increased vegetation react with nitrogen oxides from vehicle exhausts and industrial emissions, increasing the amount of ozone found in the troposphere.⁵² This type of pollution is also referred to as photochemical smog, and is the same phenomenon that first arose in Los Angeles in the 1940s and is still prevalent to this day. Ozone is an irritant that is known to trigger asthma attacks; ozone is corrosive in high concentrations and can cause damage to the respiratory system. The chief concern with ozone pollution is that ozone is a gas and cannot be avoided by simply wearing a mask such as in the cases of PM pollution such as PM10 or PM2.5. Instead, the US Environmental Protection Agency (EPA) advise that the best way to reduce exposure to ozone pollution is to avoid being outdoors and to not exercise in areas that contain dangerous levels of ozone.⁵³ The best way to reduce this pollution—besides of course reducing the amount of carbon dioxide in the atmosphere—would be to reduce the number of combustion engine vehicles on the roads, especially in the concentrations seen in metropolitan areas; but this challenges the notion that motor vehicles are a symbol of modernisation. Besides, it is plainly evident that Chinese city design has been done so in a way to promote the use of automobiles, making it very difficult in many new cities to commute without one.

It is recognised that air pollution is by far the most salient problem in China today; however, the country is also affected by many far less visible though extremely pressing environmental issues linked with the processes of development and modernisation. For example, mining is necessary for the extraction of the myriad resources used in the manufacture of goods that contribute to the modern lifestyle. However, mining practices are linked to some of the worse environmental disasters in human history—such as the Toyama Prefecture incident mentioned above—and this is no less apparent in China. One extreme case is that of Wanshan in Guizhou Province, where mercury poisoning has been detected due to the mining industry's poor environmental standards and practices. In many places,

⁴⁹ It needs to be emphasised here, then, that this demonstrates that the government know exactly what the causes of the pollution are.

⁵⁰ News, Bloomberg, "Beijing to Close All Major Coal Power Plants to Curb Pollution," *Bloomberg*, 24 March 2015.

⁵¹ "China Air Pollution Shifts West in First Quarter: Greenpeace," *The Express Tribune*, 20 April 2016.

⁵² Kao, Ernest, "Thousands Dying in Region From Ozone Pollution Caused by Warming, Chinese University Study Finds," *South China Morning Post*, 13 October 2015.

⁵³ Agency, U.S. Environmental Protection, "Ozone and your Patients' Health: Training for Health Care Providers,"

the mines no longer have profitable deposits; nevertheless, mercury levels present have left soil so contaminated as to be unusable.⁵⁴ In another particularly ironic instance of the tension between the environment and modernisation, there has been an increase in environmental problems linked to the production of electrical vehicles—vehicles which are touted as part of the solution for achieving a clean environment—as each vehicle’s battery requires around 50 kilograms of graphite, and the process of graphite mining is notorious for the pollution it generates.⁵⁵

Food production is also of major concern, both in its safety for human consumption, as well as its effects on the environment. In a particularly tragic incident, a manufacturer of infant milk-powder introduced chemicals into their product so as to give it false high protein readings. Unfortunately, this tainted product led to six infant fatalities, and potentially affected over 300,000 people.⁵⁶ This can be considered symptomatic of the values intrinsic to a capitalist market economy, in which the profit motive drives decisions, regardless of the environmental or human toll. The profit motive similarly spurs the move to large-scale agriculture utilising excessive amounts of chemical fertilisers and pesticides, and similarly is responsible for poor health in humans, and takes a severe toll on the environment. This issue is brought to the fore in Anna Lora-Wainwright’s important work *Fighting For Breath*, an anthropological study that takes as its focus one of China’s so-called cancer villages—that is, a village with an unusually high incidence of cancer attributed to chemical exposure from agriculture or local industries. Equally representative of the toxic nature of the modern lifestyle is the southern town of Guiyu, which became famous as the “e-waste capital of the world” due to the proliferation of the e-waste recycling industry, the miserable conditions of which are outlined in Minter’s seminal text *Junkyard Planet*.⁵⁷ These examples are by no means exhaustive, but are given so as to provide a general overview of the extent and scale of the problem, as well as bolstering the position that development and modernisation are invariably detrimental to the environment. This link was evident very early in the West, and in the early twentieth century the beginnings of the environmental movement was a product of this degradation. The environmental crisis has its roots in the West, and the current situation in China is due, in part at least, to a shift of industry from developed to developing nations and the globalisation of the profit motive.

International Nature of the Environmental Crisis

Although environmental degradation is particularly pronounced in China, it is an international issue that requires international cooperation to address. Whilst China’s development most certainly has a negative impact on the health and well-being of its population, it has also served to bring hundreds of millions of people out of poverty. Indeed, it is well-acknowledged that if it had not been for China’s economic miracle, global poverty levels would be far more severe than they are today.⁵⁸ But not only has economic development benefitted China, it also has had flow-on effects that have brought benefits to the rest of the world. For example, most of the consumer goods produced within China are exported to other countries—which have been largely responsible for this increase in production. Nevertheless these benefits also have their downsides, and whilst the pollution is localised within China it sometimes can export those ill effects to neighbouring countries. One such example is that air pollution from China has been detected on the west coast of the US,⁵⁹ giving credence to the adage

⁵⁴ Han, Chu, "The Human Cost of Living in the 'Mercury Capital' of China," *China Dialogue*.

⁵⁵ Behrmann, Elisabeth, "Green Batteries' Graphite Adds to China Pollution," *Bloomberg*, 1 May 2014.

⁵⁶ Branigan, Tania, "Chinese Figures Show Fivefold Rise in Babies Sick From Contaminated Milk," *The Guardian*, 2 December 2008.

⁵⁷ Minter, Adam, *Junkyard planet: Travels in the Billion-Dollar Trash Trade*, First U.S. Edition. ed. (New York: Bloomsbury Press, 2013).

⁵⁸ Hu, Angang, "China's Economic Growth and Poverty Reduction," Seminar Paper, (2003).

⁵⁹ Levitt, Tom, "U.S. Cities Suffer Impact of Downwind Chinese Air Pollution," *China Dialogue*, 17th January

that air pollution knows no bounds. This environmental damage has occurred through the marketisation of the Chinese economy and is inextricably linked with global forces—it is unhelpful to think that China is solely to blame for this situation.

The relationship between modernisation and environmental degradation outlined in the last few sections show that China's road to modernisation is similar to that of other developed countries, though there are two important differences. China's development has come at great cost to its own environment, especially in the opening up phase. Secondly, it has come at a time when the global environment has a historic legacy from the development of the West. These two crucial factors indicate that this is a critical moment for alternative modes of development to emerge.⁶⁰ But is there such a thing as an environmentally friendly mode of development? Historical analysis shows that development necessarily leads to environmental degradation. Even though it has been a means by which populations have improved their standard of living by way of improved access to health care, education, and growing material wealth for some, it has also been a force driving in the other direction. Indeed, if developed nations were to follow the Western model of development, there is no doubt that it would exacerbate the global environmental crisis.

How Development Leads to Environmental Degradation

As has been argued, the Western development model leads to environmental disaster and this is noted through an examination of three important features common to the Western model of development that negatively affect the environment. These three aspects Wen Tiejun's identifies as "cost-transference," consumerism, and globalisation. Before I discuss these three issues, it is important to point out a key difference in the history of the development processes of China and the Western nations that preceded them. In general, it is argued that European nations that passed through this process of capital accumulation had access to vast amounts of other sources of income, including colonial empires and used slave-labour which they could exploit as a means of accumulating capital. In this way, Western nations could minimise labour costs and transfer much of the environmental destruction and so-called negative externalities that arise from the process of industrialisation to their colonies.⁶¹ Further, the pace of industrialisation in the West transpired at a much slower rate than it did in China, meaning that the gravity of the problems arising from unchecked industrialisation and resource depletion were not fully understood until well into the twentieth century. This difference in the history of the development process in China has meant environmental health has been affected more severely and in a far shorter time frame.

Economic development and the environmental consequences of it began under Mao's economic policies, which laid the educational and industrial structures as well as the infrastructural foundations of the Deng-era economic miracle. The pace and extent of industry-led modernisation remained comparatively low in the Mao period, largely due to the fact that the economy was centrally planned and mostly closed to external economic forces. After Mao's death, Deng allowed limited market reforms known by the terms reform and opening up and socialism with Chinese characteristics. This policy shift marked the beginning of a new era in China, signified by rapid industrialisation, marketisation, urbanisation, and the increased pace, scope, and severity of environmental degradation. This era saw a proliferation of factories and the widespread adoption of industrial agricultural techniques with large increases in the use of petroleum, chemical pesticides, and

2013.

⁶⁰ Simons, Craig, *The Devouring Dragon: How China's Rise Threatens Our Natural World* (New York: St. Martin's Press, 2013), p119.

⁶¹ Wen, Tiejun, "Deconstructing Modernisation," *Chinese Sociology and Anthropology* 39, no. 4 (2007): pp11-2.

fertilisers. Indeed, a significant turning point in China's developmental history is the first state visit by a US leader to the PRC by Richard Nixon in 1972. The normalisation of the political relationship between the US and China led to trade partnerships that enabled China to increase fertiliser production; this event ensured China's ability to increase agricultural production to feed its population and improve how it accumulated capital for its industrialisation programme. With this policy change in mind, I will now turn to the three issues introduced above, firstly, the notion of cost-transference.

Cost-Transference

A useful framework for understanding the mechanisms that cause environmental degradation to occur because of the process of modernisation is cost-transference theory; this understanding is attributed to Wen Tiejun, whose research is devoted to the so-called *san nong* issue.⁶² As Wen states in his article "Global Capitalisation and Systemic Poverty Creation," his theory of cost-transference can be summed up as follows:

. . . systemic poverty results from [developing nations] bearing the ever accumulating weight of the cost of globalisation.⁶³

Wen's cost-transference theory is a critique of the Western model of development and a critique of developing nations that choose to follow this mode of development. Wen argues that this model invariably leads nations into the "development trap." This trap occurs when a country is unable to accumulate enough capital to support the process of industrialisation; once a country falls into this cycle, it is very hard to escape.⁶⁴ He argues that, historically, Western nations transferred the costs of their development to their colonies, and after the Second World War the colonies became what are known today as developing nations. As these nations pursued development by integrating into the Western global economic system and following the Western model (referred to as the Washington Consensus),⁶⁵ Western nations continued to benefit at the expense of developing nations. Wen contends that most developing nations that have managed to avoid the development trap are those that have some condition that allows them to transfer the cost inward, a phenomenon he refers to as the "soft landing" (*ruan zhuolu*).⁶⁶ In the case of China, this soft landing was able to occur as the cost borne by the cities during times of financial crisis was distributed outward to rural areas. Wen draws on his cost-transference theory so as to give a novel insight into China's economic policies and politics, showing how China was able to weather eight major financial crises between the years 1949 and 2009. However, this concept is not just limited to costs in purely financial terms.

This theoretical concept can be extended to understand cost in terms of environmental degradation that has been increasing in developing countries worldwide. One way to combat environmental degradation in the West was by moving industry offshore—and China provided fertile grounds for many international companies to adopt this strategy. Also increasing China's attractiveness to foreign investment was its ability to accommodate this process through heavy investment in infrastructure projects such as airports, highways, and harbours facilitating the efficient distribution of goods from

⁶² San nong (三农) refers to what Wen calls the "three-dimensional rural problem"—simply put as rural industry, rural people, and rural life. For more on this topic see: 温铁军, "“三农问题”: 世纪末的反思," [Petrus Liu] *Inter-Asia Cultural Studies* 2, no. 2 (2001): pp287-95. See also: 李昌平, *我向总理说实话* [Changping Li] (西安: 陕西人民出版社, 2009).

⁶³ 温铁军, "全球资本化与制度性致贫," [Tiejun Wen] *中国农业大学学报 (社会科学版)* 29, no. 1 (2012): p15.

⁶⁴ *Ibid.*, p17.

⁶⁵ *Ibid.*, pp14-5.

⁶⁶ 温铁军, *八次危机: 中国的真实经验 1949-2009*, p15.

China to the world. As developing nations strive to achieve a standard of living akin to Western countries—which are increasingly shifting industry offshore—this inevitably leads to improved environmental conditions in the West and environmental degradation in industrialising countries. The cost of the West’s continued dominance is ultimately paid for by a worsened environment in other nations. A recent WHO survey of 3,000 urban areas worldwide has found that only 2 percent of cities in developing countries have acceptable air quality, compared with 44 percent in developed nations.⁶⁷

The environmental cost of development is clearly demonstrated from China’s experience. From the Deng-era onward, many developed nations moved their manufacturing operations to China, a phenomenon that has continued up to the present day, earning China the moniker the factory of the world. Favourable economic policies put forth by the CCP meant that foreign enterprises could invest in industry at a fraction of the price of running the same enterprise in Western countries; this savings was achieved by taking advantage of China’s cheap and abundant labour force and lax environmental law enforcement. This has caused a marked rise in the availability of consumer goods as well as a corresponding drop in price; however, the resultant environmental damage has served to offset many of these achievements. It is important that this tension between economic development and environmental degradation is understood as a cost. This is because although a country may expand its economy in terms of GDP through the process of capital accumulation and pro-capital policy, this capital is inevitably accumulated at the expense of the environment. The problem of using GDP as the chief indicator of progress is that it disregards the effect of pollution on the environment; in fact, it can be counterproductive as it can count both the polluting act and the act of cleaning up pollution as positive in terms of GDP. To counter this, alternative methods of measuring economic development such as green GDP have been developed, which factor in these so-called negative externalities.

This phenomenon of cost-transference has been a recurring theme in industry-led modernisation. As mentioned earlier, China was unable to exploit colonies for its development—thus, the decision was made that China would exploit its own resources to develop the economy. When Deng’s reforms opened the doors to foreign capital, many transnational companies set up manufacturing plants in China. This enabled companies to produce goods more cheaply by taking advantage of the cheap price of Chinese labour as well as China’s lack of—and then lax attitude toward—environmental regulations. Recounted later in greater detail, widespread environmental degradation prevalent in Western industrialised countries led to the environmental movement, which exposed the damage that many companies had been doing to the environment. Similarly, in China’s drive to get rich, environmental degradation was considered less important than the march towards industry-led modernisation. Land and resources from the rural sector were expropriated from the *nongmin*, often illegally, attracting investment but leaving in its wake environmental devastation—all to achieve high GDP growth. In this way, developed nations benefit as they are able to purchase cheap manufactured goods, urban areas benefit as they reap most of the profits from these transactions, and rural areas suffer the environmental consequences.⁶⁸ Thus, the link between development and environmental degradation cannot be ignored—much of the Western world has been able to mitigate its effects by transferring the cost to developing nations; the effects of this are nowhere more confronting and disturbing as those we are now witnessing in mainland China.

⁶⁷ "Four out of Five Most Polluted Cities in the World Now in India."

⁶⁸ 温铁军, *八次危机: 中国的真实经验 1949-2009*.

The Problem of Consumption

It's a story about us, people, being persuaded to spend money we don't have on things we don't need to create impressions that won't last on people we don't care about.⁶⁹

- Tim Jackson

Consumerism is an important factor in driving the environmental problems existent in the world today, and so warrants a brief introduction in this study. As a nation industrialises, its ability to produce goods increases; an increase in consumption beyond that deemed necessary is called consumerism. This notion of consumerism is usefully analysed in Ewen's classic text *Captains of Consciousness*, which examines the way in which the logic of capitalism, which initially produced products for the wealthy classes, resulted in producers widely expanding their markets to also include people from lower classes. Further, he explores the role of advertising in this process, as it turns consumerism into a cultural phenomenon by creating insecurities and desires in people that seemingly can be overcome through consuming products on the market. Calling this a "fancied need," Ewen emphasises the importance of this notion as it causes people to think they are satisfying their own needs through their buying habits, when in fact they are instead satisfying the "real, historic needs of capitalist productive machinery."⁷⁰ This culture of consumerism is key to the successful expansion of the market for the capitalist system, famously described by Marx as needing to "nestle everywhere, settle everywhere, establish connexions everywhere."⁷¹

Although this model of economic expansion may appear useful in ensuring flows of capital, its key flaws are that it encourages excess production and waste and does not distinguish between necessary and unnecessary products. The production of surplus and superfluous goods is problematic as it requires a continuous stream of resources—resources that are finite. This would not be so bad if we humans could do so within our means; however, in the year of writing, we had used up our year's allocation of resources by the 8th of August.⁷² This means that at current rates of consumption it takes around one and a half earth's worth of resources to satisfy people's needs. Keep in mind, this is the global average; if everyone in the world were to consume on par with the average Australian, it would require over five times the planet's worth of resources to be sustained.⁷³ This alarming trend cannot logically continue, inspiring such movements as Schumacher's "Small is Beautiful" and "New Materialism" as a means to reverse the trend.⁷⁴ A further problem with this model of consumption is that overconsumption tends to lead to high levels of personal debt, a salient problem in many Western countries today.⁷⁵

The problem of consumerism is not new, by any means; the idea of the consumption of products as a means of flaunting one's social status is poignantly analysed in Thorstein Veblen's classic work of 1899, *The Theory of the Leisure Class*. Veblen critiques the class of people associated with what he calls "conspicuous consumption" and "conspicuous leisure"—those people who own the means of production but are not physically engaged in the production process. Veblen introduces this idea of "conspicuous consumption" whereby wealthy classes flaunt their wealth as a means of outwardly

⁶⁹ Jackson, Tim, "An Economic Reality Check," TEDGlobal.

⁷⁰ Ewen, Stuart, *Captains Of Consciousness: Advertising And The Social Roots Of The Consumer Culture* (New York: McGraw-Hill, 1976), pp35-6.

⁷¹ Marx, Karl and Friedrich Engels, *The Communist Manifesto* (Camberwell, Victoria: Penguin, 2010), p223.

⁷² "Earth Overshoot Day," Global Footprint Network.

⁷³ Ibid.

⁷⁴ Simms, Andrew and Ruth Potts, "The New Materialism: How Our Relationship with the Material World Can Change for the Better," ed. Schumacher College (Totnes, UK: The Real Press, 2012).

⁷⁵ Ibid., p4.

indicating membership to the wealthy class.⁷⁶ This idea of conspicuous consumption is applicable to Chinese society today as people increasingly attain a higher standard of material wealth and display this in excessive consumption. Stories of conspicuous consumption are widespread in modern China, especially in depictions of the *nouveau riche* (*baofahu*) and the second-generation reds (*hong'er dai*), that is, the children of the CCP's founding members. One salient example is of a car crash in Beijing's Datun Road tunnel on the 11th of April, 2015. In this incident, a Ferrari was racing a Lamborghini through the tunnel at speeds upward of 160 kilometres per hour, culminating in a collision that left both cars damaged beyond repair. What aggravated the people who followed the story most, however, was that the drivers were in their early twenties and unemployed.⁷⁷ This kind of conspicuous consumption—by unemployed youth no less—in a society described by its leaders as socialist is a telling example of the levels of wealth attained by some Chinese in the mere three and a half decades since economic reform. Another, albeit more light-hearted, story that illustrates the prevalence of conspicuous consumption is of an official from Shaanxi Province who won the moniker watch brother (*shoubiao ge*) for his predilection for wearing luxury items, especially watches.⁷⁸ In this case, the problem was, that as a relatively low-level official on a correspondingly low salary, the public saw him as a typical example of the corrupt official who acquires extra income through shady means. These displays of wealth are related to the concept of face, which Podoshen, Li, and Zhang argue are generated from a feeling of necessity to maintain a similar material standard of living to those within one's own social group.⁷⁹ If their hypothesis is correct, then there are strong cultural values at play that take an important role in spurring the desire for conspicuous consumption, a phenomenon not only present, but rising significantly—especially in China's urban areas.⁸⁰ Moreover, as China's population continues to flow from rural to urban areas, this trend will continue to rise for some time unless it is controlled by the party-state.

This trend toward hyper-consumption, conspicuous or otherwise, is a side effect of development toward the modern lifestyle, and necessarily leads to environmental degradation. An increasing standard of living generally requires one to purchase more things—requiring an increase in production of goods to compensate for the rise in consumption. These surplus demands necessitate more energy inputs; in China, electricity, for instance, is largely produced by burning coal, a notoriously dirty source of energy. Part of this lifestyle are the automobile and the aeroplane, and of particularly importance though rarely noted is the ocean-going vessel essential for maritime trade—all of which contribute to the problem of pollution. The process by which the consumption and production cycle lead to environmental catastrophe is usefully outlined by social activist Annie Leonard's online video entitled "The Story of Stuff."⁸¹ In this short film, Leonard breaks down the process by which resources are designed into products for sale to consumers, products which are made to be discarded in a short span of time so as to continue the process of consumerism.⁸² Focussing on the consumption and production cycle in the US, it underlines the political reasons the US government encourages mass consumption to the extent that, at the time of filming, the US consumes 30 percent of the world's goods whilst only holding 5 percent of the world's population. This is a trend that has become

⁷⁶ Veblen, Thorstein, *The Theory of the Leisure Class*, Oxford World's Classics (Oxford; New York: Oxford University Press Inc., 2007), pp46-68.

⁷⁷ 朝晖, "北京法拉利撞兰博基尼: 一个20岁一个21岁," [Hui Chao] *驱动之家*, 13th April 2015.

⁷⁸ 陈文嘉, "陕西安监局长杨大才眼镜被曝价值13万," [Wenjia Chen], 6th September 2012.

⁷⁹ Podoshen, Jeffrey S., Lu Li, and Junfeng Zhang, "Materialism and Conspicuous Consumption in China: A Cross-Cultural Examination," *International Journal of Consumer Studies* 35 (2011): p18.

⁸⁰ *Ibid.*, p17.

⁸¹ Leonard, Annie, "The Story of Stuff,"

⁸² In her video, Leonard claims that North Americans discard 99 percent of products within six months of purchase.

increasingly visible in China. The underlying message is that current rates of consumption are unsustainable, and that to resolve this issue will require social and technological change. This film has an important message that resonates deeply with the situation in China at present; as people in China are getting wealthier, consumption patterns approximating those in Leonard's film are emerging. The obvious inability of the planet to provide enough resources to continue this trend indicates the need to change consumer behaviour to slow rates of consumption to sustainable levels.

WTO Entry and Environmental Degradation

As argued earlier, once the PRC was established, heavy industry was developed and along with this the beginnings of the modern environmental crisis were visible. Later, when the CCP decided to end the PRC's days of virtual autarky and to allow more foreign businesses into the domestic market, there was a marked increase in pollution, in part due to new modes of production and in part due to modernising standards of living. What should also be noted though is that China's acceptance into the WTO led to a sharp increase in the level of environmental degradation.⁸³ In a 2004 study, it was shown that even in the three years since China's acceptance in 2001, there were already many indicators of higher levels of environmental degradation attributed to the increase in trade. For example, in the forestry industry, China became a net importer of wood, which while saving China's own forests meant there was a significant increase in demand in other timber-exporting countries worldwide, many of which deforest illegally.⁸⁴ In the automobile industry, acceptance into the WTO led to a vast increase in automobile production which in turn has led to increased pollution from production, increasing emissions in urban areas, and the construction of roads.⁸⁵

Further to these issues, entrance into the WTO led to higher levels of production and a general rise in the standard of living, meaning a sharp rise in the per-capita use of energy for both domestic and industrial purposes. This increased energy demand, whilst somewhat offset by a rise in the use of renewable energies, was still largely reliant on dirty coal which continues to have a marked negative impact on the environment.⁸⁶ Another industry of significant detriment to the environment was the textile industry; an increase in dyeing and bleaching related to the production of textiles very quickly led to an increase in the discharge of waste water.⁸⁷ These findings indicate that there is an inextricable link between environmental degradation and the economic development brought about by China's acceptance into the WTO. Indeed, a study of the environmental impact of the WTO by the International Centre for Trade and Sustainable Development found:

In the past decade, China has had a trade surplus in terms of monetary value, but a trade deficit in terms of environmental indicators, which reflects the fact that when goods are exported to other countries, pollution remains in China.⁸⁸

This fact reinforces the idea that environmental problems are rarely limited to one country; China's environmental problem is a global problem, and China's environmental crisis is both a national and a global issue as China's cheap manufactured goods flood world markets. The cheap price of those

⁸³ Development, International Institute for Sustainable, "An Environmental Impact Assessment of China's WTO Accession: An Analysis of Six Sectors,"

⁸⁴ Ibid., p69.

⁸⁵ Ibid., p133.

⁸⁶ Ibid., pp171-2.

⁸⁷ Ibid., p198.

⁸⁸ Meléndez-Ortiz, Ricardo, Christophe Bellmann, and Shuaihua (eds) Cheng, "A Decade in the WTO: Implications for China and Global Trade Governance," ICTSD Programme on Global Economic Policy and Institutions.

goods means that the environmental cost of those goods was not paid for by the consumer but has had adverse environmental effects in China. This cost is transferred to every person drinking toxic water, every worker working for substandard pay in substandard conditions, and every urbanite consuming toxic food and breathing toxic air. Undoubtedly acceptance into the WTO has brought China significant economic benefit if calculated purely in terms of GDP and has raised many more people out of poverty. However, it has further served to exacerbate the environmental problems that arose from the industrialisation and accumulation of capital that began from the early days of the establishment of the PRC.

This chapter lays the scene for the dissertation by discussing the tension between development and the environment. We have seen that environmental degradation goes hand-in-hand with development, and this is evident from the Chinese experience from ancient times to modern. Following, we saw some of the worst negative effects that have arisen from development and that these disasters are invariably a mixture of modern technology and fast-paced industrial-led development that has resulted in environmental tragedy and extensive illness and death. Finally, we encountered some of the reasons why development leads to environmental degradation; by presenting the causes it will make the solutions more apparent. It is with this background information that we turn to Chapter 2, which demonstrates that environmental consciousness in China has generally kept abreast with that in so-called developed nations, showing some of the important trends and present developments.

Chapter 2: The Rise of Environmental Consciousness in China

Environmental Consciousness in the Chinese Party-State

As noted in Chapter 1, environmental degradation in China was becoming a national and international issue, prompting political responses at the Beijing Olympics and at APEC. The continual concern over smog in the cities was building political momentum. However, the CCP was caught with the political dilemma that modernisation had brought economic growth, and with it expectations regarding higher standards of living and rising consumerism. It was also becoming evident that the usual response of having the countryside compensate for the cities was no longer viable as environmental problems had spread to the rural areas. Continual neglect and abuse of the environment had resulted in a crescendo of calamities, related to the CCP's reform policy of imitating the Western-style pollute first, clean up later (*xian wuran, hou zhili*) model of development. When Deng pronounced his economic reforms, his intention was that the people of China would benefit from the development and investment arising from opening Chinese markets to foreign capital. The success was measured by GDP which increased rapidly at a rate of rapid modernisation not seen before in history. Once these changes were in place, Deng and the CCP then proceeded to promote values of materialism and consumerism among the people to raise their material standard of living.⁸⁹ However, in accordance with the Western model of development, it ignored the fact that the creation of so many factories, the increased use of chemical pesticides and fertilisers to support the growth in agriculture, the increased use of electricity, the proliferation of automobiles—and indeed many of the necessary ingredients for this model of development and modernisation—would have a detrimental effect on the environment. This trend increased throughout the Deng era, accelerated under Zhu Rongji,⁹⁰ and gained further momentum following accession to the WTO. This so-called economic miracle and the ensuing environmental destruction continued relatively unabated until recent years when the damage done to China's environment became too urgent to ignore.

Despite this seeming disregard for the environment, China has been a participant in global environmental fora since the 1970s, and environmental issues have been enshrined in CCP official reports since at least the late 1970s. This tendency toward environmental consciousness reached a significant point in 2007, when the then general secretary of the CCP, Hu Jintao, announced that there would be a change to China's mode of economic growth. This was at a time when the economy had been growing at around 10 percent per annum in terms of GDP since 1978. This new model was touted to be different from the old unsustainable model by shifting the mentality from development at any cost to development promoting environmental protection and frugality in the use of energy and resources.⁹¹ The term that he used to describe this model was *shengtai wenming*, generally translated into English as ecological civilisation, with civilisation meaning the act of becoming civilised. In the sections that follow, I trace the evolution of environmental awareness in China: from involvement in international environmental fora, the evolution of environmental expressions in National People's Congress (NPC) reports, to the CCP's commitment to becoming an ecological civilisation.

Environmental Consciousness in the Early Years

The volume of negative press and public concern surrounding the state of China's environment increased to such extent that the impression was that the CCP was lagging behind with regards to environmental awareness and participation in international environmental fora. Contrary to this perception, however, the government of the PRC has consistently participated in events related to

⁸⁹ Meisner, *Mao's China and After: A History of the People's Republic*, p437.

⁹⁰ *Ibid.*, pp519-20.

⁹¹ Oswald, James, "China Turns to Ecology in Search of 'Civilisation'," 3rd August 2016.

environmental protection alongside Western developed nations. For example, in 1972, it sent a delegation to the United Nation's (UN) first international environmental conference—the UN Conference on the Human Environment, which took place in Stockholm, Sweden.⁹² The outcome of this conference is known as the Stockholm Declaration, with its stated purpose being to rally people and governments so that they may come together in the interest of the improvement and preservation of the human environment.⁹³ Further, in 1978, the CCP amended the Chinese constitution to include clauses that acknowledge that the state has a responsibility to protect natural resources and the environment, as well as to prevent public hazards such as pollution.⁹⁴ Other indicators of China's awareness of environmental issues being on par with that of the developed world are that it was a signatory to Agenda 21 (the UN action agenda that resulted from the Earth Summit held in Rio de Janeiro in 1992), that it has ratified the Kyoto Protocol, and that over 20 percent of China's energy comes from renewable sources⁹⁵ (as compared, for example, with just over 10 percent for the US, the UK, and Australia).⁹⁶ Alongside these indicators, there is also compelling evidence of a trend toward environmental consciousness to be found in the work reports produced from the five yearly NPC meetings.

The NPC is the PRC's national legislature, and it consists of both party members and non-party members. It is, in theory, the highest organ of authority in Chinese politics and hence it is useful to analyse the pronouncements made during these meetings as they are a vehicle for the announcement and legitimation of major decisions made by the government of the PRC.⁹⁷ The first mention of the environment or environmental protection in an NPC work report was during the Twelfth Congress, which took place from 1st to the 11th of September, 1982. At that time, the word environment was not actually used with regard to environmental protection. Instead, the expression ecological balance (*shengtai pingheng*) was used, and it was touted as an essential element of the national strategy to develop industry and increase the living standards of the people. The following is a translation by the author of the pertinent section (the bold sections have been added for emphasis):

So as to satisfy the requirement of industrial development and the improvement of the living standards of the people, we must strengthen agricultural infrastructure, improve the conditions of agriculture, implement scientific sowing methods, be able to grow more cash crops and grains on a limited amount of arable land, and completely develop forestry, animal husbandry, fishing and subsidiary industries whilst simultaneously continuing to resolutely control population growth, resolutely protect all kinds of agricultural resources, and **maintain ecological balance**.⁹⁸

The theory of ecological balance was an early ecological theory forming the basis of the Gaia theory that was formulated by Lovelock and Margulis in the mid-1970s; in essence, this hypothesis posits that organic life and inorganic compounds on the earth form a complex and self-regulating system that

⁹² Si, Meng, "An Insight into the Green Vocabulary of the Chinese Communist Party," *China Dialogue*, 15th November 2013; Economy, Elizabeth, *The River Runs Black: The Environmental Challenge To China's Future*, 2nd ed. (Ithaca: Cornell University Press, 2010), pp97-8.

⁹³ "Declaration of the United Nations Conference on the Human Environment."

⁹⁴ Economy, *The River Runs Black: The Environmental Challenge To China's Future*, p99.

⁹⁵ Harrabin, Roger, "China 'Deserves More Credit' for Renewable Energy Effort,"

⁹⁶ Administration, US Energy Information, "International Energy Statistics,"

⁹⁷ Lieberthal, Kenneth G., *Governing China: From Revolution Through Reform*, 1st ed. (New York: W.W. Norton, 1995), pp159-60.

⁹⁸ The original text can be found in Appendix 4. For the full report refer: 胡耀邦, "全面开创社会主义现代化建设的新局面,"

maintains life on the planet.⁹⁹ The inclusion of ideas from this theory indicates that China's leaders from the early 1980s were already aware of current developments in Western theories of ecology and environmentalism, or at least had been exposed to some of their ideas and vernacular through attendance at international environmental fora and exposure to the academic writings of the time. Although this term was included, it was only used once in the whole of Hu Yaobang's work report to the NPC, indicating that though the importance of the environment was acknowledged it was hardly considered central to the government's strategy of economic development. Later this theme was carried on in the work report for the Thirteenth Congress of the NPC, which took place on the 25th of October, 1987; here environmental protection was explicitly introduced into the report, when Zhao Ziyang declared during his speech:

Comrades! Here I must also explicitly point out that population control, **environmental protection, and ecological balance** are important issues that affect the overall development of the economy and society.¹⁰⁰

Introducing the phrase environmental protection into the NPC work report, and linking it specifically with the issues of social and economic development, can be understood as an official acknowledgment by the Chinese government that the issues of the environment and development are inextricably linked.

The Increasing Importance of Environmental Issues

Since the Thirteenth NPC work report, the status of environmental issues and the imperative to improve and protect the environment have been increasingly important. In the report of the Fourteenth NPC, environmental protection and population control are again emphasised, evidence that the Chinese government consider ecology and population control as being related, something that in the West often comes across as being Malthusian.¹⁰¹ Further, these two are emphasised as being crucial in achieving improved living standards. For example, the ninth point in this report touches on the importance of environmental protection, stressing the need to imbue a sense of environmental awareness in the people of the nation. It is also the first time that the government emphasised and defined the realms that came under the purview of environmental protection by outlining the frugal use of natural resources such as land, minerals, forests, and water, and that also stressed the imperative of working hard to improve the state of the environment.¹⁰² The Fifteenth NPC work report is the first to introduce the idea of sustainable development (*kechixu fazhan*)—this is a concept that was introduced by and defined in the 1987 *Brundtland Report*, also known as *Our Common Future*. Along with this development, the report expands vastly on the importance of environmental protection, emphasising that it is an integral part of fundamental national policy (*jiben guoce*), whilst also for the first time introducing planned measures for environmental remediation such as cleaning up pollution, revegetation, the protection of soil and waterways, and protection against desertification.¹⁰³ By the Sixteenth NPC work report, delivered in November 2002, the language of environmental protection was becoming increasingly established. For example, as well as linking the idea of sustainable development to the notion of the “moderately well-off society”

⁹⁹ Lovelock, James and Lynn Margulis, "Atmospheric Homeostasis By and For the Biosphere: The Gaia Hypothesis," *Tellus* 26, no. 1-2 (1974).

¹⁰⁰ The original text can be found in Appendix 4. For the full report, refer to: 赵紫阳, "赵紫阳在中农国共产党第十三次全国代表大会上的报告,"

¹⁰¹ Interestingly, Chinese scholar Hong Liangji, writing around the same time as Malthus, also warned of the potential negative consequences of population growth.

¹⁰² 江泽民, "中国共产党第十四次全国代表大会报告,"

¹⁰³ 江泽民, "江泽民在中国共产党第十五次全国代表大会上的报告,"

(*xiaokang shehui*),¹⁰⁴ it also introduced notions of “harmony between people and the environment” (*ren yu ziran de hexie*) and the “development road toward a civilisation with a beautiful environment” (*shengtai lianghao de wenming fazhan daolu*). Further, it notes a fault in the present mode of industrial development, stating that economic development must adhere to a “road toward a new style of industrialisation” (*zou xinxing gongyehua daolu*).¹⁰⁵

The work report of the Seventeenth NPC shows that by 2007 promoting environmental protection was an imperative for the government. This report emphasised the balance between ecological development and population, as well as the necessity of a clean environment to realise the continued economic development of society. Further, it stipulated another uniquely Chinese concept, the “two-oriented society” (*liangxing shehui*). This expression is typical of abstruse governmental verbiage; the “two orientations” it refers to are a society oriented toward being “environmentally friendly” (*huanjing youhaoxing shehui*) and a society oriented toward “resource-conservation” (*ziyuan jieyuxing shehui*). Other important phrases used in this report are “circular economy” (*xunhuan jingji*), “renewable energy” (*kezaisheng nengyuan*), “energy conservation and emission reduction” (*jienerg jianpai*), “ecological restoration” (*shengtai xiufu*), “climate change” (*qihou bianhua*), “ecological compensation” (*shengtai buchang*) and, importantly to this study, “ecological civilisation” (*shengtai wenming*). Significantly, environmental protection and related subjects are now distributed among three different sections in this report: in section three, these topics are a crucial element of Hu Jintao’s “scientific outlook on development” (*kexue fazhanguan*); section four details its importance in achieving the goal of a “moderately well-off society;” and section five explicitly declares the importance of a healthy environment with the nation’s future economic development.¹⁰⁶ It is evident that although the beginning of the government’s campaign to increase environmental awareness and protect the environment are to be found in the early 1980s, it was not until the mid-2000s that the issue became (ostensibly at least) central to China’s economic policy. It is also important to note that it was in this report that the government declared the objective of becoming an ecological civilisation and the imperative of firmly establishing the concept of ecological civilisation within society.¹⁰⁷

The most recent meeting of the NPC was in November 2012, and following the pattern above, this meeting was much more in-depth in its dealing with the increasingly salient environmental problems throughout the country. Along with being included in the sections relating China’s “socialism with Chinese characteristics,” and with the aim of achieving a “moderately well-off society,” environmental issues were given their own section in this report, section eight, titled “Vigorously Promoting Becoming an Ecological Civilisation.”¹⁰⁸ This section greatly expands on the notion of ecological civilisation, changing it from the vague phrase first used by then President Hu Jintao to a slogan fleshed out with more meaning. For example, in Section eight, a clean environment is a challenge in a country with such serious pollution and scarce resources, yet an imperative to achieving the goal of a prosperous future for the nation. The global scope of environmental issues is also mentioned, and the importance of China contributing to the global effort to reduce pollution is stated.

In this section, it is also made clear that a clean environment must form the basis for human development. Four points are emphasised in relation to achieving the target of becoming an ecological civilisation: optimising the plan for the development of territorial China, promoting resource frugality

¹⁰⁴ The expression is of Confucian origin; popularised by Hu Jintao; it is the stated aim of the CCP to reduce poverty and inequality in China.

¹⁰⁵ 江泽民, “中国共产党第十六次全国代表大会报告,”

¹⁰⁶ 胡锦涛, “胡锦涛在中国共产党第十七次全国代表大会上的报告,”

¹⁰⁷ Ibid. The exact quote is in Appendix 4.

¹⁰⁸ The Chinese phrasing is in Appendix 4. See 胡锦涛, “十八大报告,”

across the board, strengthening ecological systems and environmental protection, and strengthening the development of ecological civilisation systems. With regard to the last section, although the concept of ecological civilisation systems is not explicitly defined, this section places its emphasis on: remediating environmental damage, implementing a scheme for ecological compensation,¹⁰⁹ increasing activities seen to have ecological benefits, and efficient resource consumption. These four guidelines are considered fundamental to developing a capable system for appraising economic and social development. This point highlights that eco-civilisation as touted by the government is, at its heart, a shift in focus from old methods of economic evaluation toward a new model that attaches importance to the natural environment. Further, eco-civilisation is perceived as having important repercussions for society in general; it highlights the importance of social development, and is an integral part of socialism with Chinese characteristics. By following the development of environmental discourse in official CCP work reports from the NPC—from the ecological equilibrium of the early 1980s to the introduction and development of the concept of ecological civilisation— it is evident that environmental awareness has been an integral part of CCP policy since the early 1980s and is increasingly important up to the present day. To see a chart of the progression and development of environmentalist discourse within the Chinese government, refer to Appendix 3.

The CCP Updates Environmental Law

It was in 1979 that the NPC first approved the draft law on environmental protection that would establish key principles for environmental protection whilst initiating a legal network for environmental protection.¹¹⁰ However, despite the introduction of these laws, the environment continued to be exploited for the sake of economic development, and since the reform and opening period the state of the environment continued to decline. The ineffectiveness of previous legislation in addressing these environmental issues led environmental law expert at Peking University Wang Jin to describe these laws as “useless.”¹¹¹ Today’s environmental crisis is not due to a lack of legislation; rather, it is the lack of implementation of these laws,¹¹² clear indication of the emphasis of GDP growth over environmental health. In 2007, Wang Canfa, professor at the China University of Political Science and Law and renowned environmental law expert noted four main issues that were responsible for the lax implementation of environmental law in China: unrealistic legislation due to inadequate legal research, rapid creation of legislation, superficial legislation, and the inability of legislation to adapt to new rules and laws; local governments prioritising economic benefit measured in terms of GDP growth over environmental protection; a “legislative void” that exists between administrative departments and the Standing Committee of the NPC and the court system; and public participation in environmental protection being underdeveloped.¹¹³ Lei Zhang et al argue that although these laws were lauded internationally for their “advanced concepts and principles for environmental protection,” that various government ministries and commissions felt threatened by these laws’ ability to usurp their power (and also, quite likely, their financial gains) and so enacted departmental regulations and sectoral laws that greatly impeded implementation of the environmental protection laws (EPL).¹¹⁴ Because of this, between 1995 and 2011, the NPC received seventy-eight proposals for the revision of

¹⁰⁹ This means that the central government will provide funds to areas with damaged ecological systems in order that they may clean up the environment.

¹¹⁰ Economy, *The River Runs Black: The Environmental Challenge To China's Future*, pp99-100.

¹¹¹ Wang, Jin, "China's Green Laws are Useless," China Dialogue.

¹¹² Wang, Canfa, "Chinese Environmental Law Enforcement: Current Deficiencies and Suggested Reforms," *Vermont Journal of Environmental Law* 8 (2007): p174.

¹¹³ Ibid., p169.

¹¹⁴ Zhang, Lei et al., "Power Politics in the Revision of China's Environmental Protection Law," *Environmental Politics* 22, no. 6 (2013): p1029.

the EPL, eventually leading to the formal decision to include the revision of the EPL law into the 2011 legislative agenda of the NPC Standing Committee.¹¹⁵

On the 24th of April, 2014, the eighth meeting of the Twelfth NPC Standing Committee introduced China's new EPL, with the laws coming into effect on the 1st of January, 2015. These new laws departed in many significant ways from the old laws, in order to increase their effectiveness. For instance, the new laws emphasise the need for environmental protection ahead of economic development, including in the preamble the need for sustainable development and the creation of an ecological civilisation.¹¹⁶ Further, it notes that environmental protection should guide economic development, and that destructive practices in production serve to hinder development.¹¹⁷ In 2015, Peng Benli of Yulin Normal University in Guangxi and Li Ainian of Hunan Normal University wrote an article outlining the pros and cons of China's new environmental laws. In their opinion, some of the positive departures that they make from the old laws are: declaring that GDP should no longer be the only measure of political achievement for leaders and cadres; making provisions for an environmental evaluation system; making provisions for institutions that define an environmental protection red line (*hong xian*); making provisions for institutions to monitor, assess, and evaluate risk for the environment and environmental health; clearly making allowances for public litigation on environmental issues (although they must be initiated by non-governmental organisations (NGOs) that have not violated any laws in the last five years); and making provisions for daily fines for environmental violations.¹¹⁸ The issues that the new environmental laws have failed to address are: they do not establish environmental rights, but still rely on government supervision and public obligation for environmental protection; they do not touch upon systems for environmental supervision and management; their negative incentives are not well-coordinated with other environmental laws; the language used in establishing laws is too vague; obligations outlined within the document are not enshrined in law; and some clauses are distributed irrationally.¹¹⁹

Despite some criticisms of the new laws, they are generally accepted as being superior to the previous laws as they provide more means by which authorities can investigate and punish— through fines or arrests—people or companies who cause environmental damage. But of course, the proof that these laws are effective must be in the implementation. Beginning in 2015, the incidence of environmental lawsuits increased, as did the punishments for these violations. For example, in October 2015 two NGOs, Friends of Nature and Fujian Green Home, won an environmental damage lawsuit against illegal action by the owners of a quarry in Fujian Province. The illegal action was the expansion of the quarry area, illegally occupying a forested area and the damage to local vegetation. The defendants were found guilty and were required to pay 1.27 million renminbi (RMB) in compensation.¹²⁰ In a newspaper article, it also attributes the case as being made possible by the strength of the new EPL, which has enabled NGOs to initiate public litigation on environmental matters.

Another instance of a major public interest lawsuit brought against a polluting industry was the case of the Dalian Environmental Protection Volunteers Association (DEPVA) versus the Dalian Riqian Electrical Machine Company, a China-Japan joint venture. In this case, the company was found guilty and ordered to pay 2 million RMB in compensation, although this sum was much lower than the

¹¹⁵ Ibid., pp1029-30.

¹¹⁶ "中华人民共和国环境保护法（主席令第九号），"

¹¹⁷ 彭本利 and 李爱年, "新《环境保护法》的亮点、不足与展望," 环境污染与防治 37, no. 4 (2015): p90.

¹¹⁸ Ibid., pp90-1.

¹¹⁹ Ibid., pp91-2.

¹²⁰ "China NGOs Win Landmark Environmental Lawsuit," Xinhua Net.

DEPVA's original claim for over 7 million RMB.¹²¹ Also attributed to the new laws is an increase in fines from polluters in Beijing, a city infamous for its pollution problem. Another Xinhua article reported that by October 2015, Beijing had collected over 100 million RMB in fines from polluters; in nine months, they had collected almost double the amount as in the same time in 2014. This is largely attributed to the new stipulation of daily fines, whereby penalties accumulate daily, creating a large disincentive for pollutive enterprises.¹²² By January 2016, it was reported that in Beijing in 2015, the enforcement of the new laws had brought in a total of 183 million RMB, including 44 million RMB for 1,937 cases of air pollution and 72 million RMB for 181 violations related to water and other areas.¹²³

A case representative of the new powers of arrest for breaking the new EPL is that of Zhou Zhongxin from Ningjin County in Hebei Province.¹²⁴ It was discovered sometime during the latter half of 2014 that Mr. Zhou had set up an illegal zinc plating factory and was illegally dumping the waste from the factory straight into a well. It was alleged that because of his actions, the water had dropped to a pH of 1.58, with zinc levels over 130 times the national recommended safety levels. A group of locals reported him, and upon investigation by the local Environmental Protection Agency he was found guilty of breaking the EPL. This is a rather extreme case of pollution, but it does demonstrate one case of how the EPL is being invoked to bring polluters to justice.

Although little time has elapsed since the introduction of the new EPL, the above evidence shows that they have already been implemented and enforced successfully on several occasions. Whether this will serve as an example for industry in general to conform with environmental policy however remains to be seen. Changes made by the central government in March 2015 transferred authority for approving new power plants from the Ministry of Environmental Protection to provincial governments. The issue here is that this has left potential for provincial governments to approve projects based on their potential for increasing local GDP that would otherwise have been vetoed due to environmental concerns. Indeed, despite the new EPL, the construction of 155 new coal-fired power plants across China has been approved.¹²⁵

Xi Jinping's "Two Mountains Theory"

Another interesting development worthy of mention in this section is the explicit promotion of ecological values by President Xi Jinping. First, in 2014, this appeared in his work *The Governance of China*, to introduce to the world some of the rationalities behind Chinese governance and the thought of Chairman Xi. Chapter 8 of this book is called "Becoming an Ecological Civilisation," and it features three short articles about Xi's thoughts on environmental remediation and ecological civilisation.¹²⁶ Later, in August 2015, news articles complete with an infographic appeared, promoting Xi Jinping's "Two Mountains Theory" (TMT) as being an integral part of the CCP's ecological civilisation campaign.¹²⁷ Moreover, at an official level, it is touted as being the guiding thought for the development of the document titled "An Overall Plan for Ecological Civilisation System Reform," mentioned in greater detail later, that was released on the 11th of September 2015.¹²⁸ This section briefly considers TMT and outlines its guiding precepts in order to ascertain whether or not it is an important concept that should be taken seriously. TMT as it appears in recent newspaper reports and

¹²¹ "Public Interest Environmental Litigation Case Close in NE China," Xinhua.

¹²² "Beijing Pollution Fines Surpass 100 mln Yuan," Xinhua.

¹²³ "Beijing Polluters Fined 183 mln Yuan Last Year," Xinhua.

¹²⁴ 王鑫来, "非法排污危害大 污染环境被批捕," [Xinlai Wang] 人民日报, 26th Nov 2015.

¹²⁵ Kong, Lingyu, "Local Gov'ts Use Newfound Power to Approve Dirty Coal-Fired Power Plants," Caixin Online.

¹²⁶ 习近平, 治国理政 [Jinping Xi] (新华出版社, 2014).

¹²⁷ "习近平 "两座山论" 的三句话透露了什么信息," 新华网.

¹²⁸ "习近平的 "两座山论" 有了顶层设计," 央广网.

policy documents is an abbreviated form which roughly translates as “Clear water and lush mountains are more valuable than mountains of silver and gold.” It is derived from this longer version:

We want both clear water and lush mountains as well as mountains of gold and silver. It is better to have clear water and lush mountains than mountains of gold and silver; and clear water and green mountains are [as valuable as] mountains of gold and silver.¹²⁹

Interestingly, there is now an official translation of TMT: “We value both natural landscape and resources as well as material wealth. The former overrides and promises the latter.” The original Chinese expression makes use of simple yet poetic imagery in portraying these three scenarios, which are intended to emphasise the fact that Xi Jinping and the CCP advocate environmental protection over development. The origins of the phrase are to be found in one of Xi Jinping’s jottings in a column that he used to write in the Zhejiang Daily newspaper during his time as the leader of Zhejiang Province. On the 24th of August 2005 in his column, titled “*Zhi Jiang Xin Yu*,” he wrote:

We seek harmony between people and the environment, harmony between the economy and society, or to put it simply, we must have both clear water and lush mountains as well as mountains of gold and silver.¹³⁰

Xi used this expression twice in his columns, once in 2005 and once in 2006, and it was published in 2007 in a book-length compilation of columns that he wrote for this newspaper between 2003 and 2007, also titled “*Zhi jiang xin yu*.”¹³¹ In 2013, on the 7th of September, he visited Nazarbayev University in Astana, Kazakhstan, where he also employed the above expression about clear water and lush mountains to the students at the university, and then followed by saying:

We absolutely cannot sacrifice the environment for the sake of a short period of economic development.¹³²

This visit was part of an official visit to Kazakhstan to promote the recent “Belt and Road” (*yidai yilu*) Initiative, a part of which outlines a strategy for the economic development of Central Asia. By developing maritime and overland trade routes, China hopes to facilitate trade between regional nations and China; in this way, economic development will occur through increased access to markets and trade in the region, and also off-set overproduction in China. However, as Xi noted in his speech, the official stance of the CCP is that this development must not happen at the expense of the environment.

Though this theory has been given some media coverage and is now being included in official documents, TMT does not pass muster, at least in the Western academic sense, as a theory. The idea that development should not happen at the expense of the environment is at least as old as the *Brundtland Report* (also known as *Our Common Future*) which was released in 1987, and the idea of sustainable development that arose from that report. Xi Jinping has taken this idea that development should not happen at the expense of the environment—and which was mentioned in official documents at least as early as the Fifteenth NPC work report in 1992—framed it in flowery language, contracted that into a neat saying of four characters in length (*liang zuo shan lun*) and delivered it to

¹²⁹ The original text can be found in Appendix 4.

¹³⁰ The original text can be found in Appendix 4.

¹³¹ In this expression, Zhijiang is a reference to Zhejiang’s largest river, the Qiantang River, which loops around Hangzhou. The title does not translate well into English, and as there is no official translation for this title as yet, I have left it in pinyin.

¹³² “习近平的“两座山论”有了顶层设计。”习近平的“两座山论”有了顶层设计。”

the masses. The guiding thought behind the official publication “An Overall Plan for Ecological Civilisation System Reform” released in September 2015 demonstrates the priority given to the dissemination of this message of emphasising environmental health over developmental wealth. In this sense, it is indicative of a trend to portray China’s leaders as not only political leaders, but also academic leaders that have their own contributions to various fields of academia. With that in mind, it is notable that both President Xi and Premier Li Keqiang have PhDs—marking a significant shift in leadership credentials. It is with this understanding of how environmental thinking has evolved in the government that the thesis moves now to discuss the notion of civilisation in the Chinese context, followed by an explanation of when and how the expression ecological civilisation entered the official lexicon of the CCP.

Chapter 3: The Concept of *Wenming* and the Rise of Ecological Civilisation

Civilising Discourse

The topic of ecological civilisation as outlined in the previous chapter has received little attention by China scholars. For example in 2013, although they had published a sizeable “new Sinology” book on the topic of China and its civilising mission,¹³³ Barmé and Goldkorn dedicated but a solitary sentence to the notion of ecological civilisation, dismissing it as a mere “buzzword.”¹³⁴ This is despite the fact that, even as early as 2007, and in the English language, prominent Chinese environmentalist and scholar Ma Jun had an article published stressing the importance of the ecological civilisation movement, in which he clearly outlined some of the core concepts that it encompasses.¹³⁵ He argues that the idea of an ecological civilisation is new; however, later in this paper it will be demonstrated that it is actually an old idea reframed in a novel way. In recent years, the notion of an ecological civilisation has inspired a burgeoning school of thought that is dedicated to finding an alternative to Western-style industrialisation-led modernisation. The notion of ecological civilisation has gained traction within Chinese civil society. This movement has been borne out of a Chinese view perceived imperative to create a counter to Western-style capitalism-driven “industrial civilisation” modernisation that has the potential to ameliorate not only China’s environmental degradation but also the same trend visible worldwide;¹³⁶ it has become the catch-cry of Chinese politicians and academics alike for their drive to clean up the country’s environment.¹³⁷ It was the dearth of English language literature on this topic that led me to start investigating this novel concept; and to this day there are few China scholars who have decided to take this topic seriously.¹³⁸ In the section that follows, I discuss the Chinese concept of *wenming* which is related to, but distinct from civilisation, and how it is used in CCP official discourse. Following, I show how the concept of ecological civilisation was first an idea that was raised in the academic community and subsequently adopted by the CCP, thereupon becoming a core part of government policy.

The Introduction of Ecological Civilisation

The prominent environmental scholar Shapiro argues that Maoist policy amounted to a declaration of war against nature;¹³⁹ if so, then Dengist economic policy can be considered as the continuation and escalation of this conflict. After almost thirty years of market-led economic growth, mainland China became beleaguered with environmental degradation of a scale and speed the world had never seen; issues such as air, water, and land pollution, food safety, cancer villages, desertification, and deforestation were widespread. In response to public disquiet, in 2007 the then leader of the CCP President Hu Jintao declared that China would strive to develop into an “ecological civilisation” (*jianshe shengtai wenming*) to combat these pressing issues. At the time it was announced, China

¹³³ In contrast with Western so-called civilising missions, the Chinese mission is inward focussed, seeking to raise education levels and to condition their large rural population into urban dwellers.

¹³⁴ Barmé, Geremie and Jeremy Goldkorn, *Civilising China = Wen Ming Zhong Hua*, China Story Yearbook, p xix.

¹³⁵ Ma, Jun, "Ecological Civilisation is the Way Forward,"

¹³⁶ See for example: 刘宗超, *生态文明观与中国可持续发展走向*, 1st ed., 生态文明丛书 (北京: 中国科学技术出版社, 1997); Liu, *An Outlook on Ecological Civilisation*.

¹³⁷ See for example: "加一个生态文明如何,"; "中共中央国务院关于加快推进生态文明建设的意见," 人民日报; Oswald, James P. F., "What Does Eco-Civilisation 生态文明 Mean?,"; 刘湘溶, *我国生态文明发展战略研究* [Xiangrong Liu] (北京: 人民出版社, 2012); 周鑫, *西方生态现代化理论与当代中国生态文明建设* [Xin Zhou] (北京: 光明日报, 2012).

¹³⁸ See for example: Geall, Sam and Adrian Ely, "Ecological Civilisation," in *Innovation for Sustainability in a Changing China: Exploring Narratives and Pathways* (STEPS Centre, 2015).

¹³⁹ Shapiro, Judith, *Mao's War Against Nature: Politics and the Environment in Revolutionary China*, Studies in Environment and History (Cambridge; New York: Cambridge University Press, 2001).

watchers did not know what to make of this pronouncement. Despite the lack of a clear definition, party members and academics touted that the term generally described a new model of economic growth based on ideas of frugality, sustainability, and environmental protection.¹⁴⁰

One key reason that this slogan may have been overlooked by China watchers is that it is the fourth in a series of civilisation or civilising slogans after Deng Xiaoping's concurrently pronounced "spiritual" and "material" civilisations (*jingshen wenming*; *wuzhi wenming*) and Jiang Zemin's "political" civilisation (*zhengzhi wenming*), which were largely inward-looking, being attempts to promote more civilised behaviours among the Chinese populace—or the government in the case of political civilisation.¹⁴¹ However, unlike the previous discourses on civilisation, the idea of ecological civilisation has international implications and is not laden with values that may be politically unsavoury to the Western palate. It both stipulates a development ideal, global in scope, urging us to rethink our relationship with nature, and, since the third plenary session of the Eighteenth CCP Central Committee, lays a relatively clear strategy on how to develop into an ecological civilisation through law and government policy. However, the CCP did not invent the expression ecological civilisation, but rather picked it up from a lively academic debate that already existed within the academic community. Before showing how ecological civilisation came into the lexicon of the party, it is important to firstly explain the concept of *wenming* and how it differs from the Western concept of civilisation. This will be illustrated by examples of how it is used in CCP discourse and why ecological *wenming* is of more significance than other *wenmings* previously espoused by the CCP.

What is Wenming?

The term *shengtai wenming* consists of two character compounds; the first, *shengtai* is simply translated into English as ecology, but when translating the second, *wenming*, we are presented with some difficulties. The term *wenming* has ancient origins; tracing its roots back to the Chinese classic text *The Book of Changes*,¹⁴² *wenming* described an ideal state of being, linked not to notions of buildings and military or political domination but to literacy, education, and Confucian ideals.¹⁴³ To get to the root of the concept *wenming*, it is useful to first compare it to a related concept, *wenhua* and understand the three characters used in these terms and their meanings. The character *wen* 文 is related to the written language, and by extension can mean art, or culture more generally. For example, *wenzi* means script or written language, and *wenyi* means literature and art. The character *ming* 明, depicting the sun and moon together, means bright or lucid and by extension can mean to understand as in *mingbai* or astute as in *jingming*. The character *hua* 化 means to change, as in chemistry *huaxue*, literally the study of changes, or modernisation *xiandaihua*, literally "becoming of the current age."

Based on the understanding of the meanings of these three characters individually, then, *wenming* (culture plus lucidity) describes an enlightened state of being, whereas *wenhua* (culture plus change) refers to *becoming* literate, or knowledgeable. These are, of course, ancient and traditional understandings of these terms. Even the English word, *culture*, is derived from a word originally pertaining to agriculture, a meaning of the word that has been lost over time. Unlike English, however, the Chinese written language uses pictograms, meaning that the ancient meanings of words are much more conspicuous. To gain a better understanding of the term in a modern sense, let us consider the

¹⁴⁰ Oswald, "What Does Eco-Civilisation 生态文明 Mean?."

¹⁴¹ Dynon, Nicholas, "'Four Civilizations' and the Evolution of Post-Mao Chinese Socialist Ideology," *The China Journal*, no. 60 (2008): p106.

¹⁴² Wang, Gungwu, *The Chineseness of China: Selected Essays* (Hong Kong ; New York: Oxford University Press, 1991), p316.

¹⁴³ *Ibid.*, pp146-8.

translations of these two terms, *wenming* and *wenhua*, from the Wenlin electronic Chinese-English dictionary. The term *wenming* can be used as either a noun or a stative verb:

n. civilisation; culture

s.v. civilised¹⁴⁴

Per this dictionary, *wenming* can be translated as either civilisation, culture, or civilised. To put it into sentence form, we could say “*zuo ge wenming ren*” meaning “be a civilised person” or “*Zhonghua wenming*,” meaning “Chinese civilisation” or “*gongjian wenming chengshi*,” meaning “building a cultured city together.” These sentences are meant to show how the translation of *wenming* can vary depending on context. As mentioned before, *wenming* is closely related to *wenhua*, the English translation of which is given as:

n. culture; civilisation

n. <PRC> education; literacy¹⁴⁵

From these examples, we can see that both terms, *wenhua* and *wenming*, can be translated as culture or civilisation depending on context. Hence we begin to see some of the issues involved around translation and thus comprehension of this term. The use of *wenhua* in modern Chinese gives us some indication of how its current meaning differs from its traditional meaning; one can talk of ancient *wenhua* (*gudai wenhua*), or say a person has a lot of *wenhua* (*ta hen you wenhua*) meaning that person is well-educated or cultured.

The importance of *wenming* as a cultural concept is outlined in this passage by Chinese academic Fang Zhaohui:

The greatest cultural ideal for China today or in the future is not to pursue economic strength, political superiority, or military might; it is not to seek the domination of all or hegemonic power over other people; it is not even to prove the superiority of the Chinese race. Instead it is to pursue the great ideas of *wenming*, an indomitable *wenming* ideal that will provide a people with an enduring time of peace and order, so they may forever stand among the nations of the world, [a *wenming* ideal] that is founded on the long-term plans for the future development of the Chinese people.¹⁴⁶

Fang here is drawing on the Confucian traditional distinction between *wenming* and barbarism (*yi xia zhi bian*). This shows that the traditional Confucian concept of *wenming* is still invoked in Chinese literature today, where the concept of *wenming* is a reference to the Confucian ideal stage of enlightenment through education, in binary opposite to barbarity. This *wenming* acts as a beacon to the unenlightened, leading not by force but by good example. So, traditionally, the Chinese idea of *wenming* has at its heart culture and literacy, whereas the European idea of civilisation is more of a technological/political concept. As Thorsten Pattberg notes:

Up to the 20th century, the Europeans believed China was not a proper “civilisation,” because it had no police force, while China accused Europe of being

¹⁴⁴ "Wenlin Software for Learning Chinese," in *Wenlin* (Honolulu, Hawa'ai: University of Hawa'ai, 2012).

¹⁴⁵ Ibid.

¹⁴⁶ 方朝晖, *文明的毁灭与新生: 儒学与中国现代性研究* [Zhaohui Fang], 第一版 ed., 中国当代学术思想文库 (北京: 中国人民大学出版社, 2011). The original text can be found in Appendix 4.

without “*wenming*” because it lacked filial piety, tolerance, human gentleness and so on.¹⁴⁷

This point brings to the core differences between the Western concept of civilisation and the traditional idea of *wenming*; however, in modern times it is equally possible in some cases for the term *wenming* to equate more or less with the English term *civilisation*.¹⁴⁸

Although originally appearing in the Book of Changes, the concept of *wenming* lost favour in the Chinese lexicon over time, reappearing in Chinese academic writings in the early part of the 20th century via Japanese translations of French writings on civilisation.¹⁴⁹ In this way, it can be argued that the modern usage of the term *wenming* is largely influenced by, and depending on context, interchangeable with the Western term *civilisation* in that it generally connotes a higher state of development,¹⁵⁰ but with its core ideal being to improve the “imagined flawed cultural character of the Chinese.”¹⁵¹ In fact, when Chinese academics explain the idea of *wenming* in the literature on ecological civilisation, they will often equate its meaning with pioneering English anthropologist E.B. Tyler’s understanding of civilisation as a progression consisting of three stages,¹⁵² whereby “Human life may be roughly classed into three great stages, Savage, Barbaric, Civilized;” savage refers to a hunter-gatherer lifestyle, barbaric is the stage where agriculture has been developed but writing has not, and the civilised stage occurs when writing is developed, allowing “intellectual and moral progress.”¹⁵³ In these Chinese texts, *wenming* is used to describe the three stages of human development as original *wenming* (*yuanshi wenming*), agricultural *wenming* (*nongye wenming*), and industrial *wenming* (*gongye wenming*). Ecological *wenming*, then, is the next step in this progression, superseding industrial *wenming* as a whole new means of existence.¹⁵⁴ If we consider this usage of the term *wenming*, it would be equally feasible to translate it using the term civilisation or society.

However, it has also been argued that as the term *wenming* has its cultural roots in China and is a uniquely Chinese concept, it contains a depth of meaning that cannot be conveyed by mere translation into another language. Direct translation in this case, Pattberg claims, amounts to “language imperialism,” whereby linguistic groups take a key foreign concept and translate it into their native language for their own convenience.¹⁵⁵ Though Pattberg’s argument may hold true for a traditional understanding of the term such as Fang Zhaohui’s *wenming* in the paragraph above, the reality is that the modern understanding of the term *wenming* has been greatly influenced by Western notions of civilisation, and has re-entered modern Chinese political discourse through translations of Western texts. It must be noted, also, that while Pattberg states that language imperialism has occurred when Western translators take the word *wenming* and translate it as *civilisation*, he does not state clearly

¹⁴⁷ Pattberg, Thorsten, "Language Imperialism, Concepts and Civilization: China versus The West," Global Research.

¹⁴⁸ For the difficulties experienced in translation, see Dutton, Michael Robert, "Lead Us Not Into Translation: Notes Toward A Theoretical Foundation For Asian Studies," *Nepantla: Views from South* 3, no. 3 (2002).

¹⁴⁹ Dynon, "'Four Civilizations' and the Evolution of Post-Mao Chinese Socialist Ideology," p89.

¹⁵⁰ Bakken, Børge, *The Exemplary Society: Human Improvement, Social Control, and the Dangers of Modernity in China*, Studies on contemporary China (Oxford [England] ; New York: Oxford University Press, 2000), p58.

¹⁵¹ Ibid., p413.

¹⁵² See for example, 严耕 and 杨志华, *生态文明的理论与系统建构* [Geng Yan], ed. 严耕, 生态文明丛书 (北京: 中央编译出版社, 2009), pp48-9.; and also 刘湘溶, *我国生态文明发展战略研究*, pp17-39.

¹⁵³ Tylor, Edward Burnett Sir, *Anthropology [electronic resource]: An Introduction to the Study of Man and Civilization / Edward Burnett Tylor*, ed. Toronto University of, Introduction to the study of man and civilization (London: London : Macmillan, 2007), pp23-4.

¹⁵⁴ 严耕 and 杨志华, *生态文明的理论与系统建构*, pp166-7.

¹⁵⁵ Pattberg, Thorsten, "Language, Imperialism and Culture - Dr. Thorsten Pattberg on GRTV," Youtube.

whether this is also the case if Chinese translators take the Western term *civilisation* and translate it into Chinese as *wenming*, as many have evidently done such as when referencing E. B. Tyler's work. Today, the term *wenming* is ubiquitous. It can be found in official statements, as well as on big letter posters, street signs, and school chalkboards. Keeping in mind the myriad ways this fluid concept can be used, I will now discuss how *wenming* is used in Chinese political discourse.

Usages of *Wenming* in CCP Discourse

Modern usage of the term *wenming* can be traced to the Deng era of politics. At a time when China announced a new economic path, it brought to the fore obvious economic disparities on a scale that had not existed under the socialist planned economy. As a deliberate strategy to encourage Chinese to engage in the accumulation of capital, and also to justify the resultant emergent inequalities, Deng pronounced what has become one of his signature proclamations, "let some get rich first"¹⁵⁶ as a way to dispel the distrust of the people. This distrust arose from a people who were still deeply suspicious of a party that was known to turn on the people, as they had during the Hundred Flowers Campaign. To further the idea that material wealth did not necessarily have to go hand-in-hand with moral corruption (as it ostensibly had in the West), Deng introduced into official discourse the dual concepts of material *wenming*, and spiritual *wenming*. Material *wenming* set an ideal material standard of living, whereas spiritual *wenming* was intended to guide the morality of these Chinese nouveau riche. It is interesting to note that this conception of *wenming* can also be considered a binary opposite to the abstract notion of pollution in an ethereal sense; Dynon notes that coupled with the spiritual *wenming* campaign was a campaign against spiritual *wuran*, spiritual pollution.¹⁵⁷ This usage of binary opposites has, to my knowledge, yet to be implemented with relation to ecological civilisation, however.

So from the view of the Chinese leadership, the term *wenming* was to create for the people an ideal to ascribe to, ethical guidelines by which to live one's life. In many ways, then, this sense of *wenming* could almost be considered an ethical standard of living. At the same time, despite its stark parallels with Western notions of civilisation, *wenming* was intended to denote an alternative modernisation—which in China is often equated to Westernisation.¹⁵⁸ In fact, during the early days of China's market reforms, Deng visited Singapore, hoping to use their model to guide China's modernisation. As Anagnost argues, although *wenming* is often identified with Westernisation, the examples of Japan and Singapore particularly inspired the Chinese government. These two countries were highly developed and they exhibited a high level of *wenming* indicating that their Chinese cultural influence would not hinder their ability to achieve a similar high level of success.¹⁵⁹ Anagnost goes further, claiming that:

The attainment of *wenming* symbolises for many the attainment of a comparable position of leadership for China in the near future.¹⁶⁰

The rise of China as an economic power has led to claims that its cultural form of civilisation is the reason for its success. One of the more engaging arguments on this culturalism is that of Jacques, from his work *When China Rules the World*, claiming its civilisational agenda will shape the global political

¹⁵⁶ *rang yibufen ren xian fuqilai*. (For Chinese, see Appendix 1)

¹⁵⁷ Dynon, "'Four Civilizations' and the Evolution of Post-Mao Chinese Socialist Ideology," p90.

¹⁵⁸ See *ibid.*, p89. See also 罗荣渠, 从【西化】到现代化 [Rongqu Luo] (合肥市: 黄山出版社, 2008).

¹⁵⁹ Anagnost, A., 'Constructing the Civilized Community', in Hutters, Theodore, Roy Bin Wong, and Pauline Yu, *Culture & State in Chinese History: Conventions, Accommodations, and Critiques*, Irvine studies in the humanities (Stanford, Calif.: Stanford University Press, 1997), p359.

¹⁶⁰ *Ibid.*, p439.

order.¹⁶¹ If Jacques and Anagnost are right, then aside from *wenming* as an ethical standard of living, it may also evolve into an ethical standard of leadership/government that may shape the world via a different understanding of the term civilisation.

Another type of *wenming* was introduced in 2002, when Jiang Zemin delivered a speech whereby political civilisation (*zhengzhi wenming*) made its debut in official Chinese rhetoric. Now that the Chinese people were given material and moral guidelines for an ideal life in an advanced society, there was cause to introduce a more *wenming* way of governing the people. This political *wenming* had at its core a focus on regulation, law, governance, and institution-building.¹⁶² The introduction of this new *wenming* coincided with Jiang's "Three Represents" (*san ge daibiao*), that promoted the idea that the CCP sought to represent advanced productive forces, the orientation of the development of China's advanced culture, and the fundamental interests of the overwhelming majority of the people in China. It is the last of the represents that is relevant to political *wenming*. The third represent led the way for inclusion in the CCP of formerly excluded members of the Chinese public—the entrepreneurs that had successfully attained a high level of material *wenming* before the rest. As Thøgersen notes, this was a deliberate move by the CCP to change their image from that of a Leninist vanguard party, to a party of civilised elites that hand-recruited the *crème de la crème* of Chinese society into the party with the goal of making China civilised and prosperous.¹⁶³ This triumvirate of *wenmings* set out ideals for a material standard of living, for a moral standard of living, and then also for a moral standard of leadership.

These ideals were implemented as a means of achieving Deng Xiaoping's vision of a moderately well-off society. However, it became increasingly obvious that China's development drive was of great detriment to its environment. Reports of air pollution, water and soil pollution, and cancer villages were on the rise, and presented a challenge to social harmony in China. It was a relatively natural progression that the CCP would adopt the well-established concept of *wenming* to enunciate their goal of environmental remediation. Providentially, the idea of *wenming* in relation to the environment had already been established in the writings of some Chinese academics.

The Origins of Shengtai Wenming

The first appearance of the phrase *shengtai wenming* (ecological civilisation) in Chinese print is from an article in the *Guangming Daily* newspaper on the 18th of February, 1985. This article is a commentary on another article that appeared in 1984 in the Moscow University journal called *Scientific Communism*, arguing that fostering an ecological civilisation is a central part of Communist education—hence, the actual term would appear to be of Russian origin. The precise terminology used in the Russian article is "экологической культуры" which directly translates as ecological culture. The author defines ecological culture as the interaction between society and nature, which takes in to consideration the modern understanding of ecology and the ecological demands of society. In its explication of society, it clearly states that these ideas are drawn from Marxist-Leninist concepts and incorporated with ecological ideas as a means of understanding the interaction between society and the environment.¹⁶⁴ In accordance with what is written in the brief *Guangming Daily* article by Zhang Shan, this early conception of ecological civilisation is portrayed as a system that synthesises social

¹⁶¹ Jacques, Martin, *When China Rules the World: The Rise of the Middle Kingdom and the End of the Western World* (London: Allen Lane an imprint of Penguin Books, 2009).

¹⁶² Dynon, "'Four Civilizations' and the Evolution of Post-Mao Chinese Socialist Ideology," p100.

¹⁶³ Thøgersen, Stig, "Parasites or Civilisers: The Legitimacy of the Chinese Communist Party in Rural Areas," *China: An International Journal* 1, no. 2 (2003): pp204-5.

¹⁶⁴ Липицкий, В. С., " Пути формирования экологической культуры личности в условиях зрелого социализма," *Вестн. Моск. ун-та. Сер. 12, Теория научного коммунизма* 2 (1984): p43.

science (also taken to mean Marxist-Leninist theory) with ecological studies, so as to restore the idea of a unity between humankind and nature and to promote the frugal use of resources to achieve harmonious development.¹⁶⁵ In this sense, it is understood as advocating an alternative mode of development, one that did not exploit the environment. This expression caught the attention of academic circles in China, as it was in 1988 that a Chinese academic named Liu Zongchao, who was deeply troubled by the worsening state of the global environment, began to use the expression ecological civilisation in his academic writings.¹⁶⁶

Liu, who is now director of the Beijing-based Ecological Civilisation Club¹⁶⁷ (*shengtai wenming julebu*) in Beijing's Zhongguan Cun district. He is a widely-read academic having completed a bachelor's degree in science, a master's degree in geoscience, a PhD in philosophy, and post-doctorate studies in economics. Since those early articles of the 1980s, Liu has dedicated much time and effort to developing and promoting the ideas of ecological civilisation, even going as far as framing his ideas as the Suist school of Chinese ecological civilisation. The character for "Su" 夔 is a variant of the character 苏, meaning to revive—the constituent components of 夔 are 更 (again) and 生 (born); the idea of rebirth is significant to this school of thought as it reflects its opinion that current industrial society can be revived and renewed into an ecologically civilised society, a sustainable society that strives for harmony between man and nature.

Since the early 1990s, Liu and his team of researchers at the Ecological Civilisation Club have been dedicating their time and resources to researching the issue of environmentally sustainable development, publishing many papers and books. In 1997, the first book in Chinese on the topic of ecological civilisation was published, called *An Ecologically Civilised Outlook and China's Trend Towards Sustainable Development*.¹⁶⁸ In this text, Liu outlines the two main themes encompassed by the term ecological civilisation; that as a post-industrial society (civilisation meaning a stage of development—a noun, ecological civilisation) and that of imbuing people with an ecological mindset (civilisation as a civilising process—an adjectival phrase, ecologically civilised).

Interestingly, two years earlier and on the other side of the world, US academic Roy Morrison used the term ecological civilisation in his book *Ecological Democracy*, to describe a post-industrial society based on ideals of sustainability and environmental protection. Morrison is an academic from the US who is currently the director of the Office for Sustainability at Southern New Hampshire University, working in the development of renewable energy technologies. In recent years, he has also been working with Chinese companies as a consultant and researcher on the adoption of renewable energy technologies and implementing policies through an organisation called China International Working Groups.¹⁶⁹ These two important contributions to the scholarship on ecological civilisation will be discussed in depth in the literature review in the following chapter.

¹⁶⁵ 张擅, "在成熟社会主义条件下培养个人生态文明的途径," *光明日报*, 18th February.

¹⁶⁶ This information comes from an interview that I conducted with Liu Zongchao, Jia Weilie, and other researchers based at the Beijing Ecological Civilisation Club in Zhongguan Cun, Beijing on March 2, 2015; see also Liu Zongchao's biography: <http://www.stwclub.org/UserShow.asp?newid=61> [Mandarin]; see also Jia Weilie's blog: http://blog.sina.com.cn/s/blog_3dfb18090100peei.html [Mandarin] – both accessed 09/12/2015.

¹⁶⁷ Whilst completing the final draft of this dissertation, I have noticed they have changed the official English name to "Beijing Academy of Ecocivilisation" (*beijing shengtai wenming gongcheng yanjiuyuan*)—literally the Beijing Eco-Civilisation Engineering Research Institute/Academy.

¹⁶⁸ 刘宗超, *生态文明观与中国可持续发展走向*.

¹⁶⁹ See their website here: <http://www.ciwg.net/>

Importantly, prior to the release of Liu's book, an important development occurred that marks the link between the discussions of ecological civilisation in the academic sphere and its adoption by the CCP into official governmental discourse. In the mid-1990s, Liu and the Ecological Civilisation Club" applied to the National Planning Office of Philosophy and Social Sciences¹⁷⁰ to conduct a research project called "Ecological Civilisation and a Foundation for Increasing Information on Ecological Ethics."¹⁷¹ This research application was subsequently approved under the aegis of Liu's home institution, Renmin University of China. The project has official approval, with Liu Zongchao as project leader, and core members of the research team being Liu Aosheng, Zhang Tianping, Zhang Xiaode, and Jia Weilie. The research project was to be conducted in conjunction with many other leading national research institutions, with some of the more prominent ones being Peking University, the Chinese Academy of Sciences, and the Chinese Academy of Social Sciences (CASS).¹⁷² This particular event is significant as this marks the formal acceptance of the concept by the CCP; this is because the National Planning Office of Philosophy and Social Sciences has strong connections to the Party's Central Propaganda Department.¹⁷³ So by the mid-1990s, the concept of ecological civilisation had officially started filtering into the consciousness of the CCP, paving the way for its full and official adoption in 2007 under Hu Jintao.

CCP Adoption of Ecological Civilisation

Although it was in 2007 that Hu Jintao proclaimed that the CCP was striving to become an ecological civilisation, this was not the first time this expression was used by the party in an official capacity. According to academic Jia Weilie, the deputy director and researcher at Beijing's Ecological Civilisation Club, the expression was first officially used in a document in 2003, entitled "The CCP Central Committee and the State Council's Decisions on the Hastening of the Development of the Forestry Industry," which stated that in the development of the forestry industry they would need to be guided by the ideal of maintaining an ecologically civilised society, which maintained the natural beauty of the environment.¹⁷⁴ Also from 2003, and slightly earlier by about twenty days, I found an opinion piece published on the Yangzhou government website entitled "How to Add Ecological Civilisation." In this article, which has no author attributed to it, it is suggested that the CCP should adopt ecological civilisation as the fourth *wenming* in its series of civilising discourses (political, spiritual, and material as mentioned above).¹⁷⁵ From these examples, it is clear that the concept of ecological civilisation entered the lexicon much earlier than its formal adoption in 2007. In these two contexts just mentioned, ecological civilisation is used in the sense of becoming ecologically civilised more so than in the sense of a post-industrial environmentally sustainable society. This indicates that even from this early stage, the idea of ecological civilisation was linked to ideas of an ethical standard of comportment. However, it was not until later that concrete guidelines detailing how exactly the CCP planned to transform China into an ecological civilisation began to emerge.

On the 8th of November 2012, the Eighteenth National Congress of the Communist Party of China began in Beijing. It was during this meeting that the Congress ratified changes to the Constitution of the CCP to include "becoming an ecological civilisation" as one of its goals, alongside economic, political, cultural, and social development, seen necessary to achieve a "comfortably well-off society" (*xiaokang shehui*) and "socialism with Chinese characteristics" (*zhongguo tese shehui zhuyi*). The

¹⁷⁰ Refer to Appendix 4.

¹⁷¹ Refer to Appendix 4.

¹⁷² 刘宗超, "研究院简介," 北京生态文明工程研究院.

¹⁷³ Holbig, Heike, "Shifting Ideologies of Research Funding: The CPC's National Planning Office for Philosophy and Social Sciences," *Journal of Current Chinese Affairs* 43, no. 2 (2014): p18.

¹⁷⁴ CCP, "中共中央 国务院关于加快林业发展的决定," 新华网. For the exact expression, see Appendix 4.

¹⁷⁵ "加一个生态文明如何".

incorporation of the concept of becoming an ecological civilisation into this constitution was an important step in the transition of this slogan from party rhetoric to important concept. It was also significant in that the incorporation of the concept of ecological civilisation warranted change to the party's previous goal of "four-in-one" (*siwei yiti*) to become "five-in-one" (*wuwei yiti*). The origins of this four-in-one slogan harkens back to 1982 during the Deng era, when his concepts of the developing of material and spiritual civilisation became known as "two-in-one" (*liangwei yiti*). At the time, Deng's idea was that these would be guiding concepts for the development of a socialist society. Later, when Jiang Zemin introduced his idea of political civilisation, it was added into the party vernacular and the slogan was updated to become "three-in-one" (*sanwei yiti*). By the Seventeenth National Congress, the previous *wenmings* were dropped, and the slogan became four-in-one, meaning that socialist development would be achieved through economic, political, cultural, and social development. The later addition of "becoming an ecological civilisation" to this concept is significant in that it officially indicates the priority given to addressing environmental issues by the CCP whilst China is in the development process. In this way, then, the status of ecological civilisation has been raised to equivalent significance to the other realms.

So it is now with this discussion of environmental degradation, environmental consciousness, and civilisation discourse in our minds that we turn to part two which comprises of the literature review and methodology. These previous chapters have served to open up various avenues of inquiry to be discussed by way of a literature review, of which I have isolated seven: environmental degradation in China, ancient and modern; causes of environmental degradation; ecological civilisation as a post-industrial society; ecological civilisation as an ethical standard of behaviour; ecological values; governance in an ecological civilisation; and working toward a solution. The following chapter discusses these topics in detail through engagement with relevant literature on the topics, in order to come to the research question that guides this thesis.

PART 2

Literature Review and Methodology

Chapter 4: Literature Review

Key Themes and Questions

As will be demonstrated in the literature review that follows, the global environmental crisis in general, and its manifestations in China in particular, are widely debated in literature. However, the issue of ecological civilisation is significantly undertheorised. When beginning my research in 2013 there was very little to be found in the English literature specifically on ecological civilisation, but that has since changed. The idea of an alternative mode of development has a longer history though; for example, Bookchin and Milbrath present ideas very closely related to ecological civilisation in all but name, and date back to as far as the 1960s. The key difference between the writings of these two scholars and more recent writings is, in a word, China and the magnitude of what economic development and ecological devastation mean in national and global terms.

In this section I review the major literature relevant to this dissertation, and have grouped them into seven themes that explore the history of, causes of, and proposed solutions to the environmental crisis. As we review the literature, there are some key questions that arise that need to be addressed, and they form the basis of this chapter. The simplest way to understand the concept of ecological civilisation is as a political slogan used by the government to promote ecological values among its people. But upon further investigation, it becomes clear that it has deeper meaning and has started a movement, generating interest and connections between scholars in China and the West.

Environmental Degradation in China, Ancient and Modern

Although ancient Chinese philosophy may have preached harmony between man and nature, the reality has proven far removed from accord. The history of China is a history of anthropogenic environmental degradation, leaving an indelible mark on the Chinese landscape. In many of the writings on ecological civilisation, it is claimed that the notion draws on ancient Chinese wisdom, such as the oft-cited *tian ren heyi* (harmony between people and the heavens), implying that ancient Chinese society lived in harmony with nature. De Burgh and Zeng argue, however, that this awe of the environment was likely induced by fear of retribution via environmental disaster, where the heavens showed displeasure for the lack of respect for nature in and of itself.¹⁷⁶ It has also been claimed that ancient China was a true “agriculture of circularity,” whereby the nutrient cycle between growing and consuming food was unbroken, very little waste was generated, and agricultural practices were adapted so as to suit local ecosystems.¹⁷⁷ However, this is not entirely the case. One of the key texts written about the environment in ancient China is Marks’ compendium of China’s environmental history, titled *China: Its Environment and History*.¹⁷⁸ Marks’ work is of significance as he demonstrates that environmental change and degradation from agricultural practices have been a continuing theme throughout the development of today’s China by the mainland’s ethnic majority, the Han Chinese. Marks draws this conclusion through his analysis of ancient sources written by the predecessors of the modern Han. The main theme of this text is that the development and expansion of civilisation in ancient China, achieved through the conversion of forests and grasslands into farmland, led to widespread loss of ecosystems and biodiversity long before the PRC was established in 1949.

Marks’ findings are supported by studies such as Liu’s 1971 *China’s Fertiliser Economy*, which showed that by the PRC era almost all of China’s cultivated land was depleted of nitrogen, that however good

¹⁷⁶ Burgh, Hugo de and Zeng Rong, *China's Environment and China's Environment Journalists: A Study* (Bristol, UK; Chicago: Intellect, 2011).

¹⁷⁷ Wen, "Four Stories in One: Environmental Protection and Rural Reconstruction in China."

¹⁷⁸ Elvin, *Retreat of the Elephants: An Environmental History of China*.

traditional practices were at returning nutrients to the soil they served merely to slow the rate of degradation.¹⁷⁹ This extensive and protracted campaign to convert so-called wastelands into usable (and taxable) farms ensured the success of the Chinese civilisation in maintaining strong power structures, but at great environmental cost. Interestingly, Marks' argument is based on the premise that the connection between energy and power is the main link that leads to environmental degradation. In this argument, ecosystems and the humans and animals that live in them are seen as energy stores able to be used by those in power to achieve their ends; the energy used to maintain these "little batteries" is ensured by the expansion of agriculture.¹⁸⁰ In his view, the exploitation of these ecosystems created reliable methods of harvesting solar energy through the creation of farms; this consistently available source of energy enabled population growth, sustained armies, and ensured the success of the Han Chinese civilisation. However, these methods were inherently unsustainable, and put a huge strain on China's ecosystems, culminating in wide-scale environmental destruction. Aside from leaving the lands barely fertile, ancient Chinese civilisation displayed a general trend toward environmental destruction through what Elvin calls their "pre-modern hydro-agrarian city-driven economic development."¹⁸¹

In Elvin's seminal text *The Retreat of the Elephants*,¹⁸² he further expands on this tendency, uniquely, through an analysis of a study of ancient Chinese poetry. Elvin argues that an analysis of poetry throughout Han Chinese history, a popular literature style in Han culture, provides a clear picture of how the Han people perceived the environment and the anthropogenic-environmental relationship, positing the ironic observation that "classical Chinese culture was as hostile to forests as it was fond of individual trees."¹⁸³ As with Marks' work, Elvin's shows that the preponderance and "success" of Han culture is largely attributed to their projects of deforestation and colonisation through expansion of cultivated land. This is embodied in the title of his work; the "retreat of the elephants" refers to the fact that Han expansion and elephant habitat have an inverse relationship, that whilst elephants were found at least as far north as Beijing, in the present era they are confined to a few small forests near the Burmese border that were either too difficult or too remote to cultivate.

Environmental historical studies on the mainland is only a recent development, with the first university course on the subject being taught in 1999;¹⁸⁴ there are, however, several noteworthy Chinese academics who have contributed valuable research toward describing this trend of environmental degradation in ancient China. Hou Renzhi who worked extensively on researching the effects of Han civilisation on desertification,¹⁸⁵ and Shi Nianhai who demonstrated the relationship between agricultural practices and land degradation on the Loess Plateau¹⁸⁶ are perhaps two of the most important. As Bao notes, there is much room for development in the field of environmental history studies in China. He also raises the point that although Chinese Confucian, Daoist, and Buddhist thought did contain elements of respect for nature, nevertheless, civilisation developed at the

¹⁷⁹ Liu and Social Science Research Council (U.S.). Committee on the Economy of China, *China's Fertilizer Economy*, p104-5.

¹⁸⁰ Marks, *China: Its Environment and History*, 56.

¹⁸¹ Elvin, Mark, "The Environmental Legacy of Imperial China," *The China Quarterly* 156, no. Special Issue: China's Environment (1998): p735.

¹⁸² Elvin, *Retreat of the Elephants: An Environmental History of China*.

¹⁸³ *Ibid.*, xvii.

¹⁸⁴ Bao, "Environmental History in China," p476.

¹⁸⁵ 侯仁之, "敦煌县南湖绿洲沙漠化蠡测: 河西走廊祁连山北麓绿洲的个案调查之一," [Renzhi Hou] *中国沙漠* 1, no. 1 (1981).

¹⁸⁶ 史念海, "司马迁规划的农牧地区分界线在黄土高原上的推移及其影响," [Nianhai Shi] *中国历史地理学论丛* 1 (1999).

expense of the environment, and this trend continued and became exacerbated in the modern era.¹⁸⁷ The history of ancient China acknowledges environmental degradation as a theme throughout, despite ancient philosophy containing elements of what today is known as environmentalism or ecological thinking.

There is abundant literature available on environmental degradation in modern China, the most influential of which will be addressed in the following section. The earliest of the writings, and which was comprehensive in scope, is Smil's *The Bad Earth: Environmental Degradation in China*,¹⁸⁸ a wordplay on the title of Buck's acclaimed novel *The Good Earth*. Smil provides extensive detail regarding problems with land, water, air, and biota that have arisen from China's modernisation. Despite being generally balanced in his coverage, he clearly identifies deforestation and loss of vegetation as the most pressing concerns facing modern-day China. Another prominent scholar of China's environmental problems, especially in America, is Economy; her seminal work is titled *The River Runs Black*. For Economy, the negative effect of widespread industrial development on the health of China's main waterways is representative of the tension between development and the environment—that whilst standards of living may be improving, this has happened at the expense of clean, useable water. Watts in his work *When a Billion Chinese Jump*.¹⁸⁹ provides a useful overview to China's environmental problems in his journalistic investigations of various regions of China. It deals with many of the most severe problems facing China today, from exploitation of nature, pollution, population, overconsumption, and the various measures the government, NGOs, and other grassroots movements are taking to remedy these issues. He highlights the global causes and manifestations of the environmental issues, when he states that "many nations show some of these symptoms." Unfortunately for China though, he continues by noting that "... they are all apparent in China, where the impacts of development are accumulated, amplified and accelerated."¹⁹⁰

However, these texts neglect to mention the rise of environmental awareness indicated through governmental practices and proclamations. Smil's work, being an early contribution to the field, did not witness the rise of environmental consciousness, as embodied by the increase of environmental vernacular in Chinese governmental documents or newspapers. He also did not witness the spread of environmental NGOs in China. However, as Smil notes, "the very fact that all the preceding pages could be written on the basis of recent Chinese studies and reports is an encouraging sign."¹⁹¹ This trend is reiterated by Economy who dedicates some space to tracing environmental awareness in the PRC beginning from its attendance at the UN Conference on the Human Environment in 1972. She also describes the increasing importance attached to remedying environmental damage and the obstacles faced in so doing. Expressing the ideological line that environmental protection requires democracy, Economy argues that an increased role for NGOs within China will have a potentially destabilising effect on the CCP leadership, potentially leading to a political collapse such as witnessed in former "Eastern-bloc" countries. *River* also stresses the role of NGOs (or GONGOs, government-operated NGOs, as they are sometimes called) working in China, and this is supported with stories of how these NGOs have been achieving successful environmental advocacy outcomes. Conspicuously missing from these works, as they portray the Chinese government as the problem not the solution, is a detailed analysis of the evolution of environmental thought within the Chinese government, and how these manifested into the promotion of ecological civilisation in 2007—this is despite the fact that

¹⁸⁷ Bao, "Environmental History in China."

¹⁸⁸ Smil, *The Bad Earth: Environmental Degradation in China*.

¹⁸⁹ Watts, Jonathan, *When a Billion Chinese Jump: How China Will Save Mankind -- or Destroy It* (London: Faber and Faber, 2010).

¹⁹⁰ *Ibid.*, 384.

¹⁹¹ Smil, *The Bad Earth: Environmental Degradation in China*, p168.

Economy's and Watts' works both were published in 2010, several years after the concept was officially announced.

Causes of Environmental Degradation

The above texts decry the tendency toward environmental degradation. However, they differ in important ways in defining the exact cause of this global problem. Smil's book was the first English language text published that critically assessed the environmental destruction of China.¹⁹² Prior to this revelation, there was a prevailing orthodoxy that socialist as opposed to capitalist development could avoid the problem of environmental degradation. Smil's book was important in dispelling this myth, and debunking eye-witnesses who attested to this socialist fallacy.¹⁹³ Smil showed that the development of China was at the expense of the environment. However, Smil's thesis suffers from a lack of understanding of the political and historical background in which China developed, paradoxically given the speed of devastation that occurred after the Deng reforms. Rather Smil blames these problems on one person, Mao Zedong. Indeed, Smil's text features anti-communist tirades within its pages. Similarly, this overtly ideological approach is amplified in Shapiro's books, in which she castigates communism in general and Mao in particular as causing China's environmental degradation, highlighted in her book *Mao's War Against Nature*. Shapiro reduces the complex relationship between economic development in China to a one-dimensional depiction of Mao as an environmental wrecker. The book's simplistic title is somewhat contradicted in the introduction, when Shapiro writes that "Mao alone was not responsible."¹⁹⁴ A clear indicator of Shapiro's contradictions is visible in how she blames Mao's encouragement of "people power" and the ensuing population explosion as a travesty against nature, only later to state that the implementation of the one-child policy was "draconian." It seems no matter what the Chinese do in regard to the environment, it is always ideologically misguided. In the end, Shapiro finds that the environmental damage during the Mao period had its causes in the CCP leadership ties to the Soviet Union, and a history of environmental degradation that began in ancient China. However, she fails to tie these issues with the general trend toward environmental degradation worldwide and the global causes of the Chinese environmental crisis and its exacerbation in the embrace of capitalism in China.

More useful in outlining the causes of China's environmental woes is Economy's *River* but again ideological predications mar the analysis.¹⁹⁵ The book begins with a story about the pollution of the Huai River, and the failed attempts at restoring its health. The text continues by outlining the basic arguments surrounding the debate about development versus the environment. She identifies the main causation in the issue of whether development, population, and foreign trade are harmful to, or beneficial for, the environment. She concludes with the view that all of the arguments for and against are equally plausible, but then drives home a negative appraisal of the Chinese political system by saying that the causations tend to "ignore the role of political institutions in shaping a country's environmental and developmental path."¹⁹⁶ Paradoxically, her study gives credit to the Chinese political process, showing that there is room for a study on how the ethics of ecological civilisation are influencing political decisions, and how this notion is shaping political institutions so they make better environmental decisions. This idea is more clearly elucidated in the collection of essays edited by Kassiola and Guo, aptly named *China's Environmental Crisis*.¹⁹⁷ Unlike Smil, Shapiro, and Economy,

¹⁹² Ibid.

¹⁹³ See for example: Kapp, K. William, "'Recycling' in Contemporary China," *Kyklos* 27, no. 2 (1974).

¹⁹⁴ Shapiro, *Mao's War Against Nature: Politics and the Environment in Revolutionary China*, p16.

¹⁹⁵ Economy, *The River Runs Black: The Environmental Challenge To China's Future*.

¹⁹⁶ Ibid., p14.

¹⁹⁷ Kassiola, Joel Jay and Sujian Guo, *China's environmental crisis : domestic and global political impacts and responses*, 1st ed., Environmental politics and theory (New York: Palgrave Macmillan, 2010).

these essays are based on the argument that China's environmental crisis is a social not an anti-CCP problem. Much of Kassiola and his contemporaries' works take this view, and so provide a useful contrast to the works mentioned above.

Before considering in more detail the collection of essays, I first draw attention to an earlier work on China's environmental issues and environmental political theory, a book chapter co-authored by Kassiola and Liu Xiaohang. This chapter, titled "The Dilemma of Western Industrial Civilisation and China's Path in the 21st Century," is taken from the collection titled *Challenges Facing Chinese Political Development*.¹⁹⁸ The main thesis of this chapter is that Western-style industrialisation led by consumerism and materialism is not only undesirable for China, but impossible. Kassiola and Liu call this "competitive materialism," and denounce this "social disease" as leading to "a social order [that], even if viewed as desirable, is not sustainable."¹⁹⁹ It is at heart a critique of consumer capitalism advocating a new path for China, and stresses both the ability and the imperative of China to pursue such a path toward sustainable development—whilst simultaneously acknowledging that at present it has not shown much indication of doing so. It outlines the roots of this mode of thinking as springing from the thought of Thomas Hobbes in his major work, *Leviathan*. Kassiola and Liu state that the roots of consumer capitalism stem from Hobbes' portrayal of human happiness as being drawn from competitive and materialist behaviour, and that this view was further added to by Descartes and Bacon who advocated that humans are the "masters" of nature which must be exploited for the advancement and welfare of humankind. Similarly, Kassiola's essay "*Confucianising Modernity and 'Modernising' Confucianism*" bears some similarities to the notion of ecological civilisation. Kassiola is an environmental political theorist, so while he recognises the importance of the contribution of the sciences toward restoring the environment, he sees the source of the environmental crisis as political, and that it can only be remedied through social change adopted by humanity as a whole. Establishing his argument through a critique of the Western industrial-capitalist method of development, he continues by saying that his is not an outright rejection of Western values but instead a call to reject those not ecologically viable.

In this way, the writings of Kassiola et al draw distinct parallels with the key texts on ecological civilisation. For instance, Morrison in his work *Ecological Democracy* sees that the key factor causing the global environmental crisis is not capitalism, but what he calls "industrialism,"²⁰⁰ to be understood as a way of organising the world and the lives of the people within it, which is characterised by two central imperatives: the maximisation of consumption and production and the maximisation of profit and/or power, that is global in scope.²⁰¹ Industrialism is not just limited to the way factories produce, but indeed is typical of large-scale agriculture, and even evident in educational systems and organisations that are typified by profit maximisation and hierarchies. In this, he notes that neither capitalism or communism are preferable, as they both embody a form of industrialism, guided by a common ideology based on the elements of hierarchy, progress, and technique (technology), and with an inherent tendency toward war.²⁰² Morrison's analysis is unique in that it focuses on industrialism as the key perpetrator of ecological damage, noting that regardless of whether it is led by a capitalist or a socialist state it still results in environmental damage. Morrison argues that this is because both systems share a commitment to hierarchical ordering, the glorification of progress, and the priority

¹⁹⁸ Guo, Sujian and Baogang Guo, *Challenges facing Chinese political development* (Lanham, MD: Lexington Books, 2007).

¹⁹⁹ *Ibid.*, p147.

²⁰⁰ The concept of industrialism was first introduced by Henri de Saint-Simon. See: Bell, Daniel, *The Coming of Post-Industrial Society: A Venture in Social Forecasting* (London: Heinemann Educational Books Ltd, 1974), p49.

²⁰¹ Morrison, Roy, *Ecological Democracy* (Boston, MA: South End Press, 1995), p8.

²⁰² *Ibid.*, pp9-10.

placed on technological development.²⁰³ His analysis is also critical of globalisation, seeing it as means of developed nations exploiting developing nations, weakening the system of nation-states, and keeping developing nations in a state of relative poverty.²⁰⁴

Likewise, Liu in his text *An Ecologically Civilised Outlook*, in which he argues that industrial society increases wealth and production, but brings with it pollution and a global environmental crisis. However, he emphasises the view that industrial society is unavoidable as it has also created the prerequisite conditions to create an ecological society, and that when an ecological society is coupled with an information society then humanity will enter the age of an ecological civilisation.²⁰⁵ Liu's explanation of industrial society is also quite illuminating. In this text, he describes an industrial society as:

Industrial society (*gongye wenming*) is a society that has “a minority at its core”, founded on the principle that “people are the masters of nature”, it relies on the productive ability of scientific technology and continuous development, it is founded on the basis of unlimited demand and use of natural resources to ensure economic growth and the voluminous flow of material goods, it satisfies modern man's material greed to the utmost limit without consideration for the needs of posterity.²⁰⁶

This view differs from Morrison's, as Liu does not take an overall negative view of industrial society, rather he sees it as a necessary step toward a better society. In Liu's words, industrial society's greatest contribution is that it gave birth to “twins”—ecological society and information society (*xinxi wenming*). Information society is how an ecological society is managed; without it an ecological civilisation would be impossible as it serves to optimise networks of distribution, making them more efficient. He continues by explaining that a major characteristic of industrial society is that its development naturally results in the loss of a functional biosphere, much as agricultural society naturally results in land degradation and eventually desertification. Liu argues that an industrial civilisation also encompasses a specific perspective on values, development, and economics that is anthropocentric, neglecting humankind's actual role in the environment and results in economic disparities whereby a small number of people and nations control a large amount of the wealth. He states that this kind of inequality is irreconcilable with ecological ethics and sustainable development.

In contrast to the views of Morrison and Liu, Clayton and Heinzekehr argue in their work *Organic Marxism* that unbridled capitalism is the main culprit responsible for the devastation evident in society and the environment in the present era. They define capitalism as “an economic system in which the most central value and goal is the creation and increase in wealth.”²⁰⁷ They argue that ancient civilisations were governed in accordance with core values articulated by leaders of those societies, fostering within society values intended to cultivate their members. However, capitalist societies of today differ from ancient civilisations in that they are run on the assumption, inspired by the likes of Hobbes—just as Kassiola argues—that the natural state of man is “the war of all against all” and John Stewart Mill, who declared that political economy views man solely as a “being who desires to possess wealth.” It is these popular views of the nature of humankind, they argue, that have led the discourse in modern politics and economics, and to that end have become a self-fulfilling prophesy. The values

²⁰³ Ibid., pp25-7.

²⁰⁴ Ibid., pp46-58.

²⁰⁵ 刘宗超, *生态文明观与中国可持续发展走向*.

²⁰⁶ Ibid., p28.

²⁰⁷ Clayton, Philip and Justin Heinzekehr, *Organic Marxism: An Alternative to Capitalism and Ecological Catastrophe*, Toward Ecological Civilization (Claremont, California: Process Century Press, 2014), p17.

of competition and ruthlessness have since been firmly implanted in the psyches of those living in capitalist systems that exist around the globe, creating a global norm that extols those values. To that end, for humanity to move away from capitalism, and the destructive patterns of behaviour that it endorses, it will require a reformulation of the role of humans in nature and the values on which society is based, in order that the transition can be successful.

Similarly, Bookchin sees the problem of environmental degradation as closely linked to the breakdown of society. As early as 1962, Bookchin was writing about the social causes of the environmental problems that arose from industrial society, such as in his seminal work *Our Synthetic Environment*, in which he wrote:

Environmentally, we are a beleaguered species – not by natural forces that inflict material scarcity and toil as unavoidable features of the human condition, but by social forces that create irrational relations and requirements as utterly needless features of our lifeways.²⁰⁸

Bookchin sees that society is beset by unhealthy power relations that arise from hierarchies, and that environmental problems, rather than being governmental, spiritual, technological, or biological are instead social. Although the environmental crises touch on these dimensions, they do not arise from any one of them. He does not subscribe to the tenets of liberal environmentalism or deep ecology, for example, as he argues that they do not address the root causes of the problem. All environmental problems—rain forest destruction, toxic waste dumps, global warming, the overconsumption of resources—exist not primarily because of issues such as anthropocentrism, misuse of technological aptitude, poor governance, or overpopulation, but instead because of our long history of domination of other humans and the natural world, and because we treat the natural world as though it were a resource available to us merely so that we may increase our power and profit.²⁰⁹

In summary, the environmental crisis is depicted via differing world views. Smil and Shapiro place the roots of environmental problems on the communist political system rather than its more complex underlying root causes. Missing in their texts is the role that US anti-communist policies played in denying the PRC access to technologies and advice that might have helped to mitigate some of the worst environmental problems. Economy identifies the need for change in political institutions, albeit a total systemic change, but also acknowledges that cultural change is necessary. However, it is Kassiola et al, as well as Morrison, Clayton, Liu, Bookchin, and Milbrath, writing from an ecological point of view, who present a better understanding of the social causes of the global environmental crisis.

From the ecological perspective, the combination of free-market capitalism with industrial modes of production and market values serves to exacerbate the potential for destruction that these systems are able to wreak on the global environment. Nowhere is this potential more salient than the example of China in the post-Mao period; certainly, the environment had already been degraded by Mao's industrial policies and agricultural modernisation; however, as discussed in the first chapter, the devastation that supervened Deng's market reforms can be attributed more widely to global market forces and industrialisation. The opening of markets and eventually accession to the WTO served to increase the speed and scale of the destruction so much so that it is unprecedented in human history, and its effects will be evident for many generations to come. It is with this understanding that the thesis turns to proposed solutions to this crisis—the creation of an ecological civilisation.

²⁰⁸ Bookchin quoted in Best, Steven, "Murray Bookchin's Theory of Social Ecology: An Appraisal of *The Ecology of Freedom*," *Organization & Environment* 11, no. 3 (1998): p336.

²⁰⁹ *Ibid.*, p337.

Ecological Civilisation as a Post-Industrial Society

One of the interpretations of the term ecological civilisation is that it refers to a new way of organising society, a transformation of the old industrial order that is characterised by waste, poverty, inequality, war, and environmental destruction. The first Chinese academic to write extensively on the concept of ecological civilisation, Liu Zongchao, uses the word civilisation in such a way that it is interchangeable with the word society.²¹⁰ As such, it may be used comparatively with other stages of human social development. Liu sees it as the inevitable next step in a progression of human societies that began with the hunter-gatherer society, which in its turn gave way to an agricultural society, which then gave way to industrial society. However, he also introduces the concept of an information civilisation or information society, explaining that most societies today are a composite of the different types of societies, with a leading society (*zhudao wenming*) and an auxiliary society (*fuzhu wenming*). For instance, he states that some developed countries can be considered information societies, which have auxiliary industrial and agricultural societies, and some countries in the early stages of development are still primarily agricultural societies that have auxiliary hunter-gatherer societies. In his view, China was both an industrial and agricultural society, with an auxiliary information society. Liu argues that to move to ecological civilisation, industrial society must utilise the full capabilities of the information age to be able to ameliorate the negative aspects of an industrial society.

A differing version of an ecological civilisation, as a post-industrial civilisation, is articulated by Jia Weilie, the Ecological Civilisation Club's assistant director, in what he calls a global outlook on ecological civilisation that is found in the preface to his book, *Toward an Ecological Civilisation*:

The 21st Century is the Century of Ecological Civilisation!

Ecological Civilisation is the integration of material civilisation and spiritual civilisation; it supersedes industrial civilisation. Information networks are the product of post-industrial society, and provide a means to optimise the distribution of resources for an ecological civilisation, ecological values will come to guide society. Ecological technologies are developing quickly; ecological industries will be able to more deeply bring about an economic revolution than information industries. China in its industrial phase lagged behind the West, but by choosing the road towards a country that is ecologically strong, the East will stand out as an Ecological Civilisation!²¹¹

In this work, Jia sees an ecological civilisation as a transition in the main mode of production that enables humankind and nature to coexist in harmony, and he posits that its core concepts consist of three key parts. The first is the idea of ecological civilisation being a new era; it is a progression from the societies or civilisation that preceded it, namely hunter/gatherer, nomadic pastoral, agricultural, and industrial. In this sense, his view is in line with Liu's as it criticises industrial society as being generally a failure, which whilst it brought material benefits to some of the human population, it also had a negative impact toward the majority that far outweighs any benefits it may have. An ecological civilisation, then, is built on the foundation of industrial and agricultural civilisation, a new era that learns from the mistakes and ignorance of the past. These two academic works on ecological civilisation serve as a sound basis for the understanding of the concept from the Chinese perspective, as they originate from the first Chinese academics to research and publish on the subject and hence had a strong influence on the academic community within China. It is also worth noting that, as their original writing pre-dates the adoption of the term ecological civilisation by the CCP, they serve as an interesting point of reference for how the concept took root in official CCP discourse, emerging from

²¹⁰ 刘宗超, *生态文明观与中国可持续发展走向*.

²¹¹ 贾卫列, 杨永岗, and 朱明双, *生态文明建设概论* (北京: 中央编译出版社, 2013).

the circulation of ideas in civil associations and the academy. That is, these two texts originate from academics who are involved in the think-tank The Ecological Civilisation Club in Beijing, whose research is solely dedicated to the study of an ecological civilisation. Whereas many Chinese scholars have incorporated the expression ecological civilisation into their writing, their understanding is generally superficial in comparison, using the expression as a blanket term for any idea that has an environmentalist leaning. In contrast, the Ecological Civilisation Club and their research portray ecological civilisation as a burgeoning field of study that is cross-institutional in nature, a body of knowledge, and an understanding of the world necessary to progress past the harmful stage that we find ourselves in at present.

With a brief introduction of the Chinese conception of ecological civilisation as a post-industrial society, I will now examine the concept as formulated by Western academics. As touched upon earlier, Morrison used the term ecological civilisation to describe an ideal post-industrial society that had as its core values ideas of environment awareness and sustainability. His work was published as early as 1995, and seems to have done so independently of the nascent group of academics writing on the topic in China. However, in the Anglophone literature the idea did not garner the same enthusiastic response as it did in China. The expression “ecological civilisation first appeared in *Ecological Democracy*, where in the opening sentence he writes:

THIS BOOK IS ABOUT FUNDAMENTAL CHANGE, about the movement from an industrial to an ecological civilisation.²¹² [capitalisation in original]

Since writing this book, ecological civilisation has been a common theme that Morrison has written about in subsequent books and publications. He also has published on his website that in 2009 at a Peking University conference on ecological civilisation he was officially acknowledged as the first academic globally to discuss ecological civilisation as a concept in a book.²¹³ Further, *Ecological Democracy* was published in Chinese in 2016. In Morrison’s vision, an ecological civilisation is a post-industrial sustainable society, whose energy needs are met sustainably, decisions are made democratically, and society is not mired in the capitalist system’s ceaseless demand for materialism and consumption-driven growth. In this world, people live in harmony with nature as opposed to exploiting nature, there exists a strong sense of community amongst civil society, and many of the social ills associated with the capitalist and industrialist modes of production are avoided. As evidenced above, ecological civilisation—and the need to transition to a post-industrial environmentally sustainable society—was established long before Morrison was writing about it. What is clear is that at a similar time and on the other side of the world in China the idea of an ecological civilisation had already been in use among some within the academic community for some years.

In *Ecological Democracy*, Morrison uses the terms ecological civilisation and ecological society interchangeably, as a description for the alternative to industrial society, which will result in a fair, equitable, and sustainable future. In his view, there are three alternatives for the future of industrial civilisation: an intensification of what is, which would result in the collapse of nations and global markets; the rise of a new authoritarianism, whereby neo-fascism, theocracy, and ethnic cleansing are adopted in order to alleviate industrial modernity’s excesses; or an ecological and democratic society

²¹² Morrison, *Ecological Democracy*, p3.

²¹³ Morrison, Roy, "Roy Morrison Biography,"

(i.e. ecological civilisation) that is a “world of unity in diversity, of voluntary cooperation, guided by the desire to sustain and protect intertwined natural and human ecologies.”²¹⁴

Morrison defines an ecological civilisation as such:

An ecological civilisation is based on diverse lifeways sustaining linked natural and social ecologies. Such a civilisation has two fundamental attributes. First, it looks at human life in terms of a dynamic and sustainable equilibrium within a flourishing living world: humanity is not at war with nature, but exists within nature. Second, an ecological civilisation means basic change in the way we live: it depends on our ability to make new social choices.²¹⁵

In this way, an ecological civilisation is democratic, in the sense that people can make decisions about the issues that affect their own lives, and that society features individual rights as well as strong family and community ties. It also features balance, meaning justice, in that wealth and opportunity are evenly distributed. The third pillar on which an ecological civilisation is built is harmony, so that all living creatures have a voice and are given consideration²¹⁶—an idea that draws many parallels with Latour’s discussion on a democracy that includes all living things in *Politics of Nature*.²¹⁷

Similar in line of thought although not using the expression ecological civilisation is what Milbrath calls “New Environmental Paradigm” (NEP) societies in his seminal work from 1989 entitled *Envisioning a Sustainable Society: Learning Our Way Out*.²¹⁸ Milbrath follows a similar logic to Morrison’s, in that he argues that modern industrial society is comprised of what he calls societies of the “Dominant Social Paradigm” (DSP), and are unsustainable due to their emphasis on growth and their constant quest for power, especially military power. His sustainable society arises from the premise that DSP societies will bring about their own demise due to the competitive nature of capitalist industrial societies. Another author who wrote prolifically on alternatives to industrial society is Bookchin, whose essay *Toward an Ecological Society* is typical of his social ecological thought,²¹⁹ which serves as a critique to Western capitalist society whose relentless consumption of resources and emphasis on growth is leading to environmental destruction. Similar to Morrison, Bookchin sees social change as being imperative to avoid global catastrophe—that unless we choose change (what he calls a libertarian, ecologically oriented society that develops a balance with nature stemming from a reverence of life), that change will be forced on us by an era of totalitarianism and social controls imposed from above. In Bookchin’s ecological society, people live in a state of sufficiency as opposed to abundance, and people within society manage social affairs, not a specialised elite. In this sense, it is more than just environmentalism, which serves as a temporary fix on a broken system—it is a revolution that reverses the trend of humanity exploiting nature for its own gain. Like Milbrath and Morrison, he sees industrial society characterised by relations of domination, and that only by transforming these power relations can we progress to an ecological society. These academics wrote prolifically about the need for drastic change in society to reverse the trend toward environmental damage and ecological destruction by moving toward a post-industrial society. Discussions with Liu and Jia revealed that they are now aware of Morrison’s work, although this only happened after the initial publications by the Ecological

²¹⁴ Morrison, *Ecological Democracy*, pp4-5.

²¹⁵ Ibid., p11.

²¹⁶ Ibid., pp12-3.

²¹⁷ Latour, Bruno, *Politics of Nature: How to Bring the Sciences into Democracy* (Cambridge, Mass.: Harvard University Press, 2004).

²¹⁸ Milbrath, Lester W., *Envisioning a Sustainable Society: Learning Our Way Out* (Albany: State University of New York Press, 1989).

²¹⁹ Bookchin, Murray, *Toward an Ecological Society* (Montréal ; Buffalo: Black Rose Books, 1980).

Civilisation Club. And whilst Milbrath and Bookchin are well-known in the US, they have had little influence in China, and among the researchers at the Ecological Civilisation Club. Using the China National Knowledge Infrastructure (CNKI) database, a search turned up several articles on Bookchin, although only published in the last few years—but no mention of Milbrath whatsoever. From this it appears there was little overt crosspollination of ideas between the US and China in the early years of formulating the concept of ecological civilisation—indeed, the Ecological Civilisation Club specifically draws on traditional Chinese thought in their writings. The ecological notions just discussed imply the need for fundamental change in consciousness toward an ecological civilisation, that is, making people *ecologically civilised* as a means of mitigating the effects of the environmental crisis. It is to this notion of awareness that the thesis now turns.

Ecological Civilisation as an Ethical Standard of Behaviour

In discussing the rise of environmental consciousness globally, three important works have had an influence on the concept of ecological civilisation in China. The modern understanding of ecology as an environmental ethic is attributed to Leopold's work, *A Sand County Almanac*, a collection of stories of his observations and musings of nature around the US, Mexico, and Canada.²²⁰ Leopold's respect for nature arose from his work as a ranger in New Mexico where he was first employed to kill predator species such as wolves and bears; during one of his expeditions he came to the realisation that predator species are an integral part of ecosystems, and from this revelation he dedicated the rest of his life to wildlife protection and wilderness preservation. These observations also serve to demonstrate how pseudoscientific rationalisations can have negative consequences, such as the assumption that conservationists held at the time that killing predator species would be desirable as it would make game species such as deer abundant. These musings, captivating on their own, also serve as parables for how when we are doing anything that involves consuming resources, we should spare some time to consider the processes by which that resource came to be consumed.²²¹ Leopold's work came at a time before the introduction of the large-scale use of chemicals, and so stands in stark contrast to Carson's *Silent Spring*.

Written in 1962, this book was conceived of to share with the US public Carson's concern that the adoption and widespread use of industrial pesticides in the US was having disastrous effects on the local environment. This book scrutinises the use of the chemical DDT in the agricultural industry, and how its indiscriminate application led to the death of many more species than was originally claimed or intended. Of further concern was that despite advertising to the contrary, DDT was also hazardous to human health. Intended to appeal to a wide audience, the journalistic style of this text is easily accessible, written to invoke fear in the reader of a potential dystopian future that may arise if the irresponsible use of synthetic chemical pesticides were to continue. However, the environmental problems in the post-World War II US were not caused by pesticides alone, but also included air pollution in urban areas, water pollution in urban and rural areas, and even radioactive fallout related to the nuclear program and the nuclear arms race. In response to this trend, in 1971 a prominent academic called Barry Commoner published a book titled *The Closing Circle*.²²² In this book, he outlined many of the environmental crises that were affecting the US at that time, as well as arguing his theory as to why these crises occurred, and how they could be stopped.

²²⁰ Leopold, Aldo, Charles Walsh Schwartz, and Aldo Leopold, *A Sand County Almanac: With Other Essays on Conservation from Round River*, [Enl. ed. (New York: Oxford University Press, 1966).

²²¹ This particular passage is a great example of what we now call ecological thinking or what Hardin calls ecolacy, which I discuss in greater detail a little later in this chapter.

²²² Commoner, Barry, *The Closing Circle: Nature, Man, and Technology*, 1st ed. (New York: Knopf, 1971).

These texts are important to mention for several reasons. First, Leopold's work was the first to popularise the notion of a "land ethic" in Western thought. He laments the growth of the eco-tourism industry by stating that "woodcraft [has become] the art of using gadgets,"²²³ indicating again the tension between development and the environment, of the capacity of modern lifestyles to destroy nature, in part by reducing people's fear and awe of the environment. This is early evidence of promoting a change in an anthropogenic worldview. Later, he talks of the need for a modern understanding of and respect for wildlife that once "fed us and shaped our culture," that so-called "modern" technological advances must be matched with a "modern" mentality that would foster in us the wisdom to respect the environment.²²⁴ In the conclusion to this text, he states what is now considered his "Golden Rule," namely that "A thing is right when it tends to preserve the integrity, stability and beauty of the biotic community. It is wrong when it tends otherwise."²²⁵ Written in the 1940s, this text served to promote ideas of ecology and conservation, and having been widely translated has also influenced Chinese academics.

In Commoner's work, he explicitly outlines the link between development and environment degradation. The initial chapters outline various instances of pollution that have occurred in the US that have led to environmental issues becoming of concern to the general populace, such as photochemical smog in Los Angeles, the pollution of Lake Erie, land pollution from overfertilisation in Illinois, and radioactive fallout from the nuclear program. These various examples are used to show that modern technology—especially that which emerged after the Second World War, with its emphasis on synthesised materials and chemicals—has largely been responsible for the widespread environmental destruction that was being witnessed. The reason that the crisis was occurring was due to a basic ignorance of how the earth's ecosystems and how all forms of life are interconnected in processes that are far more complex than had previously been imagined. Commoner argues that there was "a deep-seated failure in the effort to use the competence, the wealth, the power at human disposal for the maximum good of human beings,"²²⁶ and that the only way to avoid the crisis is through a change in the social organisation of humankind so as to "restore to nature the wealth that we borrow from it."²²⁷

The importance of Carson's *Silent Spring* lies chiefly in its accessibility: its journalistic style and convincing narrative intersperses stories of environmental calamity with advice for how to mitigate issues such as weeds and pests without these technologies, with insight into the science of ecology, and with lessons on how to perpetuate a natural balance in the ecosystem. The real value in this text lies in the influence that it had in rousing public interest in environmental issues, in encouraging the scientific community to actively investigate the potential negative effects of the chemical compounds they were creating. It also exposed the lengths to which corporations would go to protect their profits and at the expense of the health of the public and the environment. It represented the manner in which concerned individuals are able to influence movements and attract public attention through their research; there are obvious parallels between Carson's work and Chai Jing's documentary *Under The Dome* mentioned in Chapter 1.

These key texts have been influential worldwide in raising environmental awareness by exposing the link between industrialisation and environmental degradation. In the West, they promoted the

²²³ Leopold, Schwartz, and Leopold, *A Sand County Almanac: With Other Essays on Conservation from Round River*, p166.

²²⁴ *Ibid.*, p187.

²²⁵ *Ibid.*, pp224-5.

²²⁶ Commoner, *The Closing Circle: Nature, Man, and Technology*, p294.

²²⁷ *Ibid.*, p300.

introduction of strict environmental regulations that ensured that manufacturing plants acted responsibly. Unfortunately, this behaviour only applied to the nations in which these regulations were enforced and so provided the impetus for many industries to move offshore to developing countries. This has served to improve the environment in Western countries somewhat, and at the same time severely worsen the already degraded environment in countries such as China. As shown in the first chapter, the Western environmental movement and some of its key concepts—such as ecological balance—had some influence among Chinese officials. Hence these texts demonstrate that there was communication between China and the West in relation to the environmental movement, and it was these ideas that then gave rise to the notion of ecological civilisation.

The term ecological civilisation, especially when considering it in Chinese (*shengtai wenming*), along with meaning a post-industrial society, can also be construed in the sense of becoming *ecologically civilised*; in this sense, it no longer denotes an alternative civilisational model and social structure, but instead refers to an ethical standard of behaviour, of acting in an *ecologically civilised* manner to realise this alternative model. It means to be ecologically minded, to act in a manner that is mindful of the environmental consequences of our actions. In this way, it is much akin to Hardin's concept of "ecology;" the essence of Hardin's concept is that education systems must consist of three levels for people to gain a comprehensive understanding of the complexity of the world and their place in it: literacy (choosing appropriate language); numeracy (learning about quantities); and *ecology* (considering the consequences of our actions, embodied by the question "and then what?")²²⁸ With a solid grounding in *ecology*, Hardin argues, we are better equipped to consider the consequences of our actions, especially their effect on the environment, much akin to the environmental adage that you can never do merely one thing.

In Chinese, the differentiation between *shengtai wenming* as ecological civilisation and ecologically civilised is generally articulated by using the term ecologically civilised outlook (*shengtai wenming guan*) as opposed to simply *shengtai wenming*. This differentiation is made in Liu's *Ecologically Civilised Outlook*, to distinguish the two concepts; whilst the book does use the term ecological civilisation to denote a post-industrial society, it sees as more important the need to educate people about the importance of the environment so as to make them ecologically civilised. In this way, perhaps a better translation in English would be "ecologically minded" as it better describes the need for a change in mind-set to realise an ecological civilisation. The character 观 (*guan*) after *shengtai wenming* indicates an outlook, a viewpoint, or a mind-set; this is the same in Hu Jintao's famous *kexue fazhan guan*, scientific outlook on development, which became Hu's contribution to the CCP theoretical body after Mao's thought, Deng's theory, and Jiang Zemin's Three Represents. In Liu's text he gives the definition of an ecologically civilised outlook as such:

An ecologically civilised outlook relates how humankind manages the relationship between people and nature, and from this hereby leads to a position, viewpoint and method for interpersonal relationships; it is under the instruction of an ecologically civilised position, viewpoint and method that human activity will achieve positive benefits; it signifies the extent by which humankind, whilst in the process of their existence and development, are able to overcome human ignorance; it is the sum total of the process of the never-ending development of humankind's leading culture.²²⁹

Liu then examines the Western literature that is indicative of the beginnings of industrial society's process of transformation into information and ecological societies. He traces the initial stages to the

²²⁸ Hardin, Garrett, "An Ecolate View of the Human Predicament," *Alternatives* 7, no. 2 (1981): p246.

²²⁹ 刘宗超, *生态文明观与中国可持续发展走向*, p11.

1930s when Aldo Leopold started writing about what he calls his “land ethic” in *A Sand County Almanac* mentioned above. He follows this by demonstrating the evolution of environmental awareness as is evidenced from literary works whose main subject are the environmental problems that arise because of industrial society, typified by such works as Rachel Carson’s *Silent Spring* and Barry Commoner’s *A Closing Circle*. Indicative of the increasing prominence of environmental awareness, he remarks that 1972 was the year that the environmental movement gained significant momentum as that was the year of the UN’s Conference on the Human Environment that resulted in the Declaration on the Human Environment.

In the same year, he notes that the Club of Rome published its report *The Limits to Growth*, which was also widely influential in its dire predictions for the future of humanity. Other works he cites that are related to an ecologically civilised outlook as indicated by a growing concern with the issue of population growth and the calls for sustainable development, including Julian Simon’s *The Ultimate Resource*, a critique on the Malthusian idea of overpopulation. He notes Goldsmith’s *Blueprint for Survival*, which recommends that societies avoid large urban populations, reverting to smaller communities that tend to cause less environmental impact and also tend to foster a greater sense of well-being among their populations. Overlooked by Liu but equally important is Paul R. Ehrlich’s 1968 work *The Population Bomb* that was widely influential in bringing to the fore the problem of overpopulation.²³⁰ Other works that Liu sees as significant to the global rise in environmental awareness necessary to facilitate the transition from an industrial society to an ecological society are Schumacher’s *Small is Beautiful* and *The Bruntland Report* (also known as *Our Common Future*), which as mentioned earlier was the Report from the World Commission on the Environment and is credited for popularising the term sustainable development, and also Agenda 21, which was derived from the UN Earth Summit held in Rio de Janeiro in 1992.

This list of sources that Liu uses in his text are derived from the literature produced by developed countries and global international institutions. This demonstrates that in his understanding, the main critiques of industrial society have emerged from those living within industrial societies and experiencing first-hand the environmental degradation caused by industrialisation. The awareness has promoted an environmental consciousness on a global scale. Importantly, the global nature of environmental issues is highlighted, and there is no indication made by Liu that the concept of an ecological civilisation is uniquely Chinese, or that it may embody environmental awareness with Chinese characteristics. As an analysis of the main themes of key texts, it is evident that they lay bare the need for environmental awareness to become instilled in human societies across the globe. Hence, in the next section, the thesis discusses the meaning of ecological values and the implications this has for my study.

Ecological Values

Central to this idea of an ecologically civilised outlook or Hardin’s ecolacy, is the concept of ecological values. Its proponents argue that if humanity is to survive the impending ecological catastrophe that most reputable scientists are forecasting, we must place ecological values as central to all decision-making processes. Perhaps the most prevalent argument in the call for a shift in values is the argument against growth. For example, Clayton and Heinzekehr, in *Organic Marxism*, argue that the emphasis on growth that is central to national economic policy worldwide is untenable on a planet with finite resources, and therefore urgent systemic change is needed if we are to avoid the collapse of global ecosystems. Arguing that there is no such thing as a value-free society, Clayton and Heinzekehr posit that education should be imbued with knowledge and values that promote the continued existence

²³⁰ Ehrlich, Paul R., *The Population Bomb*, A Sierra Club-Ballantine book (New York,: Ballantine Books, 1968).

of life on earth and the just distribution of resources and opportunities.²³¹ The overarching goal of the Organic Marxist movement is to couple the positive features of healthy, organic communities with a Marxist emphasis on the common good. But, of course, there is a large discrepancy between thought and action, and often it is implementation where things become difficult. As Marx noted in his incomplete work, *Theses on Feuerbach*, "The philosophers have only interpreted the world, in various ways; the point is to change it."²³² Indeed, things must change if there is to be any hope for the future.

Clayton and Heinzekehr, along with Milbrath, highlight the importance of Darwin and social Darwinism that has long been discredited by academic research. However, its spectre is still to be found in the defence of libertarian capitalist or so-called neo-liberal arguments that "those who have wealth must be rich because they are more "fit" for survival, and those who lack wealth must be poor because they are "unfit.""²³³ These values have become so ingrained in society that many people in Western countries take this view as a given, that poverty is the result of poor work ethic or lack of ability. Clayton and Heinzekehr debunk this myth by drawing on Piketty's ground-breaking analysis in his text *Capital in the 21st Century* to support their argument, demonstrating that in fact, there are four factors that will, in general, determine your wealth: your access to capital; your education and training; the region of the world you come from; and your race.²³⁴ It is upon this backdrop that Clayton and Heinzekehr begin their formulation of a Marxism that not only takes into account the present-day realities of an exploitative global capitalist system that has led to widespread environmental destruction, but that also is adaptable to the different societies in which it must take root.

The argument against growth is increasingly prominent in academic debates and texts, as typified by Daly's 1996 work *Beyond Growth*,²³⁵ Jackson's 2009 *Prosperity Without Growth*,²³⁶ and think tanks such as the New Economics Foundation that are dedicated to researching this problem and disseminating this important argument.²³⁷ This discussion of the limits of growth and how the relentless pursuit of growth will lead to the collapse of ecosystems is hardly new, however. For example, Milbrath's *Envisioning a Sustainable Society* is an important and influential early work the focus of which is on how to curb the destructive tendencies of a capitalist society. Published in 1989, its focus is the same as Morrison's and Liu's, although it predates their publications by some years. In the introduction to his work, he gives a powerful critique of the notion of progress, stating that "[w]e must, somehow, learn to control our exuberance or our 'success' will lead to our extinction."²³⁸ Milbrath sees that the cause of the prevalent environmental damage is deeply engrained in Western society and its values; the only way to repair the damage that has been done is nothing less than a new society. Values such as growth and progress must be reassessed if we are to ensure the survival of life on the planet. With regards to growth, he draws an analogy with all life on the planet, saying that nothing in nature grows forever—organisms experience phased growth, and growth in early stages is natural yet is no longer desirable once an organism reaches adulthood. In his critique of progress, he states that progress is a meaningless term without the knowledge of where we are going; it would be more useful for us instead to focus on the sustainability of what we are trying to achieve.

²³¹ Clayton and Heinzekehr, *Organic Marxism: An Alternative to Capitalism and Ecological Catastrophe*, p239.

²³² Marx, Karl, "Theses on Feuerbach," Marx/Engels Internet Archive (marxists.org).

²³³ Clayton and Heinzekehr, *Organic Marxism: An Alternative to Capitalism and Ecological Catastrophe*, p42.

²³⁴ Ibid., pp44-6. See also: Piketty, Thomas and Arthur Goldhammer, *Capital in the twenty-first century*, text.

²³⁵ Daly, Herman E., *Beyond Growth : The Economics Of Sustainable Development* (Boston: Beacon Press, 1996).

²³⁶ Jackson, Tim, *Prosperity Without Growth: Economics For A Finite Planet*, 1st ed. (London ; Sterling, VA: Earthscan, 2009).

²³⁷ "The New Economics Foundation Official Website," New Economics Foundation.

²³⁸ Milbrath, *Envisioning a Sustainable Society: Learning Our Way Out*, p3.

In his lengthy critique of the notion of growth, Milbrath argues that endless growth is neither feasible nor desirable, reaching the conclusion that ecosystems will be healthier and humans will have a better quality of life if populations are controlled and consumption is brought within sustainable levels. Drawing on Margulis and Sagan's *Microcosmos* of 1986, a study of the evolution of microbes, he demonstrates how when natural balances are disturbed too severely, the natural consequences tend to be mass extinctions. It is only by changing the central values of society that we will be able to avoid environmental catastrophe and a mass extinction. Clayton and Heinzekehr argue that is probably already too late to stop climate change, glacial melt, and rising oceans, and that the future environmental catastrophe will result in many deaths. However, they argue that this impending tragedy will provide the necessary catalyst to lay the foundations of a new kind of civilisation—an ecological civilisation. It will be characterised by three main features: hybrid socioeconomic systems, moving beyond the private-public dichotomy, and moving beyond value-free education.²³⁹

Liu also has much to say about the need for values in an ecological civilisation. In *Ecologically Civilised Outlook*, he expounds on the notion of ecologically civilised values (*shengtai wenming jiazhiquan*) as follows:

Ecologically civilised values are a comprehensive value outlook and ecological economic value outlook that takes the form “environment – economy – society”; all of human activity must conform to a hybrid system whose overall interests are “environment – economy – society”; this will serve to satisfy all requirements such as the coordinated development of both humans and the environment, as well as satisfying humanity's material needs, spiritual needs and ecological needs (ecological needs refer to satisfying a person's needs for convalescence, habitat, recreation, aesthetics, healthy air and water, and a comfortable environment).²⁴⁰

In this view, an ecological civilisation is not one that completely repudiates the values of industrial society; rather, an ecological civilisation is borne out of an industrial society and necessarily has some things in common with it, such as advanced technology and productive capabilities. However, it does need to reject some of the core values and philosophies associated with industrial society, and it also needs to place a higher value on resources and information. In Liu's view, this would be achieved through building eco-industry and eco-agriculture based on the industrial model, but would be improved through practices that take into consideration an understanding of ecology and ecological and economic cycles (*shengtai xunhuan, jingji xunhuan*). Similarly, in Jia Weilie's work *Toward an Ecological Civilisation*, he sees that ecological values are essential for reimagining the goals of development and a transformation in the concept of social progress. He sees that the chief hurdle to overcome is the anthropocentric worldview that industrial society is based on, and advocates a development model that promotes the harmonious development of both humankind and nature (*yi ren yu ziran hexie fazhan*). He seeks to reconstruct the ethical and philosophical foundations of economic and social development, seeing it as the only way that humanity will be able to achieve a higher stage of development.²⁴¹ This also entails the adoption of ecological values and an ecological outlook that supersedes those of industrial society. He argues that it is essential to adopt the realisation of ecological civilisation as central to the global eco-modernisation movement; it must have ecological justice as its goal, ecological security as its foundation, and the new energy revolution as its cornerstone. His views also concur that a shift in values is essential to facilitate the transition to an

²³⁹ Clayton and Heinzekehr, *Organic Marxism: An Alternative to Capitalism and Ecological Catastrophe*, pp236-40.

²⁴⁰ 刘宗超, *生态文明观与中国可持续发展走向*, p31.

²⁴¹ 贾卫列, 杨永岗, and 朱明双, *生态文明建设概论*, pp3-4.

eco-friendly modernisation which entails shifts in knowledge, changes in governance, and improved technologies—but also importantly that these must happen on a global scale. The following section examines academic opinions of forms of governance that would be necessary for an ecological post-industrial society.

Governance in an Ecological Civilisation

An important aspect of realising an ecological civilisation is determining how it is to be governed. It is accepted that current political regimes, with their emphasis on economic growth at all costs and typified by hierarchies, are incapable of governing societies away from environmental catastrophe. For example, Morrison opines that it is essential to dismantle the nexus of power that exists in the modern industrial states, power that is embodied by the corporation and the nation-state. By empowering the masses into forming regional democratic communities based within existing nations, the power of the corporation and the nation-state would be usurped, at once creating a more democratic society whilst also shifting the balance of power. He contends that resorting to market-based methods of environmental management, such as pollution taxes or markets in pollution as being an inadequate solution to the environmental problem, as they define “certain rates of environmental degradation as acceptable.” He follows this statement with a rhetorical question: “The unasked question is, acceptable to whom, besides those who manage and those who profit?”²⁴² As he poignantly notes, measures such as these do not address the underlying issues causing the problem in the first place: market-led industrialism. This view is also held by Bookchin, who sees that environmentalism is an insufficient means to bring about an ecological society. He argues that it only serves to maintain the status-quo in societies that are defined by their ability to dominate nature; instead the hierarchical structures of domination prevalent throughout society must be dismantled to advance a more natural conception of nature and humanity’s relationship with the natural world.^{243, 244} Key to Morrison’s vision is the concept of an “ecological commons,”²⁴⁵ which he defines as a “socially enclosed . . . space or realm of activity where individual rights and responsibilities are balanced with those of the community of individuals that use the commons. The community may be a neighbourhood, town, region, nation, continent, or planet.”²⁴⁶ As he notes, this concept is “anathema to modernity and the nation state,”²⁴⁷ as it shifts the emphasis from individual property and individual rights to communal spaces and community responsibility. The property ownership then does not just entail rights of use, but also responsibilities of custodianship. Property is designated as personal instead of private to emphasise the connection between community well-being and the use of property.

The above views serve as a critique of hierarchies and domination power that are typical of industrial societies. These views are shared by Milbrath, and he proposes that hierarchies of domination should be rejected in favour of heterarchies of actualisation. He argues that although it was patriarchal societies marked by their hierarchies of domination and the glorification of competition that managed to rise and dominate the global system, if these societies continue their trajectory the result would be mass tragedy. Instead, he calls for more emphasis on cooperation so that social structures are defined by what he calls actualisation power— “power to” as opposed to “power over.” Milbrath and Bookchin have similar views on the need for dismantling power structures in society to rectify the environmental

²⁴² Morrison, *Ecological Democracy*, pp89-90.

²⁴³ Bookchin, *Toward an Ecological Society*, p59.

²⁴⁴ Bookchin, Murray, *The Ecology of Freedom: the Emergence and Dissolution of Hierarchy* (Palo Alto, Calif.: Cheshire Books, 1982).

²⁴⁵ Morrison, *Ecological Democracy*, pp171-88.

²⁴⁶ *Ibid.*, p171.

²⁴⁷ *Ibid.*, p173.

problems plaguing Western societies. Best's analysis of Bookchin's stance in this regard is enlightening. He notes that, on Bookchin's view, all environmental problems are ultimately social problems, founded in an anti-ecological and irrational society that is prone to causing crises that are unresolvable through superficial reform measures. He theorises that the disharmony between the human-nature relationship arises from dislocations within the human world, that it is ultimately hierarchical social relations couched in a class-ridden, profit-driven, and accumulation-oriented capitalist society that have given rise to the multitude of environmental problems that have emerged.²⁴⁸ This distinction between hierarchies and class is an important one, as it separates Bookchin's thought from that of Marx; he argues that Marx's idea of class is generally limited to economic relationships based on the production of goods, whereas Bookchin's hierarchies are extended to any systems of command and obedience in which "elites enjoy varying degrees of control over their subordinates without necessarily exploiting them."²⁴⁹

As for Chinese academic writings on ecological civilisation, the implications for governance are not so radical. Couched in Marxist theory, such as how to incorporate ecological values into society's "superstructure," or how ecological civilisation can help humanity realise the Marxist vision of freedom,²⁵⁰ there is no critique of hierarchies or power structures as is evident in Western writings. In an interview with some members of the Ecological Civilisation Club, it was mentioned that, especially now that the CCP have adopted the term, they must be careful in writing about topics of governance. The main problem they see is that now that it has become part of official CCP discourse they no longer have the freedom to discuss and write about the topic freely—especially with its implications for governance. It is in this light that members of the Ecological Civilisation Club have begun to reach overseas to find places where they can conduct their research outside of the PRC. At present, they are in the process of establishing a base in Milan, Italy, from which to continue their research without the hindrance of PRC interference. They also see their work as being along the lines of the Club of Rome or the Club of Budapest, and they want to establish an Ecological Civilisation Club of Rome that can engage the global community in research toward an ecological civilisation.²⁵¹ Whether or not this will come to fruition is yet to be seen, but there are already strong connections between the researchers from the Ecological Civilisation Club in Beijing and those based at Claremont under John Cobb Jr.—who are also connected with the academics behind the new school of thought called Organic Marxism—indicating that there are already networks between academic communities in the US and China whose research takes its objective as the realisation of an ecological civilisation.

Working Towards a Solution – How to Realise an Ecological Civilisation

I will now consider some of the solutions to the environmental problem put forth in these texts. In Smil's work, he outlines scant ideas as to how China can fix its environment. He notes that the first national Symposium on Ecological Equilibrium was held in Zhuzhou, Hunan, in 1980, with its chief focus being on the appropriate use of resources. Following on this theme, Smil advocates extensive recycling of raw materials and wastes, something which now has become manifest in the government emphasis of a circular economy. However, beyond recycling and population control, Smil does not offer governmental solutions. Shapiro's work is little more than an invective against "Maoism"²⁵² and the assumption that the Chinese people of the era were an army of "obedient drones" bent on assaulting

²⁴⁸ Best, "Murray Bookchin's Theory of Social Ecology: An Appraisal of *The Ecology of Freedom*," p337.

²⁴⁹ Bookchin, *The Ecology of Freedom: the Emergence and Dissolution of Hierarchy*, p4.

²⁵⁰ *生态文明建设理论卷*, ed. 陈宗兴 and 朱光辉, 2 vols., vol. 1, *生态文明建设* (北京: 学习出版社, 2014).

²⁵¹ From a meeting at the Ecological Civilisation Club on the 2nd of March, 2015.

²⁵² Maoism is an idea originating outside of China; in China, the expression "毛泽东思想" (Mao thought) is used, as his ideas are generally considered an extension of Marxism/Leninism, without a major theoretical contribution.

the natural world.²⁵³ Economy's work is more enlightening, emphasising the role of GONGOs and their work in China toward pushing for environmental remediation.

Morrison's *Ecological Democracy*, although it devotes some writing to addressing alternatives to an ecological civilisation (such as the previously mentioned global management of environmental issues with business as usual and authoritarianism), he devotes his efforts to succinctly outlining the requirements for realising an ecological civilisation, as well as many guidelines for its implementation. The turning point, he posits, will happen when popular foment arises from aspirations for a better life, from when frustrations with abuses of power and determination to build a just community arise from the people. He points out that civil society is key to its implementation, and that through the actions of association, cooperation, and confederation, civil society will create new political organisations, community groups, social clubs, non-profit corporations, businesses, and government organisations that will all serve to weaken the power in the hands of corporate bureaucracies and the state.²⁵⁴ New technologies will be implemented upon consideration of their impacts on society and the environment, and notions of employment, wages, the working week, job sharing, and the social wage will all need to be revised as part of this new society.²⁵⁵ In the closing sections of his book, he writes that "It is time for all of us to understand that we are at work in a common effort: not a movement struggling for power, but a movement for reconstruction, a movement creating, building, and nurturing what will come to be known as the community of communities, an ecological democracy."²⁵⁶ Hence we see that for Morrison, an ecological civilisation is achieved through an act of reconstruction, not destruction; it is an alternative society that is achieved not through revolution but through peaceful change in the way society is structured and a shift in society's core values.

Like Morrison, Milbrath formulated a more concrete plan of how his sustainable society or New Environmental Paradigm society would be laid out. In Milbrath's vision, these NEP societies would have six main features:

1. a high valuation on nature, including a re-evaluation of the relationship between humans and nature and emphasising environmental protection over economic growth;
2. a generalised sense of compassion towards other species, peoples, and generations;
3. plans and actions, especially with regards to technology, carefully considered to avoid risk;
4. growth limited with regards population and resource consumption
5. complete reform of society, meaning more openness and participation, emphasis on public goods, cooperation, and simple lifestyles;
6. and new politics, emphasising consultation and participation, foresight, and planning.

The similarities between the two are quite striking; however, these ideas were formulated well before the turn of the century, so I will now consider a more recent addition to the academic work on constructing a post-industrial society.

The idea of reforming society along ecological lines is explored in Kassiola's work "Confucianising Modernity and 'Modernising' Confucianism: Environmentalism and The Need for a Confucian Positive Argument for Social Change," where he draws significantly on the work of Daniel A. Bell in promoting a Confucian revival as the means to tackle China's environmental problems. He expounds the relevant tenets of Confucianism that are needed to ensure that China and by extension the rest of the developing world's development is sustainable. In his selection of Confucian values that he sees are

²⁵³ Shapiro, *Mao's War Against Nature: Politics and the Environment in Revolutionary China*, p65.

²⁵⁴ Morrison, *Ecological Democracy*, pp137-42.

²⁵⁵ *Ibid.*, p149.

²⁵⁶ *Ibid.*, p235.

needed to “revise modernity,”²⁵⁷ he identifies six values as key to sustainability: an emphasis on morality over materialism, government that is morally focussed, morality and material simplicity over material gain, the Confucian ideal of ease over the anxiety of materialist preoccupation, the understanding that all things are connected (the continuity of being), and an emphasis on Eastern philosophies that transcend modernity and Enlightenment philosophy (i.e. dualism and its dichotomies). There is significant overlap in these values that Kassiola has identified; basically he is calling for a hybrid Western/Eastern philosophical approach to the environment, with ecological preservation as the highest morality.

In *Organic Marxism*, Clayton and Heinzekehr argue that Western-style capital-based democracy and its global free-market economy has created the “greatest ecological and humanitarian catastrophe in the history of human civilisation.”²⁵⁸ To mitigate the potential effects of this impending catastrophe, they argue, humanity needs to strive to move from an industrial civilisation to an ecological civilisation; the means for achieving this are through a reformulation of Marxist thought that they have called organic Marxism. Organic Marxism utilises Marxist theory, especially its critique of market-led capitalism and combines it with ecological thinking by Alfred N. Whitehead and traditional Chinese thought, creating a comprehensive framework for realising a “post-modern ecological civilisation.” Per the authors, this has garnered attention in China, due to its many commonalities with traditional Chinese Daoist philosophies, and also with the ancient philosophical text the Yi Jing (Book of Changes).²⁵⁹ Written in 2014, it is a recent addition to the scholarship, and the authors are associated with John B. Cobb Jr. and the Centre for Process Studies in Claremont, California. It is also worth noting that this book has already been translated into Chinese and available for purchase on the online bookstore Amazon. Their association with the Centre for Process Studies means that their influence is extended to the Institute for the Postmodern Development of China,²⁶⁰ which has opened over 30 centres at universities across China devoted to the “development of constructive postmodernism in China,” guided by Whitehead’s “process thought.” Clayton and Heinzekehr argue that if the building of society is based on sustainability principles, China and the world will be able to realise the goal of building an ecological civilisation. It also argues that their “process philosophy” will become a leading mode of thought in China as it shares much in common with Chinese traditional beliefs. Interestingly, Clayton and Heinzekehr see China as being the greatest hope for the realisation of an ecological civilisation; their writing notes a paradigm shift from what Vukovich’s work *China and Orientalism* called “sinological orientalism,”²⁶¹ arguing that China is not becoming like the West but rather has the potential for a different way to a sustainable and ecological future.

Though Marxist thought is not known for its thorough dealing with environmental issues, there are some schools of thought, such as that of John Bellamy Foster and his ecological Marxism, that argue otherwise. The argument rests on a passage found in Marx’s *Grundrisse*, whereby he notes that a capitalist system, in separating wage labour and capital, also causes a separation of humanity from its

²⁵⁷ Kassiola, Joel Jay, "Confucianizing Modernity and "Modernizing" Confucianism: Environmentalism and The Need for a Confucian Positive Argument for Social Change," in *China's Environmental Crisis: Domestic and Global Political Impacts and Responses*, ed. Joel Jay Kassiola and Sujian Guo (New York: Palgrave Macmillan, 2010), pp210-13.

²⁵⁸ Clayton and Heinzekehr, *Organic Marxism: An Alternative to Capitalism and Ecological Catastrophe*, p4.

²⁵⁹ *Ibid.*, pp12-3.

²⁶⁰ "The Institute for the Postmodern Development of China - Official Website," Institute for the Postmodern Development of China.

²⁶¹ Vukovich, Daniel F., *China and Orientalism: Western Knowledge Production and the P.R.C*, Postcolonial politics (Milton Park, Abingdon, Oxon ; New York: Routledge, 2012).

natural state.²⁶² The chief reason that Marx did not write more explicitly about the subject of the environmental devastation in his works is simply, proponents of ecological Marxism argue, due to the fact that in Marx's time economic growth had not faced the limits that it has today, and hence the environmental implications of capitalism were not so apparent. Clayton and Heinzekehr's formulation of organic Marxism shows that there are indeed ecological dimensions implicit in Marx's work that must be brought out to formulate an organic Marxism. Clayton and Heinzekehr argue that organic Marxism is built upon the following basic precepts:

1. A rejection of historic determinism – organic processes are defined by change, they are drawn from webs, networks and ecosystems, not from closed systems such as prevail in Newtonian physics;
2. A rejection of meliorism and the idea of utopia;
3. Moving beyond simple analyses of production and capital to include factors such as ideas, beliefs, art and literature, philosophy, and religion and the roles they play in addressing social inequities and injustices;
4. A shift of focus exclusively on humans to include all living things and natural resources, indeed the entire planet, as being relevant to the class struggle.²⁶³

Thus organic Marxism views the impending environmental calamity facing the planet as an opportunity to reimagine social structures so that they are designed to promote the *common good*.²⁶⁴ Organic Marxism is based on values of freedom (the freedom to realise the huge potential latent within each individual and society); rights (extending beyond the civil and political realm to include economic, social, and collective rights); justice (the redistribution of power); and democracy for the common good. In this way, organic Marxism is adaptive to different societies that choose to adopt it, as, being "organic," "it grows in a system constituted by living, interconnected relationships both among its parts and with its surrounding environment."²⁶⁵ The conceptual foundation for organic Marxism is grounded in the four central features of process thinking, each of which, Clayton and Heinzekehr argue, resonate deeply with traditional Chinese philosophy: a relational view of reality, influence without determinism, aesthetic value (whereby value is by definition communal and cooperative as opposed to individual and competitive), and a balance between private and public.²⁶⁶ Importantly, Clayton and Heinzekehr show that organic Marxism is not something new, but merely the naming of a school of thought already well underway. It is important as it provides an alternative to the Western liberal philosophies that dominate the globe at present and that have led to the widespread environmental destruction evident today. It is not simply enough to state that there is a fundamental relationship between free-market capitalism and environmental destruction; it is equally urgent that an alternative be provided.

Aside from values, Liu argues that information will also play a key role in the realisation of this new ecological civilisation; an increased ability to transmit and receive information is vital to the optimal distribution of resources, to ensure both equitable and appropriate allocation of resources to those that need them. Again, this idea is not confined just to China alone; it would utilise a global information network to achieve its goals. At the time that this book was written, the Internet was a very new

²⁶² Clayton and Heinzekehr, *Organic Marxism: An Alternative to Capitalism and Ecological Catastrophe*, pp180-1.

²⁶³ *Ibid.*, pp64-7.

²⁶⁴ See for example: Daly, Herman E., John B. Cobb, and Clifford W. Cobb, *For the Common Good: Redirecting the Economy Toward Community, the Environment, and a Sustainable Future*, 2nd ed. (Boston: Beacon Press, 1994).

²⁶⁵ Clayton and Heinzekehr, *Organic Marxism: An Alternative to Capitalism and Ecological Catastrophe*, p141.

²⁶⁶ *Ibid.*, pp160-5.

technology in China, with the first email sent in 1987, and wide public access established on April 20, 1994.²⁶⁷ The potential of the Internet (or what Liu called then a developed information network (*fada xinxi wangluo*) in realising this goal was recognised as essential for establishing a global ecological civilisation. Further, the production and dissemination of information would also hasten the pace at which a nation would be able to transition through industrial society, and allow it to do so with lower consumption of resources than was needed for Western nations to develop, thus reducing the potential environmental cost of development.²⁶⁸ He envisages that developments in the Internet (or information super-highway—*xinxi gaosu gonglu*) will result in the formation of a “global brain” (*diqui nao*), a concept not dissimilar to Milbrath’s concept of “social learning,”²⁶⁹ that will be able to accumulate information about the biosphere and about the sustainable global systems that find a balance between “environment – economic – society.” In this way, it will be able to provide information for the best methods of allocation of resources to satisfy humankind’s material needs, as well as being able to provide warnings for any problems arising with resources, the biosphere, economic crises, or population as a means of preventing any of the negative effects of industrial society. In this way, an information society must coexist with an ecological society if an ecological civilisation is to be realised. Another passage that states clearly the importance of an ecological mentality is worth noting:

The mindset of an ecological society is a kind of existential and developmental consciousness that surpasses the mindset of industrial society and is constructive in nature, it traverses natural geographic regions and a society’s cultural patterns, it begins with the entirety of modern science and technology, and then takes the value of the coexistence of humankind and the biosphere as guidance for productive development, to depart from anthropocentrism and realise the centrality of the function of mutual interplay between human society and the natural world, to construct ecological production relations and economic systems, so as to ensure the continued existence and sustainable development of the human race.²⁷⁰

Liu indicates that it is imperative in the realisation of an ecological civilisation that ecological values, beliefs, and ideals form an integral part in society, relating this ethic to the concepts of material civilisation and spiritual civilisation. Liu sees material civilisation as consisting of the state of productive forces, scope of production, the extent of wealth accumulated in society, and the living conditions of the people. He describes spiritual civilisation as both increasing the level of education in society in both human and natural sciences, as well as instilling in society an ecologically sound worldview.²⁷¹ He is adopting these ideas from the Deng era and incorporating them into achieving an ecologically civilised society. It is also evident that education forms a central part of his concept; it is only in imbuing society with an ecological mindset and ecological values—or what Hardin called *ecolacy*—that an ecological civilisation can be realised. Not only is it a matter of instilling society with these values, but it is also through the amalgamation of political economy and sustainable economics that a complete economics can be realised—one that recognises the potential of science’s role in productive forces, but that also is guided by an ecological mind-set that adopts technology in such a way as to ensure sustainable production.²⁷² Finally, Liu writes that being ecologically civilised is an essential condition for the development of humankind, and that rather than it being a civilisation as

²⁶⁷ Network, China Education and Research, "Evolution of Internet in China,"

²⁶⁸ 刘宗超, *生态文明观与中国可持续发展走向*, p36.

²⁶⁹ Milbrath, *Envisioning a Sustainable Society: Learning Our Way Out*, pp88-93.

²⁷⁰ 刘宗超, *生态文明观与中国可持续发展走向*, p132.

²⁷¹ *Ibid.*, p131.

²⁷² *Ibid.*, p134.

such, he shows it as being in essence a reframing of the two civilisations of the Deng era, material and spiritual civilisation. He states that it is imperative to imbue the two with ecological values, to *ecologise* material and spiritual civilisation so that they can face the challenges of a world of finite resources, an increasing population, and a deteriorating environment.²⁷³

Research Question

By demystifying the concept ecological civilisation, it is possible to draw parallels with Western debates on environmental sustainability. The common themes address issues such as why it is necessary to transition to a post-industrial society, the different meanings of ecological civilisation, the ecological values that govern an ecological civilisation, how an ecological civilisation is governed, and how an ecological civilisation is realised. There are two ways in which the idea can be interpreted. The first is of ecological civilisation as a post-industrial society, the next stage in human development whereby economic activity is conducted in a way that does not harm the environment. The second is the idea of being ecologically civilised, akin to Hardin's *ecolacy*, which advocates the need to imbue people with ecological values, so that they will live their lives in a manner that minimises negative environmental impact. For the purposes of this dissertation, I will consider the concept of ecological civilisation in the second way, that the problem of the environment is largely a problem of morality. Although the above texts call for a shift in values, they say little about how techniques of governance may be utilised toward that end, aside from the use of education or a catastrophic crisis obliging a change in consciousness.

Many important questions have been raised in this literature review, such as: by what means does the government implement environmental remediation measures? How do we understand the reframing of environmental health as essential to the well-being of the population? Is ecological civilisation just a political slogan, or is there more to it? Environmental remediation, especially of such a large scale as that needed in China, presents the Chinese government with many challenges. However, of direct pertinence to this thesis: what does the concept of ecological civilisation tell us about the techniques and methods of environmental governance employed in China?

Framing environmental degradation as a moral problem is not new; however, it is an approach generally promoted by so-called "liberals"²⁷⁴ and a relatively novel stance for a government to take. Hence, the notion of ecological civilisation and its usage by the Chinese government, academics, and institutions is worthy of our attention. In the following section, I discuss the methodologies and rationalities for my study, which led me to relevant theories suitable for framing the answer to the research question as stated above. I will then link these theories to the practical cases in which the concept of ecological civilisation is invoked to answer the research question, so as to determine what the concept of ecological civilisation tells us about environmental governance in China.

²⁷³ Ibid., p220.

²⁷⁴ For an interesting discussion on the differences in liberal and conservative approaches to moralistic environmental governance, see: Feinberg, Matthew and Rob Willer, "The Moral Roots of Environmental Attitudes," *Psychological Science* 24, no. 1 (2013).

Chapter 5: Methodology

Trying to Understand STWM

Recent years have witnessed a formation of an intellectual salon emerge in China to debate ecological civilisation. One of the leaders of this debate is John B. Cobb Jr,²⁷⁵ an academic theologian based at the Claremont Centre for Process Thought, who discusses the notion of ecological civilisation—he also wrote one of the first articles written in English using the expression ecological civilisation (2013). This merged into a discussion on governance at the Academy of Governance (*Zhongguo xingzheng xueyuan*), the keynote speaker of which was Zhang Xiaode, an original core researcher at the National Planning Office of Philosophy and Social Sciences, one of the people involved in the study project entitled “Ecological Civilisation and a Base for Increasing Information on Ecological Ethics” within China. From these encounters, I was able to learn about Liu Zongchao and the Ecological Civilisation Club—hereafter referred to as the Club—in Beijing.

I first met with Dr. Liu in March 2015 and during our meeting, which I recorded, I learned about the origins of ecological civilisation in China, its main ideas and influences, and the hopes for ecological civilisation in the future. I was also able to obtain the original book published by Liu that is discussed in the literature review chapter, along with digital versions of many of his and other members of the Club’s subsequent works. It was at this meeting that I met Jia Weilie, also an original member of the study project approved by the National Planning Office of Philosophy and Social Sciences, one of the key researchers at the Club, and the person who is in the process of establishing a branch of the Club in Milan that will be called the Ecological Civilisation Club of Rome. It was from these meetings with Liu and Jia that I learned the most about ecological civilisation, without which this study would not be possible.

Rationale for Choice of Sources

In this study, I initially examine the concept of ecological civilisation by way of a literature review. There are hundreds of volumes and thousands of articles that use the expression ecological civilisation. The term has become a general term for anything that would vaguely fall within the category of environmentalism. One anecdotal example of this phenomenon comes from when I was at a Young Sinologists Study Programme in July 2015, the economist Li Yining presented a lecture. He briefly touched on the concept of ecological civilisation and its importance as a shift in the development model in China as a catch-all concept to mean sustainable development, and mumbled something about organic farming. This is just one case of how the term ecological civilisation is appropriated by academics who do not realise that there is a much deeper debate happening on the topic. For example, at the time of writing in December 2016, there are over 57,000 articles on ecological civilisation on the CNKI database; needless to say, they are not all affiliated with the Ecological Civilisation Club. Instead, this study focuses specifically on the literature of academics whose research is dedicated solely to ecological civilisation, such as Liu Zongchao and Jia Weilie in China, as well as Roy Morrison and Philip Clayton from the US. As their ideas contain distinct parallels with the works of Murray Bookchin and Lester Milbrath, I have included those authors in the literature review.

Conceptual Approach

In the literature review, I found seven key themes concerning the topic of ecological civilisation as it relates to environmental degradation in general and the environmental crisis in China. This serves to first show the key texts on the environmental problem, progressing through to ameliorating the environmental problems China faces today. In this, I conduct a comparative analysis of key literature

²⁷⁵ Cobb, John B., "Necessities for an Ecological Civilization," religion-online.org.

on the topic of ecological civilisation and related concepts. From the literature review, there were two clear ways to conceptualise ecological civilisation that were predominant. The first, was that of ecological civilisation as a kind of utopia—a post-modern, post-industrial society. It is presented as an alternative to industrial civilisation, which does not value human development over environmental health. The second conceptualisation of ecological civilisation is that of a value process, becoming civilised, which is a method to facilitate the shift toward a sustainable society. Invariably, if the first conceptualisation were the focus of my research, it would be futuristic and more problematic. Instead I have chosen the second conceptualisation as I feel it highlights possibly the most urgent problem—the need to change human values, especially in the context of contemporary China. As such, the focus of my study is not merely that of the environmental crisis as a moral problem that requires technological change and a shift of values. Rather, the thesis is concerned with the attempts by governing bodies in China to adopt paternalist governmental techniques to create environmental subjects. My approach takes three specific uses of ecological civilisation: its inclusion as the guiding thought for new policy and the nature of those particular policy outcomes, its use by local government in framing the environmental remediation of a heavily polluted county, and its use by grassroots movements exemplified by advocate of the NRRM Professor He Huili's Hong Nong Academy.

Methodology for Each Case Study

Policy

The first approach is by examining instances of how ecological civilisation is used in government policy and what these policy measures entail. The use of the slogan ecological civilisation by the CCP in official documents has its origins as early as 2003, although it was not officially adopted as a goal (becoming an ecological civilisation) until 2007. Five years after the official pronouncement, the CCP released a document detailing the necessary measures to be taken to realise this vision, and in the years since then, the idea has been developed further and the measures to be taken have become more specific. To demonstrate how the concept of ecological civilisation has influenced policy development, the study analyses these official CCP policy documents to ascertain the specific measures they stipulate and then analyse how these measures will or will not serve to facilitate the creation of environmental subjects.

Since the CCP adopted ecological civilisation as an official slogan, there have been three key documents released that signify its centrality to Chinese government policy. The first is the report from the third plenary session of the Eighteenth CCP Central Committee, which was the first official document to incorporate detailed guidelines for becoming an ecological civilisation. The document spoke of the “speeding up of the development of ecological civilisation systems.” The second document analysed was released in April 2015 and is entitled “The CCP Central Committee and State Council's Suggestions on the Hastening and Promotion of the Becoming an Ecological Civilisation.” This document expands on the first, providing more concrete measures to be introduced by the government to remediate environmental problems. The final document is called “An Overall Plan for Ecological System Reform.” The document was released in September 2015, and further expands on the previous document, providing evidence of how serious the CCP consider the project of environmental remediation. In keeping with standard CCP practice, the CCP introduced ecological civilisation experiments, to the special economic zones (SEZ) of the early days of reform, experimenting with the effectiveness of their proposed policy measures. These measures come under the banner of becoming an ecological civilisation, and hence have been considered for this dissertation. The last section analyses the relevant policy documents and publications so as to understand their key concepts and themes. Once I have done this, I then conduct an analysis of these policy documents and measures in accordance with the Foucauldian theoretical framework outlined in the next chapter.

Pujiang

The opportunity to conduct fieldwork in Pujiang County, Zhejiang Province was highly opportune and came about through collaboration with Dr HE Jixian from the CASS, who was involved in rural studies in the Long Bow village, which was the subject of Hinton's famous village studies *Fanshen and Shenfan*. Dr. HE provided background information on the Pujiang village that would make an ideal case study. Before development, the village was very poor, but due to local industry and the village's proximity to Shanghai and Yiwu, it took advantage of the prosperity of the reform and opening up period. As a result of this early investigation, my case study concentrated on Pujiang County and was conducted on two separate fieldtrips.

This case study draws on fieldwork undertaken firstly between the 26th of August and the 3rd of September of 2014 and secondly between the 13th to the 20th of June 2015—sixteen days in total. The fieldwork involved qualitative interviews with people based in rural areas as well as in the local county town (*xiancheng*). In developing the interviews, I applied a semi-structured method, whereby the questions were direct but also offered the chance for participants to elaborate on the answers should they so choose. The questions were exploring the relationship between economic development and ecological civilisation. Secondly, the questions were exploring how the theory of ecological civilisation was understood at the county level and whether it involved specific practices.

The design of the interviews explored the on-site tension between development and the environment, as well as trying to establish whether participants had any awareness and understanding of the concept of ecological civilisation. The initial sections of the interview asked questions related to their understanding of the environment and environmental issues in general and in their hometown, their awareness of some of the key issues affecting China and the world, and their understanding and opinions of what measures were being taken to address these issues. Following, the interview questions inquired as to their knowledge of specific environmental concepts such as *tian ren heyi* (that man and nature are inextricably linked); *wu wei* (Daoist concept of non-interference); and the notions of *wenming*, *suzhi* (population quality),²⁷⁶ and ecological civilisation.

I conducted the initial fieldwork by myself as a means of establishing an outsider's perspective of the situation on the ground in Pujiang County, which also worked against me as in general, locals are wary of strangers, especially non-Chinese. Most people were quite happy to share their stories so long as they were not being recorded. Whilst conducting fieldwork, I spent most of my time in a village staying with a local family, and remaining at different family members' houses on some nights depending on who was available to accompany me on a given day. Not all family members lived in the same village, which meant that I could compare situations in different villages around the county. Some of the time was spent with a local entrepreneur, who has since moved to Melbourne but who was back in Pujiang to oversee the running of his business, who gave me a tour of some local factories as well as a tour of the Pujiang countryside. He is one of the locals who became wealthy during the boom period, and being a wealthy businessman he was more than happy to show off his wealth; the contrast was most visible on drives through the countryside in his luxury Jaguar through areas where some people still survive by subsistence farming.

I managed to conduct interviews with eight locals, with the rationale being that, despite this small sample, those eight people were still broadly representative of the county and able to provide a comprehensive picture of their understanding of environmental problems in Pujiang, as they were from a broad cross-section of society including subsistence farmers, underemployed villagers, a

²⁷⁶ For an illuminating account of what is meant by *suzhi*, see: Jacka, Tamara, "Cultivating Citizens: *Suzhi* (Quality) Discourse in the PRC," *Positions* 17, no. 3 (2009).

restaurateur owner, a university undergraduate student, and the accountant for a village committee. After the initial fieldtrip, the data obtained was cross-referenced with articles available online via the Chinese academic article database CNKI, therein painting a fuller picture of the situation on the ground in Pujiang.

Following the initial fieldwork, I transcribed the interviews and analysed them, conceptualising the key issues pertaining to the situation in Pujiang County. Once I had this information, I conducted further discussions with Professor HE about the findings, which led to us planning a second trip, this time with official letters of introduction from Renmin University of China's School of Agricultural Economics and Rural Development (SARD) as well as the CASS. This measure was taken to facilitate interviews with officials and local business leaders to gain a more complete understanding of the situation in the county. The second trip was conducted together with HE, being based in the county town to visit officials in the relevant government departments. During this trip, we met with the assistant county leader, the Department of Environmental Protection, the Department of Archives, the Department of Statistics, and also held a panel discussion with local leaders of the Departments of Agriculture, Forestry, Construction, Resources, Market Supervision, Crystal Manufacture, Law Enforcement, Quilting, and Industrial Production. among others. We also visited some of the largest crystal manufacturing plants in the county and their general managers. Significant data was obtained from this visit, such as economic statistics and general information about the crystal industry, and efforts were made to obtain sufficient data to support this study.

Hong Nong

The case study of Hong Nong Academy grew out of my meetings with HE Huili, an active proponent of the so-called NRRM. Her greatest contribution to this movement is the Hong Nong Academy, which was established in her hometown, Luojiacun near Lingbao in Henan Province; HE was noted for her understanding of ecological civilisation. The case study is drawn from a five-day visit to the Hong Nong Academy that took place between the 26th and the 30th of January 2015. The academy is associated with the NRRM, with the classes taught at the academy aimed to guide China toward becoming an ecological civilisation.

At the time of the visit, it was the middle of winter, just before Spring Festival (*chunjie*). It was bitterly cold, dropping below freezing at night and snowing on several of the days during my visit. The local farmers were not overly busy doing farm work, although in some areas near the village the initial wheat crop had already been planted, and locals were engaged in other activities such as weaving. Despite the lack of activity, Professor HE had organised a group of around sixty university students to stay at the academy for a week-long study session learning about life in rural China. I was invited to participate, observe, and give a talk at the academy. I interviewed many of the students who had come to experience rural life, with some of the university lecturers who had accompanied them, and with members of the staff and locals who were involved with the academy. I took notes on my observations and experiences during my stay, and I observed the various activities that students, workers, and farmers participated in whilst at the academy. These interviews and observations were supplemented by dialogue with Professor HE, and further data was available online and from reading material provided by Professor HE.

Rationality for Dissertation Methodology

Through the research conducted on the topic of ecological civilisation, it was discovered that since its official adoption by the CCP in 2007, it has been used mainly in three different circumstances. The first is as the guiding thought in much of the new CCP policy, reports, and other official documents. Hence the first approach that I use in this study is examining how the CCP uses the expression ecological

civilisation in policies, and what outcomes it is attributed to as being the guiding thought. Second, ecological civilisation is used by the government in their attempts at environmental remediation, where unchecked industrial development has led to environmental degradation. A typical example is in Pujiang County, where I conducted fieldwork with the help of HE Jixian. The final instance in which the concept of ecological civilisation is frequently adopted is by grassroots movements that advocate environmental remediation. One such instance in which this is evident is that of HE Huili's Hong Nong Academy, part of the NRRM, but also strongly influenced by the ideas of an ecological civilisation that draws on traditional philosophy in efforts to address environmental issues. The methodologies used in each of these three studies are the focus of my dissertation. These three approaches—the first analysing policy, the second drawing on qualitative research taken from interviews, and the last arising from personal experiences visiting Hong Nong Academy backed up with articles by and an interview with Academy founder HE Huili—offer an incisive glance at how the concept of ecological civilisation is invoked and its core ideas implemented within China.

In the analysis, the concept of ecological civilisation is about becoming ecologically civilised, about changing people's behaviour to adhere to a set of moralistic norms. Here the Foucauldian notion of governmentality has heuristic effects, as it invokes the techniques of governance used to inculcate people to care about the environment. The incorporation of ecological civilisation into official CCP rhetoric is indicative of the priority the Chinese government attach to repairing environmental damage, and is supported by incorporating ecological values as part of the central values promoted by the CCP. Whilst in most countries environmental issues are politicised, and in some they are securitised, China is unique in that they have framed the imperative of environmental remediation as a moral issue; hence it will be evidenced that ecological civilisation entails paternalist techniques of governance paired with moralistic education utilised to create environmental subjects. Through this understanding of the CCP utilising moralistic, paternal modes of governance, this dissertation reveals a unique way of analysing the techniques of governance, framing the environment as being morally significant. The governmental techniques incorporate ecological values through political decisions and invocations. In general, this analysis shows how overtly paternalistic techniques of governance are tolerated in China, and what this illuminates about how the process of governmentalisation in China is distinctly different from that in the West.

The concept ecological civilisation in official discourse marks the inclusion of environmental health in the realm of the biopolitical, which is evidence of the environmentalisation of the Chinese state. Likewise, China's efforts to remediate environmental damage involve paternalistic techniques of governance as a response to the urgent nature of the environmental problem. However, these are examples of weak paternalism as they are employed alongside moralistic education, promoting ecological values, the successful adoption of which would make these paternalistic techniques redundant. This approach investigates three separate instances in which the concept of ecological civilisation is invoked: in the first, it is used as the guiding thought behind policies advocating paternalistic techniques for environmental remediation, as well as moralistic education in ecological values. The second is that it is promoted as the objective of a government campaign to remediate the environment using a top-down approach. Lastly, it is adopted by grassroots activists, as a bottom-up approach to address environmental issues. By simply using paternalistic techniques, environmental remediation is possible; however, ecological civilisation also has a moralistic dimension that advocates the wholesale adoption of ecological values among the Chinese population to create environmental subjects.

PART 3

Theoretical Framework: Environmentality and Paternalism

Chapter 6: The Governmentalisation of China and Environmentalism

Power is not so much a matter of imposing constraints upon citizens as “making up” citizens capable of bearing a kind of regulated freedom. Personal autonomy is not the antithesis of political power, but a key term in its exercise, the more so because most individuals are not merely subjects of power but play a part in its operations.²⁷⁷

The previous chapters have served to provide a background understanding of the causes and nature of the global environmental crisis, and especially the way it has manifested itself in China. Following, in the literature review, I considered some of the key literature related to the environmental crisis in general and ecological civilisation in particular. Moreover, it raised the question: what does the concept of ecological civilisation tell us about the techniques and methods of environmental governance employed in China? This chapter draws on the findings from the environmental literature review to build a theoretical framework for understanding ecological civilisation and China’s move to remediate the environment. Ecological civilisation is a broad concept that is relevant to the fields of economics, sociology, politics, environmental studies, philosophy, theology, and psychology to name but a few. From my analysis of the relevant literature in Chapter 2, I have identified the core theme that ecological civilisation encompasses, namely, values. The academics referred to in the previous chapter identified the need for a shift in values—that is, rejecting capitalist and industrialist values and adopting ecological ones—as core to the success of the ecological civilisation project. Hence in this dissertation I will focus on the concept of ecological civilisation in the sense of becoming ecologically civilised, on the need for people in society to become imbued with ecological values as a means of mitigating the harmful effects that development is having on the environment, and concomitantly, building the foundation for a potential transition toward the end result of an ideal post-industrial society. The concept of ecological civilisation entered the Chinese lexicon in the 1980s and since then has inspired many academic articles and books on the topic. These ideas influenced the CCP so that ecological civilisation became incorporated into the official lexicon of the CCP. This transition shows the commitment that the CCP has, ostensibly at least, to conducting government in a manner that is rationalised in accordance with ecological values. However, though the CCP’s environmental campaign is conducted under the banner of ecological civilisation, it is unlikely that their plans will incorporate many of the political changes stipulated as necessary to realise the vision of such scholars as Liu, Morrison, or Bookchin.

For people to conduct themselves in a manner that is mindful of the environment, alongside overt governmental measures there must concurrently exist subtle forms of power to regulate people’s conduct in accordance with ecological values. This idea draws on what Locke calls “the Law of Opinion or Reputation.”²⁷⁸ This law, he argues, has been responsible for governing human behaviour since time immemorial. Its main mechanisms operate through people as they approve or disapprove of the people with whom they interact, and it relies on no form of central authority to define it or enforce it. Locke argues that these “Laws of Opinion or Reputation” are generated through “civil society.” However, I will argue that central authority—as well as other actors—through moral rationalities of government, may indeed play a significant role in defining these laws. Further, through acts of weak paternalism, governments are able to modify people’s behaviour to conform with an ideal set of

²⁷⁷ Rose, Nikolas S. and Peter Miller, “Political Power Beyond the State: Problematics of Government,” *The British Journal of Sociology* 43, no. 2 (1992): p174.

²⁷⁸ Locke’s *Essay*, Book II, Ch. XXVIII para 10; 1957 p353-4 quoted in Hindess, Barry, *Discourses of Power: From Hobbes to Foucault* (Oxford, UK ; Cambridge, Mass.: Blackwell Publishers, 1995), p16.

values, which, in this case, are ecological values. Once these values are adopted as social norms, the “Law of Opinion or Reputation” ensures that members of society reinforce these ecological values.

In his 2005 anthropological study on a rural community in India, Arun Agrawal raised the important question: “When and for what reason do socially situated actors come to care about, act in relation to, and think about their actions in terms of something they identify as ‘the environment?’”²⁷⁹ In this dissertation I take a similar, yet significantly different determination on the creation of environmental subjects, a term which Arun explains as “people who care about the environment.” The question that follows from Arun’s inquiry is whether or not the ecological civilisation campaign is an attempt to create environmental subjects. Does it attempt to imbue people with the ecological values necessary for the realisation of an ecological civilisation? I will analyse the governmental practices at work under the banner of becoming an ecological civilisation utilising Foucault’s theories of governmentality, positing that, in general, the paternalistic measures being used to implement environmental reform in China are done alongside attempts to provide moralistic education in ecological values. In this, then, the ecological civilisation project includes attempts to create environmental subjects.

However, the task of imbuing a population with ecological values is challenging, especially given that environmental remediation is an urgent task requiring imminent action. The case of China is important as the CCP has already come to the conclusion that it is an urgent problem and are making efforts to slow its onset and mitigate its effects.²⁸⁰ Whereas much of the West makes the liberal assumption that people will generally act in their own interest and seek market policies to signal changes in behaviour, the discourse of the CCP is best understood as advocating recourse to what Kleinig calls a “paternalistic” style of governance. This argument assumes that people do not necessarily know what is in their best interests, and so require the government to enact policies on their behalf, much as a parent would instruct a child. This paternal approach to governance is neither new in nor unique to China (or indeed the world), but China has a long history of moralistic governance and therefore its operations are generally accepted in China. This general acceptance, I argue, is in part due to the notion of *xiao*, which never lost relevance in China when compared to Western theist governments that secularised as part of the process of governmentalisation, which diminished paternalistic forms of power.

As we have seen, people operating within a capitalist, industrialist system inherently tend to make decisions based on their self-interest, which are generally material decisions that do not take into consideration environmental concerns. To counter this, the CCP have made environmental protection an imperative by incorporating ecological values into their constitution, and are using ecological values to guide political decisions. This theoretical framing as a governance issue is best explained via the Foucauldian notion of governmentality.

²⁷⁹ Agrawal, Arun, “Environmentality: Community, Intimate Government, and the Making of Environmental Subjects in Kumaon, India,” *Current Anthropology: A World Journal of the Human Sciences* 46, no. 2 (2005): p62.

²⁸⁰ Koehn, Peter H., *China Confronts Climate Change: A Bottom-Up Perspective*, Routledge advances in climate change research (Milton Park, Abingdon, Oxon: Routledge/Earthscan, 2016).

The Governmentalisation of the State

Foucault and Government

In referring . . . to the restricted sense of the word government, one could say that power relations have been progressively governmentalised, that is to say, elaborated, rationalised, and centralised in the form of, or under the auspices of, state institutions.²⁸¹

In the Western tradition, sovereignty and legitimacy are key concepts. The capacity to act and the consent of those governed were the frames of reference used to understand the exercise of political power.²⁸² Conceptions of power were drawn from scholars such as Hobbes, whose definition acknowledged the wide variety of sources of power;²⁸³ Foucault's important contribution to this field was that he deduced from this that as sources of power are heterogeneous, power defied a useful definition, and hence little could be effectively said on power as a general concept. In this light, Foucauldian analysis instead takes as its object modalities by which power is exercised.²⁸⁴ With relation to governmental power, Foucault's novel conception of power views is spectral, from relationships of domination that are stable and hierarchical to relationships (such as familial or interpersonal) that are unstable and reversible; government lies in the middle of this spectrum.²⁸⁵ Foucault's work was significant as it diminished the centrality of the concept of sovereignty by what he famously described as "cutting off the king's head"—that "[w]e have to study power outside the model of Leviathan, outside the field delineated by juridical sovereignty and the institution of the State."²⁸⁶ On this view, sovereignty and legitimacy are considered to be just a few of many techniques by which governmental power is exercised, or the *rationalities* by which the government conducts matters of the state, and of the population over which it rules.²⁸⁷

Key to understanding the idea of government is the notion of conduct; this term, in its ambiguity, can be taken to mean the act of conducting, the way of leading others, but can also be understood as the way one comports oneself or behaves as a subject that is being conducted.²⁸⁸ Building on this idea, then, Foucault posited that government can be understood as "the conduct of conduct."²⁸⁹ With this in mind, Dean proffers the following definition of government:

. . . any more or less calculated and rational activity, undertaken by a multiplicity of authorities and agencies, employing a variety of techniques and forms of knowledge, that seeks to shape conduct by working through the desires, aspirations, interests and beliefs of various actors, for definite but shifting ends and with a diverse set of relatively unpredictable consequences, effects and outcomes.²⁹⁰

²⁸¹ Dreyfus, Hubert L. and Paul Rabinow, *Michel Foucault, Beyond Structuralism and Hermeneutics* (Chicago: University of Chicago Press, 1982), p224.

²⁸² Hindess, *Discourses of Power: From Hobbes to Foucault*, p13.

²⁸³ *Ibid.*, p141.

²⁸⁴ *Ibid.*, pp141-2.

²⁸⁵ *Ibid.*, pp97-8.

²⁸⁶ Foucault, Michel et al., *Society Must be Defended: Lectures at the Collège de France, 1975-76*, 1st ed. (New York: Picador, 2003), p34.

²⁸⁷ Hindess, *Discourses of Power: From Hobbes to Foucault*, pp97-8.

²⁸⁸ Foucault, Michel et al., *Security, Territory, Population: Lectures at the Collège de France, 1977-78* (Basingstoke; New York: Palgrave Macmillan : République Française, 2007), p193.

²⁸⁹ Foucault, Michel, *Dits et Écrits: 1954-1988*, 4 vols., Bibliothèque des sciences humaines (Paris: Editions Gallimard, 1994), p237.

²⁹⁰ Dean, Mitchell, *Governmentality: Power and Rule in Modern Society*, 2nd ed. (London; Thousand Oaks,

According to this definition, then, government is not necessarily restricted to the realm of the head of state per se, but also includes any bodies that employ techniques as a means of shaping the conduct of a population; hence, it can also include such institutions as schools, hospitals, prisons, NGOs, or others that have as their motivation definite outcomes that work to manipulate human behaviour, and indeed may also operate through one's capacity for regulating their own behaviour.²⁹¹ This also implies that those who govern are able then to regulate, control, shape, and channel human conduct to suit the specific ends that they aim to achieve.

Hence, the notion of government can be applied to a broad range of institutions, and indeed even the people themselves, that have as their goal regulation, insofar as this regulation requires the attempt to mould human conduct in a rational manner.²⁹² The idea of rationality in government can be understood as the thought process underpinning actions of governance that seeks to be clear, systematic, and explicit with regard to its actions on those being governed. This idea of rationality in the study of government then also implies another factor at play, namely, that government is linked to ideas of morality. In the sense that governments appeal to human beings to self-regulate their behaviour so it conforms with the aims of the government, as such, then government must also be viewed as a normative activity that has at its core a specific morality or set of values.²⁹³ This concept of moral governance is core to government in China. Following this logic, Daniel A. Bell argues that values are central to a paternalistic style of government, and this form of control has been present in China for centuries and continued into the PRC era with regard to the values of long-term social and economic planning.²⁹⁴

Pastoral Power and the Welfare-State

The notion of pastoral power is linked to the idea of governmental rationalities focussed on welfare. The term as denoted by Foucault is drawn from the practice that has its roots in the Western tradition, whereby the pastor is the representative of God—and the pastorate the community that is being provided for.²⁹⁵ This representation finds many expressions in the Mediterranean East, such as in Egypt (where the Pharaoh's power was symbolised by the shepherd's crook) and above all, in the Hebrews. In these traditions, God is the shepherd of man, and the pastor or king acts as the "subaltern shepherd" whom God has entrusted with the welfare and salvation of the flock.²⁹⁶ This view is contrasted with the "city-citizen" relationship that has its roots in the ancient Athenian republic. Foucault describes the Greek model as a self-governing community that serves as a microcosm for what today is known as the state.²⁹⁷ Here, the governed are "political subjects" bound by the legal framework of rights and obligations dictated by the city that gives them the status of citizens. In contrast, the shepherd-flock relationship cultivates political subjects who are both "obedient and needful."²⁹⁸ It is a combination of these two conceptions of the governed political community that has given rise to the modern notion of the welfare-state.

Dean shows that in the Athenian tradition, the individual is constructed as a *citizen* who "exercises freedoms and rights within the legal and political structure of the political community based on

Calif.: SAGE, 2010), p18.

²⁹¹ Hindess, *Discourses of Power: From Hobbes to Foucault*, p105.

²⁹² Dean, *Governmentality: Power and Rule in Modern Society*.

²⁹³ *Ibid.*, pp18-9.

²⁹⁴ Bell, Daniel, *The China Model: Political Meritocracy and the Limits of Democracy* (Princeton: Princeton University Press, 2015), p33.

²⁹⁵ Dean, *Governmentality: Power and Rule in Modern Society*, p90.

²⁹⁶ Foucault et al., *Security, Territory, Population: Lectures at the Collège de France, 1977-78*, pp123-4.

²⁹⁷ Dean, *Governmentality: Power and Rule in Modern Society*, p93.

²⁹⁸ *Ibid.*

equality with other citizens.” In the shepherd-flock conception, the individual is constructed as “a *living being* who can be *known* in depth, whose *welfare* is to be cared for as an individual and as part of a population, as one *submits* to integration within complex forms of *social solidarity*.” [emphases in original]²⁹⁹ Foucault was more explicit in defining the pastoral power of the shepherd-flock game, which he sees involves three procedures of individualisation: the first seeks to redefine individuals not in the terms of their status, birth, or their past actions, but instead by a dissection of merits and faults at each moment; second, individualisation is not attained by placing individuals in a hierarchy, but in their ability to overcome selfishness in servitude of the whole; finally individuals are produced in relation to an “internal, secret, and hidden truth,” which is to say the domain of God.³⁰⁰

In these ancient societies, the problem of welfare was universally acknowledged, albeit addressed in differing ways. In the Athenian tradition, wealthy citizens had an obligation of civic duty to bestow gifts upon the populace, such as public entertainment or banquets, for the benefit of the citizens but which also served to display social status. In the European-Christian tradition, this was expressed in the acts of charity and alms-giving, as an expression of humanity and compassion for those members of the flock who were in need.³⁰¹ This is important to note, as in both traditions there was a general expectation that society provided for its members, ensuring the welfare of those in their community. This shows that these societies considered welfare a moral imperative. In contrast, Dean notes that “today’s advanced liberal democracies have neglected to cultivate an ethical culture that can sustain concerns for social justice and the alleviation of disadvantage.”³⁰² This point reiterates the arguments of Clayton, Morrison, and Liu—outlined in the previous chapter—that capitalist industrial society at its heart lacks values that promote a moral imperative to provide for the common good.

This notion of pastoral power is of relevance to understanding how government is conducted in China as is evidenced by David Bray’s study *Social Space and Governance in Urban China*. Bray argues that during the Yan’an period a form of “revolutionary pastoral power” emerged that would greatly influence the complex institutional forms of power that emerged in the socialist state after the establishment of the PRC.³⁰³ His argument stems from his analysis that the cadres promised the people in their charge salvation by establishing communism if they would assure the victory of the revolution. On this view, the cadre acts as the pastor, the medium between the party and the people whose work is to liberate and thereby ensure the welfare of the people in accordance with the wishes of the party, which claimed to serve the people. The distinct difference between Foucault’s conception of the Christian flock and the CCP’s people, Bray argues that whilst the Christian tradition sought to promote salvation through the cultivation of an individual relationship with God, the Communist cadre promoted salvation through encouraging collective, mass effort on behalf of the party.³⁰⁴

However, the Christian pastor deals with members of the pastorate in both individual contexts (confession) and mass contexts (church services), and the pastor could easily be construed as able to promote salvation through collective effort (construction of churches, recruiting for holy wars) and by membership to exclusive groups such as the Christian community. What is important to note, though, is that historically the CCP have fostered a relationship with the Chinese people that does strongly resemble Foucault’s conception of pastoral power, with one important divergence. The Western

²⁹⁹ Ibid., pp99-100.

³⁰⁰ Foucault et al., *Security, Territory, Population: Lectures at the Collège de France, 1977-78*, p184.

³⁰¹ Dean, *Governmentality: Power and Rule in Modern Society*.

³⁰² Ibid.

³⁰³ Bray, David, *Social Space and Governance in Urban China: The Danwei System from Origins to Reform* (Stanford, Calif.: Stanford University Press, 2005), p60.

³⁰⁴ Ibid., p61.

theistic notion of God is absent, and in its place the Chinese familial notion of filial piety or *xiao*. Pastoral power has at its core ideas which are encompassed by paternalism; in this case, moral government is provided by Chinese central authorities who are doing so in the interest of protecting their flock. Foucault shows how this notion of pastoral power evolved out of religious communities, so with the evolution of the nation-state it came to encompass the population within a state. This shift marks the beginning of biopolitics that I will discuss in the next section.

Biopolitics and Environmentality

In Foucault's theory, government rationalises its actions via biopolitics. Foucault uses biopolitics to explain the shift of focus in Western societies from a form of rule over a domain or territory to rule over a population. Biopolitics is a form of politics that takes as its object the administration of living things, especially at the level of populations. It marks a shift in the way governmental practices are rationalised, by shifting the governmental ontology to those characteristics intrinsic to living beings who constitute a population such as birth-rate, hygiene, health, life expectancy, and race.³⁰⁵ As Dean notes, "[i]t is concerned with matters of life and death, with birth and propagation, with health and illness, both physical and mental, and with the processes that sustain or retard the optimisation of the life of a population."³⁰⁶ Biopolitics has at its core the notion of the administration of life—it marks the shift in a style of governance that "let people die" to one that "makes people live,"³⁰⁷—and a shift whereby governments saw it necessary to ensure the health, welfare, and safety of the populations they controlled. The other side of processes at work in the art of government is sovereignty. With its origins in feudal governance, sovereignty is contrasted with biopolitics as a deductive exercise; it is a governmental method that seeks to operate via technology that takes away from the attributes of its subjects. It is a form of rule over things, Dean notes, that seizes products, money, wealth, time, labour, bodies, or even life itself from its subject, and makes it property of the sovereign. This is to be contrasted with the biopolitical as a form of rule which, whilst also a rule over things, instead seeks to nurture these things: to increase standards of living, to increase general wealth, to realise the strength and greatness of the state, to ensure its inhabitants are prosperous and happy, and to encourage population growth—this form of rule then takes on a productive logic when contrasted with the former.³⁰⁸ Biopolitics, then, is any governing act that serves to administer the life of subjects that constitute the population of a state; sovereign power is that which enables the state to reserve the right to take the lives of subjects that constitute its population if need requires.

The emergence of biopolitics happened at a stage in which the concept of population as a political and economic problem led to a shift in governmental mentality whereby citizens were no longer viewed as subjects to be exploited but resources to be nurtured. It emerges with new technologies that enable demographic surveys of the population and economic analyses of statistical data related to production, population, and wealth—as Foucault puts it:

the two processes – the accumulation of men and the accumulation of capital – cannot be separated; it would not have been possible to solve the problem of the accumulation of men without the growth of an apparatus of production capable of both sustaining them and using them; conversely, the techniques that made the cumulative multiplicity of men

³⁰⁵ Foucault, Michel, Michel Senellart, and Collège de France., *The Birth of Biopolitics: Lectures at the Collège de France, 1978-79* (Basingstoke England ; New York: Palgrave Macmillan, 2008), p317.

³⁰⁶ Dean, *Governmentality: Power and Rule in Modern Society*, pp118-9.

³⁰⁷ Li, Tania Murray, "To Make Live or Let Die? Rural Dispossession and the Protection of Surplus Populations," *Antipode* 41, no. S1 (2009).

³⁰⁸ Dean, *Governmentality: Power and Rule in Modern Society*, p125.

useful accelerated the accumulation of capital.³⁰⁹

The process of the accumulation of capital requires a sufficient supply and quality of labour to maintain production and growth, and this is ensured through biopolitical processes that serve to ensure the health, education, and well-being of a population. Hence, to improve the welfare of the populace, it became the object of biopolitical processes that govern the necessary conditions that ensure nutrition, reproduction, hygiene, and morality that would provide and nurture a population capable of engaging in economic growth.³¹⁰

As it is a blanket term encompassing the myriad problems posed to governments by keeping a population alive and healthy; in this sense, it can be understood to include all things that are encompassed by the term lifestyle, such as economic growth and living standards.³¹¹ By extension, then, biopolitics is not simply relevant to matters of a population's lives, deaths, health, welfare, birth rate, and hygiene, but also the environment in which these activities and actions take place. Importantly, this connection with the environment is absent in Foucault's writings. According to Éric Darier, Foucault detested nature, preferring instead to visit churches and museums.³¹² Despite this, Foucauldian analysis has proven useful in understanding how the environment is governed, and how governments create environmental subjects, so that recent years have seen a burgeoning literature in the nascent field of "environmentality,"³¹³ or "eco-governmentality."³¹⁴

Arun Agrawal's studies in this field are particularly illuminating in their analysis of the processes by which subjects become environmentally minded,³¹⁵ as indeed is Lora-Wainwright's article on how rural Chinese, despite their understanding of environmental issues, become environmental subjects that learn to "live with pollution."³¹⁶ Thus these studies serve to highlight the usefulness of eco-governmentality as an analytical framework for this dissertation. The notion of eco-governmentality alters the notion of the biopolitical slightly to include what Foucault missed—that the health and welfare of a population is inextricably tied to the health of the environment in which it lives. My study departs from these in an important way. Whilst analyses such as Agrawal's demonstrate the relationship between governmental practice and subject formation, my study seeks to understand the ways the idea of ecological civilisation is used by the Chinese government in its efforts at environmental remediation, so as to understand the techniques and methods of governance employed in China. This analysis will be developed later in this chapter but first I turn to another important Foucauldian concept that is central to my study, that of governmentality.

³⁰⁹ Foucault, Michel, *Discipline and Punish: The Birth of the Prison*, 1st American ed. (New York: Pantheon Books, 1977), p221.

³¹⁰ DuBois, Marc, "The Governance of the Third World: A Foucauldian Perspective on Power Relations in Development," *Alternatives: Global, Local, Political* 16, no. 1 (1991): p9.

³¹¹ Dean, *Governmentality: Power and Rule in Modern Society*, p119.

³¹² Darier, Éric, *Discourses of the Environment* (Oxford, UK; Malden, Mass., USA: Blackwell, 1999), p6.

³¹³ Agrawal, Arun, *Environmentality: Technologies of Government and the Making of Subjects*, New ecologies for the twenty-first century (Durham: Duke University Press, 2005).

³¹⁴ See, for example, Michael Goldman's study on Laos's shift toward ecologically sustainable development: Goldman, Michael, "Eco-Governmentality and the Making of an Environmental State," in *Imperial Nature: The World Bank and Struggles for Social Justice in the Age of Globalization*, Yale Agrarian Studies Series (New Haven; London: Yale University Press, 2005), pp181-220.

³¹⁵ See for example: Agrawal, "Environmentality: Community, Intimate Government, and the Making of Environmental Subjects in Kumaon, India."

³¹⁶ Lora-Wainwright, Anna et al., "Learning to Live with Pollution: The Making of Environmental Subjects in a Chinese Industrialized Village," *The China Journal* 68 (2012).

Governmentality

The important question that first must be asked, of course, is whether the concept of governmentality is applicable to the Chinese context. There are many academics who utilise the notion of governmentality to understand governmental practices in a non-Western context, and indeed many who apply this to China. As Sigley notes, when applying Western theories and methodologies of knowledge to the case of China, we must do so keeping in mind that the conditions that gave rise to the modern Chinese state are distinctly different from those in the West.³¹⁷ For instance, the Chinese experiences of pastoral power and the welfare state are distinctly different from those in the West. While in the West, the secularisation of the state caused a disinclination toward the use of paternalistic techniques of governance, in China the non-religious idea of *xiao* maintains relevance and can lead to more acceptance of paternalistic measures. Indeed, this idea of *xiao* as applied to the modern state strengthens the role of the authority figure, legitimating paternalistic techniques, which are perceived to be implemented out of a concern for the well-being of the national community. This line of reasoning demonstrates that the idea of the government having moral authority has maintained relevance in China today.

The concept of governmentality is an extension of Foucault's conception of government that, at its core, provides a framework for understanding the relationship between the state and its population. Governmentality can be broadly understood as the art of governing; it shifts the reference of analysis of political power to the *rationalities* behind the methods governments employ to govern populations within their political authority as a means of achieving their political ends. Zhang, in his work on governmentality in China, shows that under sovereignty the king had the ability to deny an individual their wants, in contrast, the difference with the modern states is that under governmentality, the focus shifts to the state's ability to satisfy the wants of the population.³¹⁸ In the previous sections, we saw how the state progressed from a mode of government defined by sovereignty, whereby the sovereign has the power to let people die to modes of governance that make people live, or that foster the well-being of a population.

This distinction between government and governance is important, as outlined by Yu Keping, who argues that while governmental power always operates from top-down or bottom-up by means of bureaucracy, statutes, orders, and coercion, governance is different in that it operates interactively, both top-down and bottom-up, by means of coordination, collaboration, social networking, neighbourhood, negotiation, consensus, or identity.³¹⁹ Thus, governmentality marks a shift from government to governance, of less imposition and more interaction, of governments fostering and developing rather than compelling and coercing a population. As noted by key Foucauldian scholars Rose and Miller, the term governmentality seeks to draw attention to a manner of thought and action whose embodiment is found in attempts to know and govern the health, happiness, and wealth of populations.³²⁰

In short, governmentality is a combination of powers that work on a population by roughly three key means. The first governs through government, the conventional understanding of the word, acting in the manner of a sovereign, imposing from above. The second governs through institutions of discipline,

³¹⁷ Sigley, Gary, "Chinese Governmentalities: Government, Governance and the Socialist Market Economy," *Economy and Society* 35, no. 4 (2006): p488.

³¹⁸ Zhang, Everett, Arthur Kleinman, and Weiming Tu, *Governance of Life in Chinese Moral Experience: The Quest for an Adequate Life* (New York: Routledge, 2011), p10.

³¹⁹ Yu, Keping, "Toward an Incremental Democracy and Governance: Chinese Theories and Assessment Criteria," *New Political Science* 24, no. 2 (2002): p195.

³²⁰ Rose and Miller, "Political Power Beyond the State: Problematics of Government," p174.

such as hospitals, schools, and prisons, which are run by specialists trained in ways of cultivating and disciplining human life. The third governs through empowering the individual, by self-governance. This happens when the subject's desires become synchronised with the values promoted by states, markets, or other forces of governance.³²¹

As Dean notes, these mentalities of government highlight the way the rationality behind practices of government are explicit and embedded in language as well as by other techniques.³²² Further, he argues that these rationalities of government are composed of four main aspects that assist in the analysis of the ethical government of the self, as follows:³²³

1. *Ontology - What*: This refers to that which will be acted upon, or the "governed or ethical substance." That is, what is it that the governing body has as its target; in the case of ecological civilisation according to Morrison or Liu, the substance being governed is people's values.
2. *Ascetics - How*: This refers to how the target of governance is governed, or what can be called the "governing or ethical work." This includes procedures for monitoring, management, and rehabilitation of individuals seen as deviant to or noncompliant with the stated aims of the governing body. For example, attempts by the Chinese government to monitor and manage environmental degradation.
3. *Deontology - Who*: This aspect of governmentality deals with who the subject is whilst being governed in such a way, the mode in which an individual is subjectified, or "the governable or ethical subject." It is the subject that adheres to the norms espoused by an instance of governmentality. In this case, it is the people of China who collectively are acting in a manner detrimental to the environment, who through the actions of the "governing or ethical work" change their habits and actions in ways that adhere to and promote ecological values.
4. *Teleology - Why*: The final of the four aspects of governmentality deals with the reasons driving the act of governing or being governed. Dean calls this the "telos of governmental or ethic practices." In the case of this study, the adoption of ecological civilisation as a concept by Chinese academics, and subsequently by the CCP for guiding policy decisions, has arisen due to the perceived imperative to remediate environmental degradation and its negative effects on the population of China. However, in this case the aims to be achieved may differ somewhat; whereas academics writing on ecological civilisation aim to restructure society along ecological lines, the goals of the CCP may be more modest, seeking only to address immediate issues that affect economic development.

It is with these four aspects of governmentality—ontology, ascetics, deontology, and teleology—that we are able to analyse techniques of governance. By determining governmental rationalities in this way, we gain insight into the relationship between the government and its population, the means by which the health, happiness, and wealth of populations are secured. Finally, it is important to note that all practices of the government of the self or of others implies the existence of an end, or a desired outcome to be achieved.³²⁴ This could be something as simple and achievable as health and well-being, or it could be a normative ideal such as utopia or ecological civilisation that, whilst unlikely to be

³²¹ Greenhalgh, Susan, "Governing Chinese Life: From Sovereignty to Biopolitical Governance," in *Governance of Life in Chinese Moral Experience: The Quest for an Adequate Life*, ed. Everett Zhang, Arthur Kleinman, and Weiming Tu (New York: Routledge, 2011), p150.

³²² Dean, *Governmentality: Power and Rule in Modern Society*, p25.

³²³ *Ibid.*, pp26-7.

³²⁴ *Ibid.*, p27.

realised (at least in the manner laid out by theoreticians), still provide the impetus for such rationalities of government. As Greenhalgh notes, there is an increasing trend in China whereby the governance of the population works through granting individuals the agency and the freedom to pursue their desires, interests, choices, and rights. But she then notes that it is governing authorities who shape those desires, needs, and choices to create subjects who are able to enjoy this freedom sensibly.³²⁵ Ecological civilisation falls into line with this trend, in the efforts by governing authorities to shape people's desires to conform with the goal of environmental rejuvenation. Having presented the Foucauldian theory of the rationalities of government behind the CCP's adoption of ecological civilisation, the dissertation will introduce the concept of paternalism, relating to the actions of government.

³²⁵ Greenhalgh, "Governing Chinese Life," p155-6.

Chapter 7: On Paternalism

Mill and Paternalism

Central to the CCP's adoption of ecological civilisation as a governmental technique is paternalism. Paternalism has a long history in studies of governance, with most discussions drawing on John Stuart Mill's foundational work *On Liberty*. The main thesis of Mill's work is considered an argument against paternalism, whereby he states that:

. . . the sole end for which mankind are warranted, individually or collectively, in interfering with the liberty of action of any of their number, is self-protection. That the only purpose for which power can be rightfully exercised over any member of a civilised community, against his will, is to prevent harm to others. He cannot rightfully be compelled to do or forbear because it will be better for him to do so, because it will make him happier, because, in the opinion of others, to do so would be wise, or even right.³²⁶

In most instances, Mill argues that people should not be interfered with by others, even when it would prevent that person from being harmed, except in the special circumstance that a person's conduct would serve to harm another. In his discussion on Mill's work, Young notes that Mill argues against paternalism on at least four main grounds: that competent people are better aware of their own interests than others, especially governments; that paternalistic actions that interfere with a person's autonomy are prone to error, especially those undertaken by governments, as they rely on general presumptions and hence are easily misapplied; that as paternalistic interventions fail to respect individual liberties, it follows that they fail to treat individuals as equals; and finally, that individuals learn best through making their own mistakes, hence paternalistic intervention is not conducive to the development of individual character.³²⁷

As will be demonstrated in the final part of this dissertation, the techniques of governance used by the Chinese government to ameliorate environmental damage are overtly paternalistic. In Mill's view, they would be unwarranted as they interfere with the people's liberty of action. Some questions that leaves us with then include: Are paternalistic techniques of governance ever warranted? If the lifestyles of a minority affect the health and well-being of a majority, should we interfere with the minority's "liberty of action?" In a paternalistic philosophy, in contrast to the liberal frame, the answer must be yes.

Paternalism in China

Before developing a definition of paternalism, it is important to note that paternalistic governance has been a feature of government in China since ancient times. It is a prominent feature in Confucian thought and remains central to Chinese social structure. Despite this, the leading theorists on the topic of paternalism are Western scholars, and the Chinese usage of the term, generally *fu'ai zhuyi* but sometimes *jiazhangshi tongzhi*, draw on Western studies of paternalism. Renowned scholar Lucian Pye gives a comprehensive and informative discussion on politics in Asia in his work *Asian Power and Politics*, highlighting paternalism in Asian societies. Pye notes that East Asian societies are overtly infused with Confucian values, whereas these governmental practices are viewed by Westerners as being highly paternalistic. He argues that government styles are linked to local cultures, stating that

³²⁶ Mill, John S. *On Liberty* quoted in Dworkin, Gerald, "Paternalism," *The Monist* Jan, no. 1 (1972): p64.

³²⁷ Young, Robert, "John Stuart Mill, Ronald Dworkin, and Paternalism," in *Mill's On Liberty: A Critical Guide*, ed. C. L. Ten (Cambridge, UK ; New York: Cambridge University Press, 2008).

in most Asian cultures, “leaders are expected to be nurturing, benevolent, kind, sympathetic figures who inspire commitment and dedication.”³²⁸ This leads Pye to state that:

Probably the cardinal feature of Asian paternalistic power is an overriding concern for unity, for holding the national community together. Paternalistic authority, especially in the Confucian cultures, can demand conformity on the basis that everyone should be willing to make sacrifices for the collective good.³²⁹

In contrast to HE’s definition of paternalism,³³⁰ Pye implies paternalism works as a rationality of authority in China. The centrality of the notion of the common good also shows that the paternalistic authority is expected to sacrifice its own interests to ensure the well-being of the community, and engages with the needs of the community in a meritocratic manner. The process is notable for using technocratic advisors or specialists in governance. This practice harks back to ancient times when leaders would turn to learned advisors to help in the decision making. Pye argues that paternalistic authority has a “great advantage” over more legalistic forms of authority, as successful use of knowledge often calls for “adaptation, accommodation to changing circumstances, and experimentation,” whereas legitimacy based on legal principles “invariably calls for continuity, routinisation, and a general standardisation of most forms of governmental activity.”³³¹ Further, he notes that paternalistic forms of government are more conducive to long-term planning, which is a necessary feature for developing successful economic plans³³²—this adaptability would also be a desirable trait for governments that aim to deliver successful environmental outcomes.

As mentioned above, Foucault’s notion of pastoral power and the concept of paternalism have much in common. What is interesting to note, is that in Western societies this acceptance of pastoral power diminished, losing its relevance to market rationality. Modern society based on industrialist and capitalist values espouses individualist values whereby the pursuit of wealth and personal gain are prized above ensuring the common good. According to Farh and Cheng, however, in China the concept of paternalism, whereby the government is seen as having moral authority is still generally accepted. They argue that this is due to the different bases of patriarchal authority in ancient times in Eastern Mediterranean cultures and those in Confucian cultures. In the former, the authority of the patriarch or pastor arose from his relationship with God, but as Western society developed this relationship between the patriarch and God became more remote. Conversely, in Confucian society, the authority of the patriarch stems from the notion of *xiao*, or filial piety, which demands “submission to the will of the father,” as one’s primary religious obligation. These divergent trends have seen the role of the authority figure in the West become more codified and restricted, whereas in China it became strengthened throughout the imperial era.³³³ In a view expressed by Pye against Weber, he notes that rather than being superseded by more profound forms of authority, in Asian political cultures, the establishment of the nation-state served to strengthen, rather than weaken, the ideals of paternalistic authority.³³⁴

³²⁸ Pye, Lucian W. and Mary W. Pye, *Asian Power and Politics: The Cultural Dimensions of Authority* (Cambridge: Harvard University Press, 2009), pp28-9.

³²⁹ *Ibid.*, p329.

³³⁰ He, Baogang, *The Democratisation of China*, (London: Taylor and Francis, 2002). p40.

³³¹ Pye and Pye, *Asian Power and Politics: The Cultural Dimensions of Authority*, pp332-3.

³³² *Ibid.*, p333.

³³³ Farh, Jiing-Lih and Bor-Shiuan Cheng, "A Cultural Analysis of Paternalistic Leadership in Chinese Organizations," in *Management and Organizations in the Chinese Context*, ed. J. T. Li, Anne S. Tsui, and Elizabeth Weldon (Great Britain: Palgrave Macmillan UK, 2000), pp100-1.

³³⁴ Pye and Pye, *Asian Power and Politics: The Cultural Dimensions of Authority*, p329.

The notion of the CCP operating in a paternalistic manner is the continuation of what has been a prominent and widely accepted feature in Chinese governmental practices for centuries. In more recent years, the Chinese government have actively promoted education in ideals and morality, as a paternalistic expression of their responsibility for the spiritual livelihood of Chinese citizens.³³⁵ This responsibility is echoed by scholar Liu Xiaoyan, who posits that there are strong arguments that show paternalism is justifiable in certain circumstances, and paternalistic measures not only do not interfere with people's liberty, they can actually serve to improve their condition by increasing their sense of personal autonomy.³³⁶ Liu advocates moralistic paternalism in relation to the education of citizens to address a lack of *suzhi* and improve moral character (*pinde*). He argues that this is necessary in China where many people still maintain traditional mind-sets, such as "the treatment of women as inferior to men" (*nanzun nübei*), as these traditional mind-sets impede their ability to make moral decisions. In his view:

The complicated nature of the actual situation in China allows great room for moralistic paternalism to take effect, this sort of paternal concern is not patriarchal, even less so authoritarian, but instead is akin to the education and development of a father towards his children before they have developed the specific capacity for autonomy with regards morality. . . .³³⁷

Hence the idea of paternalistic techniques of governance not only has a history in China, but also a present especially with regard to moralistic education. Keeping this in mind, the next section will explore the definitions of leading Western theorists on the topic of paternalism, so as to better understand how this technique of governance can be conducive to the creation of environmental subjects.

Paternalism Defined

The definition of this term is widely debated. To come to a working definition, the discussion will commence with Gerald Dworkin's definition, which asserts that paternalism is "the interference with a person's liberty of action justified by reasons referring exclusively to the welfare, good, happiness, needs, interests or values of the person being coerced."³³⁸ On this view, paternalism is a technique of governance that involves an interference with one's freedom, albeit with the noble goal of ensuring that person's welfare. Central to this definition is that its ethical *justification* comes from considerations of welfare. However, Kleinig notes that welfare considerations are not necessarily put forth as the justification for paternalistic actions, and hence that it is better to replace the term justification with "having as its rationale." In this way, it is the welfare of the object that provides the *rationality* for the action, leaving some room for interpretation as to whether welfare is an explanation or a justification.³³⁹ Thus Kleinig's notion that it is the concern for the welfare of the subject that provides the *rationality* for paternalistic actions places the concept of paternalism firmly within the scope for analysis as a technique of government in the Foucauldian sense.

³³⁵ Fairbrother, Gregory P., "The Chinese Paternalistic State and Moral Education," in *Citizenship Education in China: Preparing Citizens for the Chinese Century?* (New York: Routledge, 2013), p25.

³³⁶ 刘笑言, "自由主义 VS 父爱主义: 国家干预的正当性理由分析," *云南行政学院学报*, no. 5 (2010): p32.

³³⁷ 刘笑言, "道德父爱主义与公民教育," *中共长春市委党校学报 [Journal of the Party School of CPC of Changchun Municipal Committee]* 109, no. 4月 (2008): p62. (For the original passage in Chinese, see Appendix 4).

³³⁸ Dworkin, "Paternalism," p65. For an updated and more comprehensive discussion of Dworkin's ideas, see: Dworkin, Gerald, "Defining Paternalism," in *Paternalism: Theory and Practice*, ed. Christian Coons and Michael Weber (New York: Cambridge University Press, 2013).

³³⁹ Kleinig, John, *Paternalism*, Philosophy and society (Totowa, N.J.: Rowman & Allanheld, 1984), p10.

Another illuminating discussion on the definition of paternalism is from David Archard's essay "Paternalism Defined," in which he distils the term's essence into the following sentence: "Paternalism is essentially the usurpation of one person's choice of their own good by another person."³⁴⁰ Further to this succinct version of his detailed explication, Archard later adds that the action of the paternalist is mainly done in the belief that it will promote the good of the subject, regardless of whether the subject does or does not believe so. Bullock considers this definition to be inadequate, firstly in scope with regard to what can be considered paternalistic actions and secondly in bias, arguing that Archard's account is not normatively neutral. Thus, she expands on Archard by giving this definition:

A's behaviour towards B is paternalistic iff:

1. A aims to bring it about that with respect to some state(s) of affairs which concerns B's good, B's choice or opportunity to choose is denied, diminished or discouraged
2. A's belief that this behaviour promotes B's good is a reason for A's behaviour.
3. A discounts the fact that B would not authorise the interference if B were to be relevantly informed of A's interference with her choices.³⁴¹

The utility of this definition lies in its broadening of the scope of what can be considered a paternalistic action. Whereas Dworkin and Archard see paternalism as an "interference" or a "usurpation" respectively, Bullock expands on this by adding that a paternalist act can also serve to discourage, as well as deny or diminish, the subject's choices. In this way, in my definition I use the term *intervene* instead of *interfere*, as it does not convey the idea that the action is necessarily conducted against the will of the subject.

Specifically, these definitions take as their subject a single person. Kleinig's discussion does offer a brief expansion on extending paternalism to the realm of politics—as a rationalisation of conduct that is justified by considerations of the welfare of a population.³⁴² Though these definitions may elide the specific notion of paternalistic actions used by governments to ensure the welfare of a population this conforms with Mill's premise on the principles of governance in *On Liberty*. All societies feature some measure of paternalism; they are the rationales behind many laws that govern our lives. For example, oft-cited cases are those such as seatbelt and helmet laws, laws to limit the use and availability of tobacco or the proscription of certain drugs, these laws are created in consideration of the welfare of a person, or indeed of others around them.³⁴³ In applying this affirmation of paternalism to China, the thesis will adapt Kleinig's definition of paternalistic action thusly:

an intervention with a person's or population's liberty of action rationalised in terms of [ecological] values that seeks to improve the welfare, good, happiness, needs, interests or values of the person or population being compelled

³⁴⁰ Archard, David, "Paternalism Defined," *Analysis* 50, no. 1 (1990): p36.

³⁴¹ Bullock, Emma C., "A Normatively Neutral Definition of Paternalism," *The Philosophical Quarterly* 65, no. 258 (2015).

³⁴² Kleinig, *Paternalism*, p169.

³⁴³ *Ibid.*, pp10-11.

With this working definition of paternalism as it relates to this dissertation, I now examine some of ways in which paternalistic actions can be categorised.

Categories of Paternalism

Kleinig distinguishes different kinds of paternalism that may be practised, with categories describing subtle differences depending on how the act is effected on the subject. The first distinction, and most relevant to this discussion, is that paternalism can be either *strong* or *weak*. Strong paternalism is an imposition whereby the paternalist imposes on the subject without consideration of the subject's capacity to choose for itself. Conversely, weak paternalism occurs when the paternalist imposes on the subject based on the knowledge that the subject is incapable of making that choice for itself. Pertinent examples of strong paternalism are seatbelt wearing or bike-helmet laws. These laws are implemented across the board regardless of the fact that some may prefer not to wear protective equipment. An example of weak paternalism made by Kleinig is the intervention on the decision of a child to run across a road without looking. For Kleinig, the key to this distinction is, on the one hand, intervention is taken regardless of whether a population is capable or not of choosing what is in their best interests, and on the other, intervention is done with the knowledge that the subject will be capable or not of learning to make the correct decisions in the future. In cases of strong paternalism, the ability of the subject to make the correct decision is disregarded. However, weak paternalism is implemented only as far as the subject lacks the understanding of the outcomes of their decision; at the point in time that paternalistic acts are no longer required for them to make this decision, paternalism has served its function, and the subject becomes "autarchic." This process draws parallels with the process of governmentality acting upon a subject in such a way that its actions fall in line with a set of espoused norms. This act of governance works on the child who may not fully understand the risks of a situation such as outlined above; once the risks are understood and the governing act has influenced the subject, the assumption is that the subject has learned and hence become autarchic.

Along with this distinction, Kleinig further demonstrates that we can distinguish between *positive* and *negative* paternalism. An action is positive paternalism when the paternalist imposes on the subject to secure a benefit for the subject. Negative paternalism occurs, however, when the paternalist imposes on the subject's governance to protect the subject from some harmful condition. If to secure a subject's welfare, the paternalist requires the subject to do certain things, it can be considered an active act of paternalism. If, however, the paternalist requires that subject *refrain* from certain behaviours, then the imposition is passive paternalism. For example, in China "the Three-North Shelter Forest Programme" (*sanbei fanghu lin*) policy, which stipulates a 10-percent increase in forested area across three regions in northern China over the course of 70 years can be considered an instance of active paternalism, as it requires an active effort of reforestation in the relevant districts across the north. Conversely, government regulations in Beijing that stipulate that only cars with odd- or even-numbered registration plates may drive on the road on a specified day are an instance of passive paternalism. The final distinction Kleinig makes is between *direct* and *indirect* paternalism. If to secure the welfare of a subject, the paternalist only imposes on the one subject, it is direct. If to secure the welfare of one subject, the paternalist must act upon a third party, it is considered an indirect act of paternalism.³⁴⁴ This list of the different categories under which paternalistic actions can be classified is used to demonstrate the usefulness this concept has for providing a framework for understanding the adoption of ecological values by the Chinese government. However, this discussion will focus

³⁴⁴ Ibid., p14. Dworkin also touches on this distinction, although he calls direct "pure" and indirect "impure" paternalism. See: Dworkin, "Paternalism," p68.

chiefly on the distinction between weak and strong paternalism, as they are most relevant to the argument for the aim to promote ecological values within society.

Justification for Paternalistic Governance

Much of the academic literature on the topic of paternalism is centred on the debate on whether paternalistic actions are justified.³⁴⁵ Further, the debate needs to go beyond individual action to government actions. In order that the argument for paternalism is directed to the scope of the actions of a government on its people as exemplified by environmental governance, I will draw on Thomas Pogge. In his work *World Poverty and Human Rights*, Pogge argues that non-paternalistic strategies generally fail to deliver social justice outcomes; hence, paternalistic measures must inevitably be implemented to shape social institutions in a way that promotes social justice and human flourishing.³⁴⁶ On this basis, paternalistic environmental governance follows a similar logic, although it extends the concepts of justice along ecological lines, shaping society and social institutions in a way that promotes ecological justice and the flourishing of all living things. In Mill's argument against paternalism in *On Liberty*, no action to inhibit a person's liberty should be affected by government unless said action were to impinge on the liberty of another. However, many actions endemic to industrial-capitalist society, actions that are not often considered to infringe on the liberty of others do have this effect—although it may not be immediately apparent.

For example, one person driving a car to work instead of riding a bicycle may not be directly affecting another's liberty. However, the collective actions of many people driving cars, such as one finds in large Chinese cities, has the cumulative effect of generating unacceptable levels of noxious and irritating gases that affect all people in the city. The choices of vehicle operators then affect indiscriminately those who choose to burn fossil fuels and those who do not. If, in general, those who do not burn fossil fuels do not do so because they cannot afford it, then the ostensible liberty of those who have the money to afford this method of transport is indeed encroaching on the liberty of those who do not, by depriving them of their right to breathe clean air. If I choose to purchase a new mobile phone every six months in keeping with modern trends and technologies, it may not affect anyone in my immediate vicinity, but if everyone in the US were to do so, the collective actions of the many would lead to mass pollution in the manufacturing nations from the mining, manufacturing, and disposal processes. This pollution affects the health of people in those countries that extract resources and manufacture those products, generally being less affluent people, infringing on their liberties by taking away their rights to live in a clean environment, to eat safe food, and to drink safe water. Though it may be argued that there is some measure of financial compensation, it rarely, if ever, covers the costs of so-called negative externalities to provide the means to overcome these environmental effects. In dealing with environmental issues, the concern is with *the common good*. In this sense, if paternalistic techniques of governance are used to secure the health and well-being of a biopolitical community and the ecosystems of which they are a part, they are justifiable.

The following passage from Kleinig's *Paternalism* outlines well the argument for paternalism:

It would be a better world were such paternalism not necessary, just as it would be a better world were punishment not sometimes called for. Paternalism is not something to

³⁴⁵ For an illuminating discussion on this debate, see: Conly, Sarah, *Against Autonomy: Justifying Coercive Paternalism* (Cambridge: Cambridge University Press, 2013). See also: Goodin, Robert E., "Permissible Paternalism: In Defense of the Nanny State," in *The Essential Communitarian Reader*, ed. Etzioni Amitai (Maryland US: Rowman & Littlefield Publishers Inc, 1998).

³⁴⁶ Pogge, Thomas Winfried Menko, *World Poverty and Human Rights: Cosmopolitan Responsibilities and Reforms* (Cambridge ; Malden, MA: Polity, 2002), pp34-7.

be evangelistic about. It is not a substitute for persuasion and education, but a strategy of last resort. Like punishment, it is something that, though justified, we would like to see less of, something there are strong moral reasons for seeking to eliminate the need for. However, provided that it is limited to those character deficiencies, and those expressions of them, that place at unnecessary risk the aims and activities that are intimately connected with our self-identity, its use can be justified.³⁴⁷

I will take this moment to draw your attention to the third sentence, in which Kleinig states that paternalism “is not a substitute for persuasion and education.” This is important to note, and is of relevance to this study, as it highlights the importance of moral education working alongside paternal authority. This is especially true with regard to weak paternalism, the ideal outcome of which being the creation of an autarchic subject who is subsequently able to make morally sound decisions. Relevant to this study, ecological civilisation can work in this way, as a persuasive argument that imbues subjects with ecological values. My analysis of the mode of governance proposed by ecological civilisation is that it advocates the use of paternalistic techniques of governance the aim of which is nothing less than securing the welfare of global ecosystems and their inhabitants. Though it draws definite parallels with humanitarian governance,³⁴⁸ it casts the net much wider in that it not only seeks to benefit humanity, but all living organisms that inhabit the earth. By considering the case of China as embodied by the notion of ecological civilisation, I argue that the Chinese government employs weak paternalistic techniques of governance, as these techniques work alongside a campaign designed to impart a morally correct rationality for those techniques. The pressing nature of many environmental concerns encompassed by the idea of the becoming of an ecological civilisation—such as climate change, air pollution, or other forms of pollution that affect the health of living things—requires the urgent implementation of paternalistic measures. However, the evidence shows that there concurrently exists a long-term goal of educating people in ecological values; when this happens, these paternalistic measures become redundant, as they are implemented only as far as people’s value systems are not in alignment with the ecological values that would benefit society and the environment.

Paternal Environmental Governance

A useful discussion on the application of paternalistic governance is raised by Zhao Shuai when he argues that currently all measures and policies of environmental remediation initiated by the Chinese government are strongly paternalistic in nature, being heavily reliant on economic measures. In his view, strong paternalistic methods are of limited effect, as they classify environmental measures in terms of negative and positive externalities—on the one hand, they work to improve public health hence placing extra running costs on businesses, or on the other they reduce costs and improve business to the detriment of public health. What Zhao advocates instead is that the CCP enshrine environmental rights (*huanjing zhiqing quan*) in the constitution—he even identifies a suitable section in which to add this amendment—and ensure public access to environmental information. He argues that by having environmental rights enshrined in the constitution it will lead to available information about environmental rights and how they may be infringed upon, and about polluting processes and their potential consequences. He contends that, armed with this knowledge, the public are able to make better-informed choices about the environment. Similarly, these rights also include the rights of those managing the environment.³⁴⁹ In Zhao’s analysis, the desirable way paternalistic governmental

³⁴⁷ Kleinig, *Paternalism*, p70.

³⁴⁸ Pavel, Carmen and Michael Barnett, "Paternalism and Global Governance," *Social Philosophy and Policy* 32, no. 1 (2015): p217.

³⁴⁹ 赵帅, "从单一父爱主义到己爱主义与父爱主义的结合——论环境保护的发展及环境知情权的重要性,"

techniques are implemented is as far as they serve to educate a population. Our analyses differ, however, as in Zhao's view education is health- and impact-related as opposed to values-oriented. Regardless, both can be considered as an instance of advocating weak paternalism in addressing environmental issues.

Weak paternalism can also be useful in countering the collective actions of humanity in what Chakrabarty calls a "geophysical force"—a phenomenon that has come to the fore with the acknowledgement of the anthropogenic causes of climate change.³⁵⁰ Although in general the scholars writing on paternalism focus on the use of paternalism in interfering with individual behaviours, this can easily be extended to populations. Indeed, a paternalistic approach can serve to mitigate a person's incompetence in self-governance by guiding them toward behaviours that are beneficial to the whole, such as through Locke's "Laws of Opinion or Reputation" mentioned at the beginning of Chapter 6.

What does not pass muster in terms of achieving environmental outcomes is what Thaler and Sunstein have dubbed soft or "libertarian" paternalism in their 2008 work titled *Nudge*.³⁵¹ In this text, they argue for a paternalism that is "non-coercive," or the expression of which may not be entirely evident to those on whom it acts. One such example from the text is the use of line markings on windy roads:

When the stripes first appear, they are evenly spaced, but as drivers reach the most dangerous portion of the curve, the stripes get closer together, giving the sensation that driving speed is increasing. One's natural instinct is to slow down. When we drive on this familiar stretch of road, we find that those lines are speaking to us, gently urging us to touch the brake before the apex of the curve. We have been nudged.³⁵²

On this view, the paternalistic action works in ways that are not overtly evident to the subject; however, it still influences the subject's choices, thus giving the impression of liberty of action. In determining whether this is an act of strong or weak paternalism as determined by Kleinig's analysis, it is a little problematic; the form assumed by this paternalistic measure operates in a manner that supposes the subject is incapable of acting in its own best interests (or that its inattention would lead it to make a mistake); however this form also imposes its will on the subject without the assumption that they would learn from the imposition, and hence in that sense should be considered strong, albeit interfering at a subliminal level. In my analysis, many such instances of this so-called libertarian paternalism do not address the issue of values. For instance, this text contains a chapter dedicated to the issue of libertarian paternalism as relevant to addressing environmental issues. In the chapter, they discuss the benefit of Pigovian taxes that put a levy on certain activities that create emissions. In their view, it is a form of strong libertarianism as it allows the damaging behaviour so long as the subject is willing to pay the higher price, and it is preferable to address environmental issues in this way as it serves to preserve their liberty of choice.³⁵³ Of course, these forms of measures can also have different effects based on the culture in which they are applied. Greenhalgh notes that in China today, extra children are a status symbol, as the fines used to deter families from having more than one child

法治与社会 [Legal System and Society], no. 7 (2009).

³⁵⁰ Chakrabarty, Dipesh, "Postcolonial Studies and the Challenge of Climate Change," *New Literary History* 43, no. 1 (2012).

³⁵¹ Thaler, Richard H. and Cass R. Sunstein, *Nudge: Improving Decisions About Health, Wealth, and Happiness* (New Haven: Yale University Press, 2008).

³⁵² *Ibid.*, p39.

³⁵³ *Ibid.*, p186.

are easily afforded by the wealthy.³⁵⁴ Following this logic, a higher tax on fuel or another kind of Pigovian tax could potentially lead to a similar outcome in a Chinese cultural context.

It is reasonable to argue on equity grounds that this form of paternalism is undesirable, as in these instances people are discouraged from certain behaviours only as far as these behaviours hurt their economic interests (in dollar terms)—and of course in a different society people may continue in their behaviours anyway as they are considered beneficial to their social interests. These kinds of actions tend to affect people in the lower income classes more, and are not motivated by moralistic concerns that are aimed to create the condition of autarchy in the subject that is central to Kleinig's notion of weak paternalism. Wealthier people will continue to engage in destructive behaviour, in the belief that they are entitled to do so as they have paid for the privilege. Ultimately, they see it as a matter of personal preference and entitlement, but fail to appreciate the consequences of their behaviour. A similar example provided in *Nudge* is that of increasing petrol prices: such a measure no doubt encourages the move to more fuel-efficient vehicles and an overall reduction in people using cars. However, it invariably creates a division between those who can afford to pollute and those who cannot—further it does not address the issue of what to do with the original, polluting vehicles that are discarded. Also, those who can afford to do so do not bear the negative effects of the pollution they generate. The weakness of Thaler and Sunstein's nudge argument lies in that the measures used to implement environmental policy are overwhelmingly economic. By relying on market mechanisms, the only motivator for people's actions is money, which invariably means that the wealthy will have limited motivation to change their behaviour. What is needed instead are weak paternalistic techniques of governance that serve to instil ecological values in a population, creating environmental subjects that will make sound decisions with regard to the environment.

How Ecological Civilisation Creates the Environmental Subject

The aim of this theoretical chapter has been to introduce the Foucauldian concepts of pastoral power, biopolitics, and governmentality: firstly, to enhance the understanding of what processes are involved in and what is meant by the governmentalisation of the state; secondly, to determine how the experience of governmentalisation in China differs from that in the West; and thirdly, to demonstrate that the notion of governmentality is a useful framework for understanding actions of governance in modern China. Following, I introduced the notion of paternalism and highlighted its relevance as a technique of governance in China, especially why its use is more accepted in China than in the West. From this discussion, a definition of paternalism was developed. The distinction between strong and weak paternalism was introduced, arguing that weak paternalism is preferable as it works alongside government intervention, using measures such as education with its goal to achieve a condition called autarchy. This condition resonates with the Foucauldian notion of subjectification, whereby a subject is cultivated through techniques of governance enabling them to make informed decisions in line with the moral imperatives of a governing authority. Adopting Agrawal's terminology, I call this condition the environmental subject, a subject who is thus able to make informed decisions that minimise their impact on the environment, negating the need for paternalistic measures. Thus I argue that the ecological civilisation campaign, promoted by the Chinese government, is a technique of governance that has its roots in China's moralistic style of governance, rationalised by ecological values and implemented using paternalistic techniques, with the desired outcome being the welfare of the population. From this determination, the Chinese government frames the global environment crisis as being a moral problem, an approach that is unique for a government, and thus worthy of our attention.

³⁵⁴ Greenhalgh, "Governing Chinese Life," p157.

From the discussion above, I have come to the following conclusions. First, is the definition of a paternalistic action as “an intervention with a person’s or population’s liberty of action rationalised in terms of [ecological] values that seeks to improve the welfare, good, happiness, needs, interests, or values of the person or population being compelled.” Next, is that the Foucauldian concept of governmentality is indeed applicable in the case of China, with the caveat that Chinese governmentality arose in different historical circumstances, and hence has some important differentiating features with European governmentality. The next conclusion is that the adoption of ecological civilisation by the CCP indicates a shift in the biopolitical rationale, whereby it is understood that a clean, healthy environment is a crucial factor in ensuring the health and well-being of the population. This shift toward environmental health as a governmental imperative puts these actions in line for analysis using the concept of environmentality. Finally, the adoption of the expression ecological civilisation as part of its official rhetoric is unique in that it ostensibly commits the Chinese government to an all-encompassing embrace of ecological values. Other countries aim to tackle climate change or reduce emissions, but China has stated the objective as no less than becoming an ecological civilisation, a change that requires a shift in the current economic model and a change to peoples’ ways of life that touches on all facets of society. This shows that the ecological civilisation campaign is an example of weak paternalism, as it features paternalistic techniques of government coupled with the promotion of values, the adoption of which would render these techniques redundant.

Previous chapters have shown that in a capitalist-industrialist system actors making up a population will not act in their best interests as they are unwittingly imbued with capitalist values. This is a phenomenon of capitalist-industrial societies, according to Marx, that serves to impose a form of consciousness causing people to be unaware of what their best interests are. This notion is akin to the “radical power” that Lukes describes in his important work *Power: A Radical View*. This third dimension of power obscures the real interests of a population, having the effect that in general, a population will not attempt to defend what is in its best interests. Hindess calls this a “particularly insidious form of power which is able to influence the thoughts and desires of its victims without their being aware of its effects.”³⁵⁵ To counter its potential negative consequences, the Chinese government use education to make people aware of this effect; the overt promotion of ecological values over capitalist values aims to educate people to realise the folly of their ways and to instead act in their best interests. Therefore, we see that the Chinese government is taking responsibility to intervene in the spread of capitalist values; the concept of ecological values promoted by ecological civilisation is one way by which the Chinese government can tackle this issue. Much like Lukes’ third form of power that seeks to “secure [the population’s] compliance by controlling their thoughts and desires,”³⁵⁶ promoting ecological civilisation in this way can be understood as a form of governance that utilises paternalistic techniques alongside moral education, the purpose of which is to create a condition of autarchy. These so-called environmental subjects are thus capable of self-governance in ways that conform to these prescribed ecological values.

³⁵⁵ Hindess, *Discourses of Power: From Hobbes to Foucault*, p5.

³⁵⁶ Lukes, Steven, *Power: A Radical View*, Studies in sociology (London ; New York: Macmillan, 1974), p23.

PART 4

Case Studies: Policy, Pujiang County, and Hong Nong Academy

Chapter 8: Ecological Civilisation Policy

Introduction to First Case Study

The first case study is that of Chinese government policy implemented under the banner of becoming an ecological civilisation. I do this with an analysis and discussion of how the concept of ecological civilisation is used in official Chinese government documents. Using the initial report from the Eighteenth CCP Central Committee—where detailed guidelines for ecological system reforms were introduced—as a starting point, I then proceed to analyse the content of subsequent documents that were developed because of this initial report. The analysis will demonstrate how the inclusion of the notion of ecological civilisation in official documents indicates that the Chinese government has expanded the realm of the biopolitical to environmental health—a clear sign of the environmentalisation of the state. Further, by looking at the specific measures to be implemented in accordance with these policies, we can see that they advocate paternalistic measures that intervene with the population’s liberty of action rationalised in terms of ecological values—compelling evidence that the techniques of environmental governance used by the Chinese government under the banner of ecological civilisation are weak paternalistic techniques. This study serves as evidence that the Chinese government portrays the environmental crisis as a moral issue, advocating a shift in values as a means of addressing this crisis.

Specific Guidelines Introduced for Ecological System Reforms

In late 2013, the report on the third plenary session of the Eighteenth CCP Central Committee was released, incorporating detailed guidelines for the “speeding up of the systematic development of ecological civilisation.”³⁵⁷ It outlined a four-step strategy for developing into an ecological civilisation, that will: strengthen property rights over natural resource assets and [strengthen] the systems to control their usage (section 51); demarcate a “red line” (i.e. danger zone) for ecological protection (section 52); implement systems for resource usage compensation and ecological compensation systems (section 53); and reform environmental protection management systems (section 54).³⁵⁸ There are several concepts used in this plan that need to be noted to understand the government’s approach to addressing environmental issues. The first is the idea of “national territorial spaces” (*guotu kongjian*), which can be understood as any areas of importance within China’s territorial borders, including maritime, land, and airspace. These spaces can be divided into four kinds: urban spaces (areas that already have significant populations, as well as industrial and mining areas); agricultural spaces (areas mainly used for agricultural activities); ecological spaces (areas of ecological significance including tourism hotspots); and other spaces (including transport and communication networks, energy, irrigation, military use, and religious sites). Section 51 of this report proposes a registration system that establishes plans for the controlled management and use of territorial spaces based on these four categories.

The next concept that needs to be understood is that of “main functional area divisions” (*zhuti gongneng quhua*),³⁵⁹ which further defines the abovementioned four divisions of national territorial spaces into four subdivisions based on their capacity for development: optimum areas (*youhua kaifa qu*); important areas (*zhongdian kaifa qu*); restricted areas (*xianzhi kaifa qu*); and prohibited areas

³⁵⁷ “十八届三中全会报告(全文),” 云岭先锋网, 4th June 2015. For the text’s official English version see: “The Decision on Major Issues Concerning Comprehensively Deepening Reforms in Brief,” China.org.cn.

³⁵⁸ For a detailed explanation of the concrete measures the CCP are taking toward becoming an ecological civilisation, see: Xiao, Xiang, *Ecological System Reform*, ed. Li Wu, Trends in China (Beijing: Beijing Times Chinese Press, 2014).

³⁵⁹ Chinese terms for these main functional area divisions are in Appendix 4.

(*jinzhi kaifa qu*). Section 52 of this report outlines this proposal as a means of monitoring land use in accordance to principles of environmental carrying capacity and efficient use of resources, including a proposal that areas defined as restricted areas would not be assessed in terms of GDP and establishing a system to investigate those responsible for causing environmental damage. The final important concept outlined in this report is that of ecological compensation (*shengtai buchang*). This proposal would assign a price to natural resources and their products that reflects market supply and demand, the extent of resource scarcity, the cost of environmental damage, and the benefits of its restoration. Ecological compensation is based on the principles of “who develops it must protect it, who damages it must rejuvenate it, who profits from it must compensate, and who pollutes must pay,”³⁶⁰ and also expands the scope of the “returning pastures to grassland” (*tuimu huancao*) and “returning farmland to forest” (*tuigeng huanlin*) programmes.³⁶¹ Further, the programme of ecological compensation aims to develop trading schemes to encourage a reduction in energy use and carbon and other emissions, establish systems for water use rights, and the marketisation of environmental protection so as to promote third-party administration of environmental pollution, such as by using Pigovian taxes.³⁶² These policies implemented by the Chinese government are all examples of measures designed to shape the behaviour of the population to promote better environmental outcomes.

Overall, the report emphasises the need to implement laws to enforce its environmental policies, the need for control and monitoring systems to ensure that these laws are being adhered to, and the need to enforce laws when they have been breached. This shows that ecological civilisation has the potential to play a positive role in ameliorating environmental degradation in China and promoting sustainable growth. However, doubts about the effectiveness of this programme abound due to China’s poor history of environmental law enforcement, partly due to its weak legal system and in part due to local governments’ continued reliance on GDP as a measure of progress.^{363, 364} Li Hongwei, professor at the Central Party School who runs a course on ecological civilisation for party cadres calls this the problem of “though there are laws they are not abided by; though laws are broken they are not investigated; though laws are enforced they do not entail severe punishment.”³⁶⁵ Further, she points out that the government lacks a clear policy framework with regard to environmental protection, emphasising the need for the government to take leadership in environmental law enforcement, investment in environmental infrastructure, and the adjustment of the structure of the economy so as to change the mode of economic development so as to realise the goal of an ecological civilisation.³⁶⁶

This opinion echoes that of many academics—that a major step toward environmental remediation would be achieved when the Chinese government improves the effectiveness of its legal system. Hence, improvements in environmental law are crucial to the project of becoming an ecological civilisation—the recent update of environmental laws and examples of their implementation have been noted in Part One. Improving environmental laws—and, of course, their implementation—has

³⁶⁰ The precise phrase is in Appendix 4. See 李宏伟, “形塑“环境正义”: 生态文明建设中的功能区划和利益补偿,” *当代世界与社会主义*, no. 2 (2013): p24.

³⁶¹ While the returning pasture to grassland project is relatively recent (2011), the returning farmland to forest programme goes back to the Zhu Rongji era in 1999, with the initial pilot programme being run in Shaanxi, Gansu, and Sichuan; this program has been successful in increasing forest coverage in China.

³⁶² 李宏伟, “形塑“环境正义”: 生态文明建设中的功能区划和利益补偿.”

³⁶³ Wang, Alex, “Environmental Protection In China: The Role of Law,” *Chinadialogue*.

³⁶⁴ 李宏伟 and 厉磊, “生态文明与后发地区“绿色崛起”, ” *开放导报* 2, no. 1 (2014): p48.

³⁶⁵ 李宏伟, “生态文明建设的科学内涵与当代中国生态文明建设,” p11. The precise phrase is in Appendix 4.

³⁶⁶ *Ibid*.

the potential to instigate change in China's current "pollute first, clean up later" mode of development, a path that if it were to continue along would only exacerbate the all too salient environmental issues facing China today. The education of party cadres on environmental issues is also a measure of great importance, as it demonstrates how the CCP's governing work does not simply attempt to address technological aspects of the environmental problem, but also works at promoting values that enable the governing of the self in line with ecological values. In this way, party cadres become crucial in the process of creating environmental subjects, as they are agents in the process of governance expected to abide by and promote ecological values. These measures work in concert with recent amendments to China's EPL mentioned earlier that stipulate harsher punishments for polluters (such as removing the fine cap for polluters) and greater powers to environmental authorities,³⁶⁷ utilising paternalistic techniques of governance in concert with moralistic education. Further evidence that the CCP is serious in its drive toward cleaning up China's environment is provided below in a description and analysis of two official documents released in 2015 detailing recommendations and plans toward becoming an ecological civilisation.

Eco-Civilisation from 2015

In 2013, after these clarifications were made to the idea of ecological civilisation and the methods by which it would be implemented, it became evident that the concept of ecological civilisation was to be a mainstay in CCP discourse. With the beginnings of some general guidelines taking shape, there was room left for the further development of this idea into concrete policy and action. Almost a year and a half after these clarifications to the concept were made public through the report of the third plenary session of the Eighteenth CCP Central Committee, another official document was released on the 25th of April 2015. This document, titled "The CCP Central Committee and State Council's Suggestions on the Hastening of Becoming an Ecological Civilisation"³⁶⁸—hereafter referred to as Suggestions—further served to flesh out the specifics of the CCP's ecological civilisation campaign. In the preamble, it states the aims of hastening the development into an ecological civilisation as being to:

Speed up the transformation of the method of economic development and to improve the quality and effectiveness of development so as to realise its stated aims of social harmony, to realise the Chinese dream, to combat climate change and to maintain global ecological security.³⁶⁹

This preamble also emphasises the importance of Xi Jinping's TMT mentioned in Chapter 1, that "clear waters and lush mountains are just like mountains of gold and silver"—the importance of prioritising environmental health over economic growth. The final sentence of this preamble states the overall objective of becoming an ecological civilisation as being for the founding of a new era: the age of a socialist ecological civilisation.³⁷⁰ This communiqué further serves to expound the notion of ecological civilisation from the party's perspective and highlights the way the CCP frames environmental degradation as a moral issue. The adoption of TMT as the guiding thought for this document is

³⁶⁷ Huang, Zhen, "China's Environmental Protection Law Lays Groundwork for Greater Transparency," Asia Foundation.

³⁶⁸ "中共中央国务院关于加快推进生态文明建设的意见。" "中共中央国务院关于加快推进生态文明建设的意见。"

³⁶⁹ For the original text, see Appendix 4.

³⁷⁰ The exact phrase used is in Appendix 4. See "中共中央国务院关于加快推进生态文明建设的意见。" "中共中央国务院关于加快推进生态文明建设的意见。"

demonstrative of the discursive measures used by the CCP to promote ecological values, utilising catchy slogans as a way of promoting their ideas.

“The CCP Central Committee and State Council’s Suggestions on Hastening the Promotion of Becoming an Ecological Civilisation”

As implied by its title, Suggestions was developed as a guideline for policy development aimed at implementing the party’s goal of becoming an ecological civilisation. This document was formulated by the PRC National Development and Reform Commission (NDRC) in accordance with recommendations taken from the third and fourth plenary sessions of the Eighteenth NPC, with its official release taking place on the 5th of May 2015. It is divided into nine sections that the CCP have identified as being crucial to the development into an ecological civilisation. The following section draws on Appendix 2, in which I have translated and paraphrased the main points of the official policy into English. I will demonstrate how the policy advice advocated in this document uses the notion of ecological civilisation as its guiding thought, demonstrating the deliberate extension of the biopolitical realm to include environmental health, which is evidence of the environmentalisation of the Chinese state. Following, I show how the policies advocated in this document are examples of weak paternalistic techniques of governance aimed at concurrently facilitating environmental remediation and imbuing people with ecological values.

Overall, this document’s utility lies in its suggestions for the implementation of various laws and government policies that provide specific measures to address environmental issues. The stated aims to be achieved are frugality in the use of resources, “green” development (with emphasis on recycling and low-carbon use), and a transformation in methods of production for the realisation of a moderately prosperous society with improved environmental conditions. These suggestions come from the opening section of the document and specify the key goals to be achieved in developing into an ecological civilisation. Sections two to seven deal solely with the technological and legal aspects of addressing environmental problems. Some highlights include: establishing the system of functional areas (as mentioned in the document of 2013); requiring a new paradigm for city development (in this document, it is called “green townisation”);³⁷¹ promoting frugality in the use of energy and natural resources; and implementing systems for gathering statistical data and environmental monitoring.

Importantly, section eight explicitly deals with the need for promoting environmental values. It highlights the need for an increase in environmental awareness, the promotion of green lifestyles, and the encouragement of mass participation. Further, it advocates promoting ecological culture, adopting ecology as a core value, and promoting ecological education in early childhood education as well as educating party members. Section eight specifically deals with the issue of values, providing clear evidence that the ecological campaign is an example of weak paternalism, as it simultaneously utilises measures for environmental remediation that intervene with the population’s liberty of action rationalised in terms of ecological values and moralistic education that would render those measures unnecessary.

Suggestions is unique in that it is the first document released by the CCP wholly dedicated to explicitly detailing the requirements for the creation of an ecological civilisation. The publication of this document demonstrates clearly that this concept is not just an empty slogan adopted to give the impression that the CCP is addressing the many environmental issues plaguing the country; instead, it indicates the seriousness with which environmental issues are viewed. However, as the title suggests,

³⁷¹ The idea of townisation originally came from Guldin; see: Guldin, Gregory Eliyu, *Farewell To Peasant China : Rural Urbanization And Social Change In The Late Twentieth Century*, Studies on contemporary China (Armonk, N.Y.: M.E. Sharpe, 1997).

this document merely outlines suggestions for the becoming an ecological civilisation. Several months later, the CCP released another document related to becoming an ecological civilisation that builds on the ideas developed in this document and clearly states how they intend to implement this policy.

“An Overall Plan for Ecological Civilisation System Reform”

Shortly after the publication of Suggestions, a second official document related to ecological civilisation was released called “An Overall Plan for Ecological Civilisation System Reform”—hereafter referred to as Plan. It was approved at a Politburo meeting presided over by leader Xi Jinping on the 11th of September 2015 and was published by the CCP Central Committee and the State Council on the 21st of September.³⁷² Importantly, this document draws on Suggestions to specify definitive policy measures to be adopted under the banner of becoming an ecological civilisation. The short space of time elapsed between Suggestions and Plan—five months—is demonstrative of the priority given to ecological system reform. In this section, I draw on my own translation and paraphrasing of the document, which can be found in Appendix 2. I show how the policy decisions advocated in this document, by taking ecological civilisation as guiding thought, demonstrate the environmentalisation of the Chinese state by deliberately extending the biopolitical realm to include environmental health as crucial to the welfare of the population. Following, I show how the plan outlined in this document advocates the use of paternalistic techniques of governance alongside moralistic education aimed at facilitating environmental remediation and at creating environmental subjects.

As with the previous document, the first section of Plan outlines the leading thought, concepts, and principles that guide this document. To be precise, it stipulates six concepts to be established, six principles to be adhered to, and eight institutions to be constructed as crucial for reforming ecological systems. From the very beginning, definite guidelines are introduced as the basis for the reform process. Importantly, the concepts to be established fall in line with ecological thought, such as the TMT advocating the environment over development, and the understanding that natural features are complex, integrated systems. This is demonstrative of the centrality of the ecological thinking and ecological values that guides these policies. Sections two to nine stipulate the technological changes and legal framework necessary for environmental remediation; it includes institutions for determining rights to resources, spatial planning systems, ecological compensation, tax reform, emissions licencing systems, green finance, and institutions for assessment and monitoring. Importantly, section seven stipulates the need for transparency of environmental information to facilitate public scrutiny of the process. This is reinforced in section ten, which also emphasises that public opinion must guide these reforms. These techniques of governance are all examples of paternalism that intervene with people’s liberty of action and are rationalised in terms of ecological values, with the aim of securing the welfare of the population. However, these techniques are implemented alongside measures of moralistic education designed to govern the behaviour of people in ways that promote environmental health. This is indicated where the article clearly states the imperative that people be instilled with ecological values—what they call ecological culture (*shengtai wenhua*) and ecologically civilised consciousness (*shengtai wenming yishi*)—and are encouraged to adopt green lifestyles. Hence, Plan does indeed advocate measures that are conducive to creating environmental subjects.

This publication draws on Suggestions to create an actionable list of measures to realise the goal of an ecological civilisation. According to the preamble of this publication, “[t]his document has been formulated so as to hasten the establishment of a complete ecological civilisation system, to hasten the promotion of ecological civilisation, and to strengthen the systematic nature, completeness, and

³⁷² 国务院, 中共中央, “生态文明体制改革总体方案,”

coordination of the reform of ecologically civilised institutions.”³⁷³ The release of these two documents within the space of five months shows the priority that the CCP have given to their ecological civilisation campaign, and it is indicative of the urgency that the CCP have placed on ecological system reform. It clearly demonstrates the importance that the CCP have attached to ameliorating environmental damage that has occurred due to development and modernisation. But of central importance is that it clearly demonstrates the environmentalisation of the Chinese state, in that it expands the biopolitical realm to include environmental health as being inextricably linked to the welfare of the population.

It is important to note that these two documents, although closely related and released within five months of each other, have some important differences. The first document, *Suggestions*, is essentially a list of recommendations or guidelines by which CCP plan to implement their policies of environmental remediation and protection. However, the second document, *Plan*, outlines concrete measures that the CCP plan to instigate, by a defined time (2020) to comply with their stated aim of becoming an ecological civilisation. If all items in *Plan* were to be realised, it would doubtless have serious positive benefits for the environmental situation in China. Whether this will be achieved remains to be seen; however, the publication of this document is strong evidence that the CCP are taking environmental concerns seriously.

Ecological Civilisation Experiments

Historically, the Chinese government has exercised caution in the implementation of new policies, trialling them in a matter described by Deng Xiaoping as “crossing the river by feeling the stones.”³⁷⁴ This expression was used to describe the implementation of SEZs by the CCP in its transition from a planned socialist economy to a state-led market economy. This expression is equally applicable to the approach taken by the Chinese government in realising the development into an ecological civilisation. For example, in March 2014, the State Council published a document nominating Fujian Province as the “first experimental zone for ecological civilisation” (*shengtai wenming xianxing shifan qu*) acting at a provincial level, meaning that it would put into practice policies the aim of which was the realisation of the principles of ecological civilisation, chiefly in four areas: the scientific development of national territorial spaces; green, circular (*xunhuan*), and low-carbon development; the construction of urban and rural living environments; and experiments in innovation of ecological civilisation systems.³⁷⁵

Interestingly, Fujian has been involved in ecological restoration projects since the early 2000s; in 2002, then vice-secretary of Fujian Province, Xi Jinping, who was also the head of a work group for ecological development (*shengtai jianshe*), formally announced that Fujian would aim to become an “ecological province” (*shengtai sheng*).³⁷⁶ It was a logical progression, then, to take a province that had much earlier declared its aim to improve its environment to then become a testing ground for China’s new policies aimed at repairing environmental damage. In June of the same year, the CCP announced that Guizhou would be nominated as the second provincial level experimental zone for ecological

³⁷³ Ibid.

³⁷⁴ *mozhe shitou guohe*. The Chinese is in Appendix 1.

³⁷⁵ “福建：从“生态省”到“生态文明先行示范区”，”新浪财经.

³⁷⁶ Ibid.

civilisation, with the experiment's main aim being that by 2020 it would reclaim 12,600 square kilometres of rocky desertified³⁷⁷ (*shimohua*) land.³⁷⁸

By late July 2014, shortly following Fujian and Guizhou's nominations as experimental zones for ecological civilisation, a further fifty-seven zones from around China were nominated as ecological civilisation development experimental zones, so that the experiment could take place on a national scale.³⁷⁹ The implementation of these experimental zones is done in accordance with a document entitled "The Plan for the Development of National Ecological Civilisation Pioneering Experimental Zones,"³⁸⁰ which outlines the requirements for these zones such as areas to be improved and targets to be met. There is already some limited scholarship on more quantitative methods for the evaluation of the effectiveness of these zones,³⁸¹ but there is no indication that the Chinese government will adopt these methods. In 2016, a second wave of experimental zones was declared,³⁸² nominating another forty-five of these zones to be introduced. The scholarship on the effectiveness of these areas is still limited due to the short amount of time that has elapsed since their declaration; however, the fact that these experimental zones have been nominated is further evidence of the seriousness with which the Chinese government see the promotion of ecological values and the campaign to develop into an ecological civilisation.

Promoting Green Lifestyles

Following the release of Suggestions, the CCP published another document entitled "Suggestions for Hastening and Promoting the Implementation of Green Lifestyles" (hereafter referred to as Lifestyle). The document was released in accordance with the requirements of Suggestions and the new EPL to promote lifestyles that incorporate environmentally friendly values.³⁸³ It advocates a transformation in lifestyles so that they uphold values such as frugality and hard work, low-carbon living, and being civilised and healthy. This document outlines the need for environmental awareness and so-called green lifestyles to be widely promoted throughout society by 2020, and how it aims to achieve this by promoting environmental culture in education from primary school to university, as well as in cultural products such as television and film, books, and comics, as well as music and operas. It declares every June to be an ecological civilisation month, and for 2016 to be the year of promoting green lifestyles. Further, it states that internationally designated days for environmental awareness will be adopted, such as a world environment day, a forest day, and an eco-diversity day, among others. Again, there is a big distinction between publishing policies and implementing them, and seeing if they are effective. However, it is still important to note the policy measures being utilised by the Chinese government in promoting ecological values, indicative of the way that they frame the environmental crisis as a moral problem.

³⁷⁷ Rocky desertification is a particular type of desertification found in some parts of the world, in which a vegetated karst area is, through processes human or otherwise, transformed into a rocky landscape. See for example: Jiang, Zhongcheng, Yanqing Lian, and Xiaoqun Qin, "Rocky Desertification in Southwest China: Impacts, Causes, and Restoration," *Earth-Science Reviews* 132, no. May (2014).

³⁷⁸ "贵州获准建设全国生态文明先行示范区," 新华社.

³⁷⁹ 施生旭, "生态文明先行示范区建设的水平评价与改进对策: 福建省的案例研究," *东南学术* 5 (2015).

³⁸⁰ For the original Chinese expression, see Appendix 4: "国家生态文明先行示范区建设方案 (全文)," 发改委.

³⁸¹ 施生旭, "生态文明先行示范区建设的水平评价与改进对策: 福建省的案例研究."

³⁸² "关于开展第二批生态文明先行示范区建设的通知(发改环资[2015]3214号)," 发改委网站.

³⁸³ "关于加快推动生活方式绿色化的实施意见," 环境保护部.

Significance of Ecological Civilisation in Chinese Government Policy

As the CCP's ecological civilisation project developed from its adoption in the early 2000s, it has evolved from a slogan of obscure origins adopted by the party-state to the environmental catch-cry of the Chinese academic community and government. The idea of an ecological civilisation is also growing in popularity among the academic community in China—but also increasingly outside of China—as a motto for the environmental movement in general. This is a very important and necessary trend, and following how this idea is utilised in the quest for environmental remediation is a very appropriate and quantifiable way of measuring its effectiveness. Unfortunately, however, it would be very difficult to make a clear connection between the idea of ecological civilisation and an increase in environmental awareness. Hence, this study focuses on the techniques of governance used within China, under the banner of ecological civilisation, to show that they are evidence of the environmentalisation of the Chinese state. Further, this study shows that the paternalistic means used to intervene with the population's liberty of action does so in terms of ecological values aimed at improving the welfare of the population. But this intervention is done alongside moralistic education that aims to create environmental subjects.

It is important to note that the concept of ecological civilisation, and the influence it has on policy development, is worthy of our attention as it has international implications. The success of the campaign is most certainly important due to China's status as the world's largest polluter, as how it resolves (or does not resolve) this issue will have a global flow-on effect. If it is successful, it could then use its participation in international environmental fora to spread the ideas of its success.³⁸⁴ The actions taken by the government in the name of the ecological civilisation campaign can serve as a lesson or example to people around the world, and as inspiration for them to adopt similar policies in the name of environmental remediation.

³⁸⁴ The effectiveness of international institutions in delivering outcomes is also a hotly debated topic; see for example: Young, Oran R., "Effectiveness of International Environmental Regimes: Existing Knowledge, Cutting-Edge Themes, and Research Strategies," *PNAS* 108, no. 50 (2011); Park, Jacob, Ken Conca, and Matthias Finger, *The Crisis of Global Environmental Governance: Towards a New Political Economy of Sustainability*, Environmental politics (London: Routledge, 2008).

Chapter 9: Fieldwork in Pujiang County, Zhejiang Province

Introduction to Second Case Study

Now that we have seen some instances of how the idea of ecological civilisation influences government policy, I now examine how these policies affect what is happening on the ground. The case I analyse is that of the process of industrialisation and the resultant environmental degradation in Pujiang County, Zhejiang Province. I will do so using the theoretical framework outlined in the theoretical chapter above, demonstrating that the actions of the Pujiang County government are evidence for the environmentalisation of the Chinese state, and that the techniques of governance used are examples of weak paternalistic means to ensure the welfare of the population. The name of the villages visited will be withheld in accordance with the wishes of some of the interviewees who participated in this study. As noted earlier, this case study grew out of a dialogue between myself and HE Jixian, a researcher from the CASS, in response to my need to establish a suitable site for field work following the sudden unrest at my previous planned site.

Dr. HE's hometown is in Pujiang County, Zhejiang Province, and provides a salient example of the link between the process of industrialisation and environmental degradation. HE grew up in a village in Pujiang County, and due to the unique story of its rapid industrialisation and recent attempts by the local government at environmental remediation, he suggested that it would be an ideal site for my research on China's drive toward becoming an ecological civilisation. Pujiang industrialised quickly and is conveniently located close to the world-renowned trading hub Yiwu; hence, the locals are quite wealthy in comparison to people living in other rural areas in China. Pujiang's economy is chiefly supported by three industries, or what are known locally as the traditional three big pillar industries (*chuantong san da zhizhu chanye*)—namely crystal glass, quilting, and padlocks. Doubtless, they all have a part to play in the pollution that is affecting Pujiang at present; however, the crystal glass (*shuijing*) manufacturing industry is singled out by the locals and officials as the chief cause of environmental pollution in the county among the three. In this section, I demonstrate that the Pujiang government's environmental remediation efforts, conducted under the banner of ecological civilisation, are paternalistic techniques that intervene with the population's liberty of action rationalised in terms of ecological values, the chief objective of which is to attain improvements in the health and welfare of the population. This is demonstrative of the environmentalisation of the Chinese state, a change that has been implemented after the recognition of the importance of environmental health as a necessary factor to ensure the welfare of a population.

About the Crystal Glass Manufacturing Industry

The crystal glass industry in Pujiang emerged at some time in the early stages of the reform and opening up period. A relative of one of the interviewees purchased a book during a trip to Shanghai in the late 1970s or early 1980s that described the process of crystal glass manufacture. This relative then brought the book back home, gained an understanding of the manufacturing process, and established a small crystal glass manufacturing plant. Whether this was the actual beginnings of the crystal glass manufacturing industry in Pujiang County or not is unclear; however, what is known is that this family were one of the pioneering manufacturers of crystal glass, and once the crystal glass industry was established in Pujiang it grew and developed rapidly. One of the chief reasons that this happened is that a small crystal glass manufacturing plant requires low start-up capital and a small workshop area, and it does not require the workers to possess vast technical knowledge to produce high-quality products. This meant that it was easy for people with low education and narrow skills to establish successful crystal glass workshops. The rapid spread of the crystal glass manufacturing industry is attributed to the speed with which the local people learned the trade, the local availability

of resources, and convenient market access due to its geographic proximity to the major trading hub Yiwu.³⁸⁵

There are eight types of crystal that are manufactured in Pujiang: crystal chandelier beads, pendants, ornaments, octagonal beads, flat beads, fake diamonds, rhinestones, and crystal handicrafts. Each of these kinds of crystal products requires a unique manufacturing process, often using similar chemicals and methods in the manufacturing and finishing process. Per the information provided by the Crystal Glass Association of Pujiang, none of these chemicals used present an environmental threat. A cursory query on the Internet about how crystal glass is manufactured indicated that in some instances lead is used to make the crystal more sparkly. When asked if lead was used in production, the head of the crystal glass committee stated that although it may have been used in the past, it was no longer used as it was both unnecessary and expensive. The main pollution that results from crystal glass manufacture lies in the waste glass powder that is a by-product of the polishing and finishing process. This fine powder mixes with the water used in the process, and if released into local waterways without processing, results in the phenomenon the locals call milky rivers (*niunai he*). They are thus named due to the distinctly white tinge the water takes as the result of fine glass powder residue, as seen in the image in Appendix 5, photo 1. Some of the consequences of this kind of pollution are that it leaves the water unsuitable for drinking or swimming, results in a loss of biodiversity in waterways, and leads to hardening of the soil if this water is used for irrigation. Once the soil hardens, it becomes difficult to plough the fields, and seeds sown in this soil are less likely to germinate due to the hardness of the soil. This can be devastating for local farmers as it is very difficult to decontaminate the soil once it has become contaminated. However, increased monitoring and a reduction in the amount of small manufacturing plants has seen the milky river problem largely disappear over the last ten years. Any qualifiable or quantifiable data pertaining to an improvement in the soil is unavailable through public media. We also requested soil quality data from the local Bureau for Environmental Protection, but the bureau did not provide us with the requested statistics on water pollution and soil degradation. During our interview, however, they did acknowledge that they have kept data on the crystal glass manufacturing industry and its progress over the years since the bureau was established (2002).

Previously in Pujiang, there were many small crystal glass factories operating, mostly small workshops in residential areas.³⁸⁶ When this process began, it started in Pujiang's hilly border regions, areas which, despite being focal points of the industry in the early years, have remained largely undeveloped until recently. The interviewee mentioned above whose relative helped bring the crystal glass manufacturing industry to Pujiang testified to this fact, as their first workshop was based in a mountainous region of Pujiang called Dafan. As the cost of starting up small workshops was comparatively low, many of the locals began their own businesses, and trade was facilitated by Pujiang County's proximity to Yiwu, a trading hub in Zhejiang Province. The industry grew rapidly, inviting many migrant workers into the region, with many of them coming from southwestern provinces such as Guizhou, Sichuan, Yunnan, and Guangxi. Unfortunately, due to time constraints, none of these migrant workers were sought out for interviews. According to the Provincial Level Crystal Glass Manufacturing Group (a government-supported organisation), there are around 170,000 migrant workers engaged in the crystal glass manufacturing industry; to put this in perspective, Pujiang County has a population of just under 400,000.

³⁸⁵ 许光, "浦江县“五水共治”倒逼产业转型升级的经验研究," [Guang Xu] *当代社科视野*, no. 5 (2014): p19.

³⁸⁶ See Appendix 5, photos 2 and 3.

Migrant workers play a central role in the crystal glass manufacturing industry in Pujiang County. In the early 2000s, around 60 percent of people engaged in crystal glass manufacture were migrant workers; in recent years, however, as the industry has been “transforming and upgrading” (*zhuanxing shengji*),³⁸⁷ this ratio has changed so that now migrant workers only make up around 30 percent of the population engaged in this industry. Further, at its peak, around 85 percent of people from Pujiang County were in some way involved in crystal glass manufacture and its related industries. This statistic is interesting especially as at that time, due to the nature of the industry (being scattered and distributed small workshops), it was very difficult for the government to impose taxes on people engaged in the industry. This may also be a contributing factor in its proliferation. During the early 2000s, only 3 percent of taxes paid to the Pujiang County government were derived from the crystal manufacturing industry, yet 30 percent of total electricity was used by the industry. Hence, to combat this problem, the local government increased the taxes on electricity use for industrial purposes—possibly a driving factor in the popularity of small workshops based on the ground floor of residential dwellings. The most significant shift toward controlling the crystal manufacturing industry started in September 2011, due to the pollution it was generating; however, due to the diffuse nature of the industry, it was difficult to control. Starting in 2011, the local government began the shift toward relocating the industry into four concentrated production areas—one in the east, one in the south, one in the west, and one in the centre of the county—where local manufacturers could move their factories into a dedicated area that contained facilities that would ensure that production was carried out in a way that minimised environmental impact. This process has begun in 2015, with the transition expected to be completed by 2016.³⁸⁸

The transition from a Manchester-model production style to a centralised model is touted by the local government as a necessary step to ensure that the industry complies with environmental standards. It will also mean that it will be easier for the local government to collect tax revenue from this industry than it had been previously. The government estimates provided by the Provincial Level Crystal Glass Manufacturing Group state that at its peak there had been over 20,000 small crystal glass workshops, which at the time of the second fieldwork trip had been reduced to around 1,500. This reduction will also make it easier to move the industry into the centralised manufacturing complexes, thus making it easier to regulate. In one of the villages visited, there reportedly had been upward of fifty small crystal glass workshops operating, and most them produced crystal glass beads (*zhuzi*); recent times have seen a big push to shut down unlicensed and pollutive workshops, so that in 2014, the village had only thirteen still in operation. It is planned that by 2016 these small workshops will be closed.

Environmental Issues

This section identifies some of the main environmental issues that are affecting Pujiang County. As identified by the Pujiang County Bureau of Environmental Protection, there are three main factors that cause environmental pollution: population, agriculture, and industry. Population pollution means pollution generated in the process of normal daily activity, generally taking the form of rubbish and sewage. Rubbish became a significant problem in the 2000s as a rise in affluence was not met with effective systems in place to dispose of the rubbish that accompanies modern lifestyles; the problem of sewage removal in rural areas has also been resolved as part of the Five Waters Administered Together programme discussed below. The agricultural industry generates significant levels of pollution, mostly from the overuse of chemical fertilisers and pesticides and the increased mechanisation of agriculture. Industry is also a large contributor to the pollution problem; although

³⁸⁷ Transforming and upgrading means that production methods are becoming automated, and less workers are required for the process.

³⁸⁸ Some photos of these new facilities are found in Appendix 5, photos 4 to 9.

crystal glass is perhaps the most salient example in Pujiang County, there are two other so-called pillar industries that also likely contribute to this problem, as well as other industries that the relevant government departments neglected to mention.

In the sections that follow, I expand on these environmental issues by detailing the evidence given by local officials and residents, and then discuss how these problems are understood by each side. Following, I will detail the measures in place to resolve these problems. The key environmental issues in Pujiang as identified by the interviews are water pollution, soil pollution, loss of farmland, and loss of biodiversity. The data gathered clearly shows that these are the main issues in the county of which the residents are aware. In contrast, my online data search only identified water pollution. The seriousness of this problem is officially recognised, and the promotion of environmental restoration is articulated through the rhetoric of the Zhejiang provincial government's campaigns of Five Waters Administered Together (*wu shui gong zhi*), hereafter referred to as FWAT and Three Transforms and One Demolish (*san gai yi chai*), hereafter referred to as TTOD that will be addressed in the next section. The promotion of these campaigns is done via big letter posters in public spaces around Pujiang County.³⁸⁹ At the governmental level, these phrases are frequently used in official discourse related to these issues, as is evidenced by Pujiang County government work reports, academic articles sourced through CNKI, and local newspaper reports on the topic.

Water pollution in Pujiang is so serious as to warrant a county-wide campaign to ameliorate the damage done to its sources of water. Water pollution was not a serious issue in Zhejiang until the 1980s when the pace of industrialisation increased rapidly.³⁹⁰ In Pujiang County, one of the main industries responsible for an increase in affluence is crystal manufacture; crystal products manufactured in Pujiang County make up around 70 percent of China's total crystal manufactures.³⁹¹ It is also ostensibly the main industry responsible for the pollution of Pujiang's waterways, which according to the local CCP county committee has rendered 85 percent of Pujiang's main river, the Puyang River, toxic.³⁹² When the industry started in Pujiang, the selling price of crystal glass products was quite high, encouraging the widespread proliferation of small factories. Many of the small workshops still in operation at the time of the study were built into the bottom storey of local houses. In general, village houses in this area are multi-level—one indicator of wealth is to build another (or several more) stories onto one's house.³⁹³ So, people in the village, to make money, would establish a small crystal glass manufacturing plant in the bottom storey of their house, or else rent this space to people from outside the village so that they may do the same.

The crystal produced in this village was largely used in the making of small beads, which could be used for making jewellery, chandeliers, or for other ornamental uses. Due to a lack of enforcement of environmental laws, and the proliferation of small factories, pollution went largely unchecked until as late as 2013. This has had a direct effect on the local water sources, such as underground wells and waterways, and has caused soil contamination. The villages that were visited had many small waterways such as canals and ponds, generally next to people's houses.³⁹⁴ Crystal manufacture reputedly caused pollution to the underground wells and poisoned the waterways in the village; locals complained that the water could no longer be used for drinking or for raising loach, small crayfish,

³⁸⁹ For an example of one of these signs, see Appendix 5, photo 10.

³⁹⁰ 钟小代, "五水共治项目对流域经济发展影响的定量分析," [Xiaodai Zhong] 低碳世界, no. 9 (2014).

³⁹¹ 许光, "浦江县“五水共治”倒逼产业转型升级的经验研究," p19.

³⁹² 中共浦江县委, "强势推进“五水共治” 努力打造秀美浦江," [CCP's Pujiang County Committee] 政策瞭望, no. 6 (2014): p31.

³⁹³ For an example of such a dwelling, see Appendix 5, photo 21.

³⁹⁴ See Appendix 5, photos 11 and 12.

snails, or other aquatic life. In recent years, there have been controls in place to ensure that untreated water is no longer released into the waterways as a means to improve water quality, with corresponding reports from interviewees that some of the waterways are to a small degree supporting aquatic life again. During the meeting with the Bureau of Environmental Protection, the head of the bureau confirmed the presence of water and soil pollution, but as mentioned earlier, the relevant data that was requested and promised was not delivered.

The pollution of waterways has directly impacted the level of biodiversity found in the villages. That is not to say that it has disappeared entirely; rather, it can no longer be found in areas where it used to be prolific, and now is mostly confined to Pujiang's mountainous areas where the terrain is too rugged or too remote to be exploited for large-scale industrial use. Pujiang is a basin surrounded by hills and mountains, and the mountainous areas are still somewhat populated although generally only by the older generation who are mostly living out their days in their home village by subsistence farming. Their stated reason for doing so is that they prefer life in the countryside and are unable to adapt to life in the city. Any excess produce arising from their farming activities they tend to share around among family and friends rather than sending it to market, and if they require financial assistance they rely on money from their children who work in the urban areas. These areas have changed little during the years of reform and the environment is still largely unspoiled; the villages visited had potable water sources that came directly from the mountains. These outlying areas have dense, natural forests growing on the hills that are still inhabited by wildlife, such as wild pigs, badgers, squirrels, wild chickens and ducks, frogs, and snakes, among others.

The locals reported that wildlife here although still common is less so than in their childhood. One of the interviewees talked of how it was a popular activity that people would go into the forests and hunt wild game, saying that as yet there were no laws in place to prevent this and so there were fewer wild animals around. Another interviewee, however, reported that there was a bag-limit on the hunting of sparrows, twenty per person, and that this was enforceable by law. In discussion with another interviewee, it was learned that the limit on sparrows and other birds was introduced largely in relation to the migrant population from southwest China. In those areas, many varieties of small birds are used in local dishes; these migrant workers were poaching local birds to make their traditional food. Some concerned locals brought this to the attention of the local government, which were anxious that this poaching would reduce bird numbers and so introduced restrictions as a way of protecting the local birdlife. Although the issue of hunting was raised with the Bureau of Environmental Protection during the second research visit, its personnel was not able to provide concrete information about the laws on hunting in Pujiang County or in Zhejiang Province.

Rubbish is a problem worldwide, related to modern lifestyles and patterns of consumption, and the issue was often brought up during fieldwork in Pujiang, although it did not appear to be the most salient problem at that time. However, several interviewees mentioned the issue of rubbish, saying that in the past it had been a big issue. Some of the problem was related to the crystal glass industry,³⁹⁵ but a part of the problem was also that people would throw rubbish on the ground, identified by the locals as an issue of *suzhi* or so-called population quality and the other was that there had been no formal rubbish collection services offered by the local government. This has changed in recent years. One of the interviewees talked of how the government promoted the idea that throwing rubbish on the ground is uncivilised (*luan reng laji bu wenming*), a clear indication of the way the government connects environmental issues with notions of civility and morality.³⁹⁶ In pursuit of this goal of

³⁹⁵ See Appendix 5, photo 13 for an example of the kind of rubbish left by the small crystal workshops.

³⁹⁶ See for example, Appendix 5, photo 14.

eliminating rubbish, it was revealed that one could be fined if caught throwing any rubbish on the ground, even if it were organic matter such as fruit stones or peels. Further to this, the government provided rubbish bins to all the residents and they were collected regularly, and in the case of one of the families I stayed with, they had also built a waste collection depot on the outskirts of the village for the household rubbish to be stored before it was taken away by a garbage truck to the landfill. Although it was necessary to resolve this problem, many of the locals engaged in so-called NIMBY³⁹⁷ protests to ensure that a rubbish processing plant would not be built near their village. Finally, in 2013, it was decided that there would be a garbage collection plant built in the local Dafan region. At that time, it was one of the most advanced garbage processing plants in China. Today, the problem of waste removal and disposal has largely been addressed so that it is rare to see piles of rubbish on the streets.

Of the environmental problems evident in Pujiang, the most salient is water pollution. Previous problems such as rubbish have been addressed, and other difficulties such as soil pollution are invisible and the data on this issue is unavailable. Whilst the local government does admit to some extent that there is a problem, the scope of the issue is difficult to ascertain due to a lack of data transparency. For example, in the Pujiang County “Work Report Collection” of 2015, an article mentions heavy metal pollution coming from the electro-plating industry.³⁹⁸ However, during the research, none of the interviewees from either the local population or the local government mentioned this issue. It shows that locally there is an awareness of the pollution from the largest and most evident industry, whilst other industries responsible for pollution are ignored. As mentioned earlier, there are three so-called pillar industries in Pujiang County; the other two are locks and quilting. During the fieldwork research, these other two industries were rarely mentioned if at all; in the case of the quilting industry, it was stated that the environmental impact of the quilting industry was negligible.³⁹⁹

The Eco-Tourism Industry in Pujiang

We value both natural landscape and resources as well as material wealth. The former overrides and promises the latter. - Xi Jinping

Now that crystal glass manufacturing plants are being phased out in favour of opening up large, centralised manufacturing facilities, it has led some people to turn to other avenues to make money. Pujiang County, although in some parts largely industrialised, is also home to many sites of natural beauty, especially when moving into the mountainous areas as they have been harder to develop and so largely remain in their natural state (*yuanshi zhuangtai*). Also, being located close to the large and wealthy cities of Hangzhou, Yiwu, and Shanghai, it is conveniently located for the more affluent people of those towns who want to take a break from city life for a few days. One such place is called Malingjiao; this small former village is set on the side of a mountain, a naturally beautiful part of Pujiang that used to be famous for manufacturing crystal. Some years ago, crystal production in the village was prohibited due to the pollution it was causing, so the local party leader decided to develop it as a bed and breakfast or *minsu* village. The entrance to the village is at the street level; from there, you walk up some moss-covered old stone stairs past a tree that is reputed to be 1,200 years old into the village proper. There is an old-style courtyard building in the village that has almost been completely renovated; the downstairs area has dining rooms for guests to eat their meals, and the upstairs areas are set aside as accommodation. Aside from this, there are other former houses in the

³⁹⁷ **Not In My BackYard**

³⁹⁸ “浦江工作报道集,” (2015), p25.

³⁹⁹ However, as we saw in Chapter 1, in the section titled “WTO Entry and Environmental Degradation,” this is likely not the case.

village that are slowly being renovated also; the plan is that the whole village will be developed and turned into holiday accommodation for people who want a break from urban life. One of the houses has been set up especially as a calligraphy studio, with spectacular mountain views and a private path to the top of the mountain from the upper storey. This is one of several places that are now being developed for eco-tourism in Pujiang County.⁴⁰⁰

One of the interviewees was the owner of a restaurant that he had opened earlier in the year, facing Pujiang's backup reservoir. This place is outside of the main urban area, with the reservoir on one side and mountains behind it; as such it has become a popular place for locals to get away from urban areas as well as a destination to entertain guests so as to showcase some of Pujiang's local scenic spots.⁴⁰¹ It was commented that a trend was emerging whereby people were increasingly favouring restaurants located outside of town as the food was perceived to be fresher, cleaner, and safer than restaurants found in the urban areas. The restaurateur had opened his establishment with exactly this in mind. All the food he sourced was from reputable suppliers that he knew personally, and the bulk of the food was reported to be grown locally without using chemical fertilisers, pesticides, or genetically modified organisms (GMO). His goal was to take advantage of this increasing trend in eco-tourism to make a living. In addition to the restaurant, another building nearby was under construction where he planned to open a bed and breakfast to provide accommodation for holiday makers at affordable prices. Unfortunately, unlike the trend in other parts of Pujiang, he was unable to find a traditional local courtyard-style house (*siheyuan*) to build his bed and breakfast; the reservoir was built during the Mao period and required the relocation of several villages so as to flood the valley to make the reservoir, so all of the traditional housing in the area had been submerged. However, the potential for eco-tourism is widely recognised and so there are projects in the area to build courtyard-style houses in the traditional style, with the idea that they be turned into bed-and-breakfast-style accommodation.

This move to eco-tourism in Pujiang County is part of a broader trend to cater to the needs of the rising number of affluent citizens in China by promoting the area's natural beauty so as to entice city-dwelling tourists to the area. This is also a portion of a campaign to promote industries that are not ostensibly pollutive, and it has been publicly endorsed by Xi Jinping, with it being couched in the TMT rhetoric implying that a pristine environment is also a source of great wealth,⁴⁰² an expression that has direct links to the notion of ecological civilisation as espoused by the Chinese government. Even though many parts of Pujiang have become alarmingly polluted by industrialisation at any cost, many of the peripheral areas are mountainous and hard to develop and so have remained largely untouched. This presents an opportunity for those wishing to exploit Pujiang's areas of natural beauty as tourist destinations, providing an alternate source of income that, if managed well, will not cause harm to the local environment. However, it is unlikely that eco-tourism will become a major industry in Pujiang; the local government will still need its pillar industries for the foreseeable future. Further, eco-tourism can potentially be detrimental to the environment, with opponents spouting the adage that we are loving nature to death. It is also worth noting that whilst efforts were made to inspect local industry and investigate the effect of pollution on the local population, local leaders tended to emphasise the natural environment in the outlying hilly regions as being representative of Pujiang's environment. Hence, during this period of research the potential for eco-tourism was overrepresented, and many of the more pressing issues relating to the welfare of the local population were left underaddressed.

⁴⁰⁰ For some photos of how it looks today, see Appendix 5, photos 15 and 16.

⁴⁰¹ See Appendix 5, photo 17.

⁴⁰² 戴建平, "把水环境综合整治作为大事来抓," [Jianping Dai] *政策瞭望*, no. 1 (2014): p44.

An Analysis of Pujiang County's Environmental Remediation Efforts

With an understanding of the history and progression of environmental degradation in Pujiang County, I now consider the techniques of governance used in the government's efforts at repairing environmental damage. In the early days of the expansion of industry in Pujiang, the economic benefits were prioritised over the negative impact on the environment. Due to industrial pollution, the chief manifestation of which is found in the proliferation of crystal glass manufacturing and processing factories and workshops throughout the county, Pujiang earned itself the unenviable title of Zhejiang's most unhygienic and polluted county (*Zhejiang weisheng huanjing zui cha xian*).⁴⁰³ I posit that the FWAT, the TTOD, and the EGEP, implemented in response to the severe pollution, are indicative of the environmentalisation of the Chinese state, as they utilise techniques of government in the Foucauldian sense that aim to realise the biopolitical imperative of ensuring the health, happiness, and welfare of the population through improving the environment. Further, I argue that these techniques of governance are examples of weak paternalism, as their intervention with the population's liberty of action is rationalised in terms of ecological values seeking to improve the welfare of the population, coupled with moralistic education that would make these techniques unnecessary. I have incorporated findings from the fieldwork with information gleaned from articles and official documents published on the Chinese academic journal database CNKI related to environmental issues in Pujiang. Each of these points mentioned in the academic articles and official documents will then be related to observations that I made whilst conducting fieldwork in Pujiang during the two trips in 2014 and 2015. Data is also taken from resources received from local government officials such as some statistical data from the Bureau of Statistics and other documents from the County Archives.

In my research, I became aware of many signs advocating two campaigns that at that time were being promoted by the government. Some of the interviews touched on these campaigns as well. The campaigns were the previously mentioned FWAT and TTOD; they were referred to on big letter posters on billboards, clearly visible when travelling along the roads around Pujiang County. As with much Chinese government sloganeering, the meaning behind it is not clear just by reading the slogan, so I investigated their meaning by an analysis of official documents. In my interviews, I focus mainly on FWAT, as it is more pertinent to environmental issues. Another slogan that was very visible during the time of research was Xi Jinping's so-called TMT, his official line that environmental concerns should be prioritised over economic gains. This slogan is given as the guiding thought behind the document "An Overall Plan for Ecological Civilisation System Reform" released in 2015 (discussed in the previous chapter on ecological civilisation policy) and is evidence of the attempts made by the government to promote ecological values. It is also mentioned in official government documents relating to environmental remediation in Pujiang County, and it provides the link between the notion of ecological civilisation and environmental governance in the county. Importantly, it demonstrates how the campaign in Pujiang County utilises paternalistic techniques of governance in concert with moralistic education, with the aim of imbuing citizens with ecological values, thereby creating environmental subjects.

Five Waters Administered Together

FWAT is a government campaign specific to Zhejiang Province, the aim of which is to ease the pressure on waterways as well as ameliorating the environmental damage that has occurred since the reform and opening up period.⁴⁰⁴ The five waters or five kinds of water suggested in the slogan refer to

⁴⁰³ 中共浦江县委, "强势推进“五水共治” 努力打造秀美浦江," [CCP's Pujiang County Committee] *ibid.*, no. 6: p31.

⁴⁰⁴ 钟小代, "五水共治项目对流域经济发展影响的定量分析," pp82-3.

polluted water, flooding, waterlogging, water supply, and water conservation; in this way, the campaign aims to treat polluted water (*zhi wushui*), prevent floods (*fang hongshui*), drain waterlogged areas (*pai laoshui*), ensure the water supply (*bao gongshui*) and stress frugality in water usage (*zhua jieshui*).⁴⁰⁵ Zhejiang is in a part of the country that experiences monsoonal weather; in the rainy season which is generally between late spring and early summer, it receives around 50 to 60 percent of its annual rainfall. Because of this, flooding and waterlogging are common occurrences, and water scarcity generally is not an issue; however, due to population density, Zhejiang Province's per-capita water is still less than the national average.⁴⁰⁶ Due to Pujiang being in a basin surrounded by mountains, the likelihood of flooding is high, as is the likelihood of persistent water pollution due to stagnant bodies of water, rivers, and their tributaries having a slower rate of flow.

A zero-tolerance (*ling rongren*) approach to pollution has been actively implemented by the local government; according to Xu Guang, assistant professor at the Zhejiang Provincial Party School's Economics Department, between the adoption of the FWAT project in 2013 and March 2014, the local government had carried out fifteen so-called midnight operations to clean up water pollution (*qingshui zhiwu lingdian xingdong*), during which they discovered 2,750 households that were producing illegal emissions from crystal glass manufacture. These operations resulted in the arrests of 320 people.⁴⁰⁷ By September 2013, the county government had closed over 10,000 crystal processing plants, removed 50,000 crystal processing machines, and demolished 450,000 square metres of illegal crystal glass processing plants. The stated objective of this is to abolish the traditional cluster-type economic model (*kuaizhuang jingji*) with many small-scale plants and instead move toward a modern model that sees production concentrated in a single area.⁴⁰⁸ Assistant Professor Xu also states in his article that a direct result of the FWAT project has been a sharp decline in the number of small- to medium-sized businesses operating in Pujiang County. Whilst this has led to a decrease in the amount of pollution produced, it has also meant that there are fewer jobs available, prompting migrant workers to return home (in 2014, it was estimated that there were around 200,000 migrant workers in Pujiang County), and along with that, the value of rental property has diminished.⁴⁰⁹

Another reason for implementing the FWAT campaign was that the pollution of the water in Pujiang was so severe that it was recognised as having the potential to cause social instability in the county.⁴¹⁰ The project was announced in 2013, and its implementation began in 2014. In an article by Zhong Xiaodai from nearby Fuyang City's Department of Flood and Drought Prevention, the timeline of this project is divided into three main phases, with its completion estimated to take place in the year 2020. The first phase runs from 2014 to 2016, during which time it is planned that the most obvious problems will be addressed; the second phase runs from 2014 to 2018, during which time it is planned that the main issues will be resolved, and that there will be a transformation in the appearance of the waterways; the final phase is that by 2020 there will be no significant issues—that qualitative change will have been realised.⁴¹¹

FWAT is just one aspect of the environmental remediation efforts taking place in Pujiang County; however, it certainly provides a useful case for analysis as part of China's ecological civilisation project. The FWAT campaign arose out of a concern for the degrading water quality in Pujiang County, and the

⁴⁰⁵ Ibid.

⁴⁰⁶ Ibid., p82.

⁴⁰⁷ 许光, "浦江县“五水共治”倒逼产业转型升级的经验研究," p20.

⁴⁰⁸ Ibid.

⁴⁰⁹ Ibid., p21.

⁴¹⁰ Ibid., pp20-1.

⁴¹¹ 钟小代, "五水共治项目对流域经济发展影响的定量分析," p82.

effect that this water quality was having on the population. Therefore, the FWAT campaign is a paternalistic technique of governance, fitting in with our definition in that it is an intervention with Pujiang's population's liberty of action rationalised in terms of ecological values the chief aim of which is securing the welfare of the population. The intervention takes the form of controlling the ways people can use water, for example, by targeting polluting businesses that have a history of dumping untreated water directly into waterways. These interventions are supplemented by means such as cleaning up waterways, monitoring water quality, and building water treatment plants, all done to ensure the health and welfare of the local population. At the same time, campaigns like the FWAT run alongside campaigns aimed at instilling ecological values in the population, such as ecological civilisation and the promotion of TMT. We see that FWAT is an example of the environmentalisation of the Chinese state, and that it uses weak paternalistic techniques of governance as part of this process to create environmental subjects.

The Eight Great Engineering Projects

One of the proposals put forward to implement the FWAT project that is specific to Pujiang County is the so-called EGEP, mentioned above, which has been put forth by the county government to clean up the pollution in Pujiang and which is also couched in terms of Xi Jinping's TMT. The EGEP are as follows:

1. Building areas where the production of crystal is centralised, rather than scattered among households within the county. The aim here is that, by 2015, there will be no crystal production or processing done in residential areas.⁴¹²
2. Building new and expanding existing sewage processing plants at the village level, and building a sewage pipe network so that sewage is available in both rural and urban areas.⁴¹³
3. Creating a new landfill site, as well as waste depots in villages to improve the problem of waste disposal.
4. Restoring the ecology of the Puyang River by creating man-made wetlands to enable the river to rejuvenate itself.
5. Completing the construction of a factory for processing livestock that has died due to disease, and expanding the methane capturing plant, so as to reduce the impact that rearing livestock has on the environment.
6. Completing the project of cleaning up potable water sources and backup reservoirs, so that people will have safe water to drink.
7. Completing the clean-up of watercourses running through the city areas, including reinforcing the slopes around the Puyang River.
8. Improving pollution monitoring services, including the completion of the environmental monitoring and inspection building, a vehicle exhaust monitoring station, and an air quality monitoring station, as well as other infrastructure to improve the capacity of the government to monitor the environment.⁴¹⁴

This provides further evidence of the environmentalisation of the Chinese state as exemplified by the case of Pujiang. Promoted under the banner of the FWAT project, the EGEP details eight specific measures to be implemented for the purposes of improving water quality, all of which are paternalistic interventions on the population's liberty of action rationalised in terms of ecological values the chief aim of which is to improve the health and welfare of the population. At first glance, measures such as number three, which stipulates the creation of waste depots and a new landfill site, may not seem to

⁴¹² See Appendix 5, photos 4 to 9.

⁴¹³ See Appendix 5, photos 18 and 19.

⁴¹⁴ 戴建平, "把水环境综合整治作为大事来抓," p45.

be interventions on the population's liberty of action. However, it must be noted that these measures are designed to eliminate the problem of population pollution; these measures, coupled with campaigns to stop people from littering through a combination of moralistic education and fines, are designed to intervene on people's liberty to throw rubbish wherever they like. As with the FWAT, the EGEP is implemented in concert with campaigns to promote ecological values and thus indicates the use of weak paternalistic measures. This trend, then, demonstrates the environmentalisation of Pujiang County, where techniques of governance are implemented as much to remediate environmental damage as they are to create environmental subjects.

Three Transforms and One Demolish

Another of the government's projects aimed at addressing environmental problems, albeit to a lesser extent than FWAT, is the TTOD project. The TTOD project's aims, like those of the FWAT project, are not immediately obvious without knowing exactly what transformations and demolitions it refers to. The three transforms of the TTOD project are transforming old offices and residential areas (*jiu renzhai qu*), old industrial areas (*jiu chang qu*), and urban villages (*chengzhongcun*); the one demolish refers to the demolition of illegal buildings/structures (*chaichu weifa jianzhu*).⁴¹⁵ It professes to promote the "transformation and upgrading" (*zhuaxing shengji*) and "reform and innovation" (*gaige chuangxin*) of industry in the area, with its stated aims being to alleviate problems related to parking, travel, and the environment, reforming industry standards so that they do not harm the environment, and to remove the appearance of any place seen as "dirty, messy, or inferior" (*zang, luan, cha*).⁴¹⁶ This project started in 2013 and is projected to continue until 2016. During the interview process, the TTOD project was touched upon by one of the interviewees. This interviewee is from a village but does not personally engage in agriculture—instead most of the land that is allocated to their family by the village is rented out to another villager who uses it to grow grapes (along with crystal glass, Pujiang is also famous for producing Kyoho (*Jufeng*) grapes). Instead, they engage in various agricultural support roles. Previously, they had created a small backyard workshop rented to someone for producing quilts made from reclaimed cloth—this workshop was built on a portion of their land allotment. As the workshop was built on land marked for agricultural use, as well as the pollution generated from the workshop that they built, it was shut down as part of the TTOD project.

As with the EGEP and the FWAT, the TTOD campaign uses a technique of governance that intervenes with a person's liberty of action, rationalised in terms of ecological values, that seeks to improve the welfare of the person being compelled. As in the case mentioned above, their workshop was demolished due to its potential to pollute agricultural land. This campaign is another example of the environmentalisation of China as typified by the case of Pujiang; the overall aim of the TTOD campaign is to secure the well-being of the population by extending the biopolitical imperative to include environmental health. And as this campaign is also conducted in terms of ecological civilisation, these techniques of governance are examples of weak paternalism, the overall aim of which is to impart ecological values on the population, thereby creating environmental subjects.

The Lesson of Pujiang County

Pujiang County is but one example of an area within China that, due to fast-paced industrialisation without due regard for environmental protection, has suffered a large degree of environmental degradation—however, this case serves as an example of the tension between development and the environment seen throughout China and even worldwide. In Pujiang, the degradation is largely

⁴¹⁵ "浙江省人大环境与资源保护委员会关于我省“三改一拆”行动情况的视察报告," *浙江人大杂志*, no. 6 (2013): p99.

⁴¹⁶ *Ibid.*

attributed to the crystal glass manufacturing industry in both the available literature on the topic as well as from primary evidence given by locals and officials living in the region. It is quite likely that other industries contribute to environmental degradation; however, as the crystal manufacturing industry is so prolific and its pollution so visible, it tends to be perceived as the main source of pollution locally. Further, interviews with local officials reveal that this portrayal is evident at an official level as well as among the local populace.

This portrayal of crystal glass as the main perpetrator of Pujiang's environmental woes is reinforced by the fact that the first project declared in Pujiang's EGEP is that of centralising the manufacture of crystal glass. For example, an official local document entitled "A Case of the Experimental Implementation of Developing Water Ecological Civilisation in Pujiang County" identifies three main contaminants as being responsible for pollution of the Puyang River, implying that their main source is from the crystal glass manufacturing industry.⁴¹⁷ The three pollutants identified are manganese salt, ammoniacal nitrogen, and phosphorous. Whilst manganese pollution can result from glass manufacture, according to documents supplied by Pujiang's Board of Crystal Glass Manufacturers, manganese is not used in any part of the manufacturing process; if the information provided by the board is correct, it is likely that the source of this pollution is some other industry such as smelting, battery manufacture, or fireworks.^{418,419} According to the information sheet provided by the board, ammonia is used in the manufacture of two of the types of crystal products produced in Pujiang, namely crystal glass ornaments and fake diamonds. However, ammonia pollution experienced worldwide is generally attributed to the agricultural industry from fertilisers being washed into waterways.⁴²⁰ Phosphorous is not used in the production of crystal glass, and like ammonia, phosphorous pollution is generally attributed to the agricultural industry. Although the crystal glass manufacturing industry is responsible for water pollution in Pujiang County, analysis of the data shows that perhaps its role is overstated. Regardless of the causes, the local government and the local population see that there is an imperative to repair the damage that has been done to the environment, and active measures are in place to do so. Largely, this imperative is concentrated on two main targets: water pollution from industry and pollution related to the population (i.e. household rubbish and sewage).

In tackling the environmental problems that have arisen through the course of Pujiang County's development, the local government has adopted the slogan ecological civilisation into its official discourse to emphasise the political imperative of environmental protection and the importance of a healthy environment in maintaining social harmony and the well-being of the people. The evidence is found in official documents such as the one mentioned above that use the expression, as well as signs erected by the local government visible throughout the county.⁴²¹ This increase in environmental awareness enunciated through slogans is reinforced through actions such as the transformation and upgrading of industrial practises so that they are ecologically sustainable. By extension, there are measures adopted by local governments to ameliorate environmental damages as part of this project. Through campaigns such as FWAT and TTOD, the local Pujiang government is implementing much-needed environmental restoration projects, ostensibly without regard to possible detrimental

⁴¹⁷ "浦江县水生态文明建设试点: 实施方案," ed. 浦江县人民政府 (2014), pp16-17."

⁴¹⁸ Association, Scottish Environmental Protection, "Manganese Fact Sheet,"

⁴¹⁹ Organisation, World Health, "Manganese in Drinking-water: Background Document for Development of WHO Guidelines for Drinking-water Quality,"

⁴²⁰ Agency, United States Environmental Protection, "Aquatic Life Ambient Water Quality Criteria for Ammonia - Freshwater,"

⁴²¹ See, for example, Appendix 5 Photo 10 and 20.

outcomes for local businesses. This, in some instances, has led to unemployment or underemployment for the people affected and to some extent an exodus of migrant workers from the area. The promotion of eco-tourism has arisen out of the growing demand for scenic holiday resorts for China's emerging middle-class urbanites more so than a need to explore alternative avenues of wealth generation; its importance in addressing underemployment is overstated, and it is unlikely that the eco-tourism industry would grow to the extent that it would become one of Pujiang's pillar industries.

The case of Pujiang provides a classic example of the tension between development and the environment, showing how unchecked development can have a deleterious effect on the environment. Attempts to remediate environmental damage have been implemented under the banner of the CCP's ecological civilisation campaign, with technological and infrastructural solutions working in concert with measures to educate and impart ecological values. This case study provides clear evidence of the environmentalisation of the state; the environmental remediation of Pujiang County is demonstrative of the expansion of the biopolitical imperative to the realm of environmental health as a means of securing the welfare of the population. Further, these techniques of governance used in the environmentalisation of China as typified by Pujiang are examples of weak paternalism; they intervene with the population's liberty of action rationalised in terms of ecological values, with the clear aim of securing the welfare and health of the population.

Chapter 10: The Case of Hong Nong Academy

Introduction to the Third Case Study

The next case study is an analysis of one manifestation of the NRRM, a project started by Professor HE Huili that looks to China's rural areas and traditional knowledge as a means to mitigate the effects of environmental degradation. Professor HE invited me to go and visit her project called Hong Nong Academy, a study institute based in rural Henan Province, in an area that is near the intersection of three provinces: Shanxi, Shaanxi, and Henan. This case study is based on interviews and a five-day stay at the academy between the 26th and the 30th of January 2015, and published documents related to Hong Nong Academy and the Rural Reconstruction movement in general. As the academy was only established in 2013, and as it is quite remote, little has been written about it in Chinese and even less in English. However, the project is slowly receiving international attention, and now Professor HE is coordinating a programme through the University of Gronigen in the Netherlands on development studies, with the 2016 China programme including a visit to Hong Nong.

Professor HE grew up in Luoja Village where Hong Nong is situated, and she has fond memories of growing up in a village in rural China during the late 1970s and early 1980s. This part of Henan is in a hilly region (*qiuling qu*), and it is geographically distant from the economic and political powerhouses of China. As such, it is underdeveloped in comparison with Pujiang County. There are few local industries, and the locals were also quite late in leaving the village to find work, with many not leaving until the late 1990s and early 2000s. It is also relatively dry in comparison with Zhejiang, and the recent north-south water transfer project (*nanshui beidiao*) has put further pressure on local water resources. Professor HE's Hong Nong Academy has had some measure of success in its attempt to organise a peasant cooperative to market their produce, as well as in its capacity as an institute of learning for educating locals and visiting university students. HE draws on the concept of ecological civilisation in her vision for Hong Nong, seeing it as a small project that may have lessons to impart that are crucial to creating an ecological civilisation. Hence, in this section, I relate the story of Hong Nong Academy and discuss its relevance to China's quest to become an ecological civilisation.⁴²²

Hong Nong Academy and New Rural Reconstruction

The following section draws on the experiences I had visiting Hong Nong Academy, which is a project started up by scholar and advocate of the NRRM, Professor HE Huili, who currently teaches at China Agricultural University (*zhongguo nongye daxue*). Hong Nong Academy is located in HE's home village called Luoja Village (*Luoja cun*) near Lingbao, Henan Province. According to HE, it is often said that if you want to see the roots of Chinese culture, go to Xi'an.⁴²³ This means that Lingbao, Sanmenxia, Luoyang, and other towns and villages in the area surrounding the ancient Hangu Pass (*Hangu guan*) have been important both culturally and strategically for the Chinese for thousands of years. One of the reasons why HE chose this place for her experiment is so she can investigate whether the connection with traditional culture in the area still exists, and if it does, whether it can be recovered. It was a continuation of her ten years of work for various government departments with relation to rural development. In 2003, she was appointed deputy county magistrate of Lankao and made responsible for rural development; from 2005 to 2007, she worked as deputy district magistrate for Yuwangtai District; from 2007 to 2013, she was a standing member of the party committee of Lankao County; and from 2011 to 2013, she was the assistant mayor of Kaifeng City.⁴²⁴ It was from her own

⁴²² See Appendix 5, photos 22 and 23 for some images of Hong Nong academy.

⁴²³ See Appendix 4.

⁴²⁴ 何慧丽, 程晓蕊, and 宗世法, "当代新农村建设运动的实践总结及反思: 以开封10年经验为例," *开放时代*, no. 4月 (2014): p150.

experiences working in the field of rural development, coupled with a passion for Chinese traditional culture and a desire to revive rural society, that Professor HE decided to establish Hong Nong Academy in her home town.

The name Hong Nong is short for *hongyang nonggeng wenming*, which means to promote agricultural culture/civilisation. HE argues that Chinese culture has its roots in agricultural society, and she sees Hong Nong Academy as drawing on the tradition of *gengdu* culture—a concept that has its roots between the Spring and Autumn period and the Warring States period—which valued a lifestyle that found a balance between academic pursuit and agricultural work. During HE's undergraduate studies, she became acquainted with the work of David Ray Griffin (affiliated with Claremont Theological College and John Cobb Jr., a key proponent of organic Marxism outlined in Chapter 2), as well as other post-modern critiques of industrial society, such as Ozeki Shūji's *The Ideal of Symbiosis*,⁴²⁵ and of course the extended works of Marx. It was also whilst a student in Wuhan that she met HE Xuefeng, an academic who specialises in Chinese rural studies. At the time, he was a student leader and organised students from universities around Wuhan to get together and form a Committee for the Promotion of Rural Reconstruction (*xin xiangcun jianshe cujin hui*), of which HE Huili was a member. They were brought together in the belief that industrialisation was destroying China's rural areas and rural culture, and they all wanted to actively try and reverse this trend. HE's PhD thesis applied Wallerstein's "world systems analysis" theoretical framework to rural Henan—marking Beijing as the core, Zhengzhou as the semi-periphery, and Lankao/Luoyang as being of the periphery. It was these formative years that served to cultivate her interest in the project of rural (re)construction and revitalising rural communities and culture. Her beginnings as a peasant from rural western Henan, to her university experiences in promoting the revival of rural areas, to her studies that focused on the problems of rural China—all this was a natural progression for her to dedicate her efforts to reform and revival in her home village.

Hong Nong Academy

The idea of starting up a small learning institute in a village came to HE in 2012 when she was in Luoyang and chanced upon a group of people who had started a similar project in Kaifeng. This project is called Dunfu Academy (*Dunfu shuyuan*),⁴²⁶ and it was formally opened in 2008. The founder of Dunfu, Wang Yingjie, organised classes at the academy for his friends, family, and neighbours, which were reputed to be attended and well-received by people of all ages. In these lectures, Wang would talk about Chinese traditional philosophers such as Confucius and Mencius, and he would discuss traditional values such as respecting elders and cherishing the young (*zunlao aiyou*), marital harmony (*fuqi hemu*), being honest and keeping promises (*chengshi shouxin*), gratitude and repaying kindness (*zhi'en tubao*), treating other people well (*shandai taren*), and overcoming bad habits (*kefu e'xi*). Wang believes that as one of the key human civilisations, China and its traditional values are an important part of world history and can serve to inspire people around the world. It is focussed primarily on teaching people about traditional values, it differs from Hong Nong Academy; however, its similarity lies in its recourse to tradition as a means to mitigate perceived loss of values in modern society. Dunfu Academy features several small classrooms, teaches classics such as the Daode Jing and Da Xue, and is welcomed both in the community and among local party leaders.

Drawing on the concept established by Wang at Dunfu Academy, HE conceived of her own project that would also contribute to the Rural (Re)construction Movement. HE is also of the opinion that for

⁴²⁵ In Chinese, the author is 尾关周二, and the book title is 共生的理想; I was unable to find an English version of this book.

⁴²⁶ "敦复书院," dfsy.net.

rural reconstruction to be successful, it requires working in league with the people at the grassroots rather than imposing on them from above. So, in July 2012, HE invited some university students from Henan University to come to her village and meet with some of the old villagers so that they could experience first-hand what life is like in rural China. During the visit, she also held a session in a morality classroom (*daode jiaotang*), where they would learn about Chinese traditional philosophy and rural culture. These initial classes were held with the consent of the local government in an old primary school campus that had become run-down through disuse. In the first class, they talked about how to revive village morality (*xiangcun daode fuxing*) and learned about traditional cultural activities such as local dances and waist-drumming (*yaogu*). The Hong Nong Academy was officially established in April 2013, and since then many university students have visited it, mostly those studying in Henan Province, as well as Chinese academics and even some international academics such as those from Claremont Theological College mentioned in the previous sections.

When students arrive at Hong Nong, they do so to receive first-hand experience of life in a Chinese village, as well as to learn about Chinese traditional thought. One of the guiding principles of Hong Nong is “respect reason and treasure virtue, ecological harmony” (*zundao guide, hehe shengtai*).⁴²⁷ HE argues that the reason for choosing this as Hong Nong’s guiding principle is to understand whether traditional knowledge can be used to address issues related to modernity, such as society being in disharmony and the fact that as a society we do not respect the laws of ecology. When I was at Hong Nong, students stayed for about a week and lived on the school grounds. It was the middle of winter and extremely cold, so there was no agricultural work to be done, although during this time they learned about rural pastimes during the winter such as craftworks. Upon arriving at Hong Nong, they were divided into four groups: the work group (*laodong zu*), the literature and arts group (*wenyi zu*), the discipline group (*jilü zu*), and the study group (*xuexi zu*). Each morning would start with physical activity based on tai chi (*taiji*), after which the different groups would break off and complete assigned tasks and activities. Meals were taken together, and before each meals words of thanks (*gan’en*) were recited to show gratitude for the meal to all those who were involved in the process of providing it— from farmer to cook as well as teachers and classmates.⁴²⁸

All food was locally sourced from the surrounding area and due to it being a village and wintertime, meals mostly consisted of porridge, vegetables, and *mantou* (steamed bread) with little if any meat. For most of the students staying at Hong Nong, the local living conditions were far different from those they were used to. Aside from the simple meals, the night-time temperature dropped below zero, and combined with the concrete construction of the school campus, it was much colder than many had previously experienced.⁴²⁹ There were no shower facilities, so visitors had to wash using a bar of soap, a basin of warm water, and a cloth. The students admitted that although the experience was much harsher than they had expected, it served to give them a fresh perspective on the lives of rural Chinese, and they were much better able to appreciate the harsh conditions that many of their parents and grandparents grew up with.

⁴²⁷ The first four characters of this phrase are in reference to Chapter 51 of the classic Daoist text the Daode Jing. See also the photo of the school building, Appendix 5 photo 23.

⁴²⁸ The words are: Thanks for the kindness of my parents who raised me, thanks for my teacher’s hard work teaching me, thanks to my classmates who cheerfully helped me, thanks to the hardworking farmers, and all those involved to enable us to live a happy life in a grateful world. (Original Chinese in Appendix 4)

⁴²⁹ The traditional housing in the area, called a *yaodong*, is a kind of cave dug into the soft loess, much more comfortable temperature-wise than concrete buildings. However, they have fallen into disuse as dwellings and are mostly used as storage facilities these days. See for example Appendix 5, photos 27 and 28.

Why Hong Nong was Established

One of the chief reasons behind establishing the Hong Nong Academy is the revival of traditional culture in the hope that it may help in mitigating some of the negative effects associated with industrialism, capitalism, and modernity more generally—it is this aim that connects it with the concept of ecological civilisation. The case study of Hong Nong Academy is suitable for analysis in terms of Foucault's notion of governmentality as it utilises techniques of governance with the aim of ensuring the health, happiness, and welfare of the population, and it extends the realm of the biopolitical to include environmental health. In my interview with HE, there were five main goals that she is hoping to achieve by establishing the Hong Nong Academy: reviving rural moral culture; establishing rural cooperatives (*hezuo she*); developing "ecological technology" through a combination of old and new techniques; imparting traditional medical and hygiene knowledge; and teaching about national policy, laws, and regulations. The case of Hong Nong does not exhibit paternalistic techniques of governance that intervene with people's liberty of action; rather, the NRRM in general and Hong Nong are part of a drive to impart ecological values on the population through moralistic education. In short, places like Hong Nong have an important role to play in the environmentalisation of the Chinese state in that they serve as a site for subjectification and the creation of environmental subjects.

Reviving Rural Moral Culture

One potential measure to address issues related to modernisation, such as mindless consumerism and the environmental crisis, is through study of traditional philosophy. At Hong Nong Academy, people learn about classic Chinese philosophers such as Laozi, Zhuangzi, and Confucius.⁴³⁰ For example, one of the classes being taught while I was at the academy was the *Dizi Gui*, the "Standards for Being a Good Student and Child." This text is Confucian in origin, and it contains many lessons on the comportment of young people so that they may better follow the moral traditions advocated by Confucius.⁴³¹ The book contains seven chapters: At Home, Be Dutiful to Your Parents (*ru ze xiao*); Standards for a Younger Brother When Away From Home (*chu ze di*); Be Cautious in Your Daily Life (*jin*); Be Trustworthy (*xin*); Love All Equally (*fan ai zhong*); Be Close to and Learn from People of Virtue and Compassion (*qin ren*); and Use Spare Energy for Learning (*yuli xuexi*). The text is structured like a poem so that it is easy to recite, with six characters per line and each two lines generally rhyming. For example, the first phrase of the *ru ze xiao* is:

父母呼 应勿缓

fu mu hu ying wu huan

父母命 行勿懒

fu mu ming xing wu lan

This translates as: When your parents call, answer right away; when your parents ask you to do something, do it quickly. The section on being cautious instructs such lessons as hygiene and neatness, and the section on being trustworthy imparts lessons on the importance of being honest in speech and deed. By teaching classes such as these, it is hoped that the students will learn about traditional values and morality that will make them more responsible people. This also has a direct relation with

⁴³⁰ There was material on the Chinese sages in the rooms; see Appendix 5 photo 24.

⁴³¹ English translations taken from this website (except for Chapter 7 as it, in my opinion, veered too far from the Chinese), where the book is available in its entirety in English: "Di Zi Gui: Standards for Being a Good Student and Child," 弟子规公益网.

a traditional concept related to *gengdu* culture mentioned above, the concept of *qinggeng yudu, zhixing heyi*—that when it's fine one works in the field and then studies when it rains, combining learning and action.

In addition to these classes, the revival of moral culture also incorporates the renewal of traditional rural pastimes and cultural activities such as song, dance, and music. One example was making cloth using a traditional Chinese loom, a pastime that was prevalent in rural China before the mechanisation of the textile industry. Appendix 5 photo 25 is of one of the permanent staff at Hong Nong Academy making cloth using a loom. The process takes quite a lot of time, of which there is plenty in the winter months in the village. The cloth is then used to make bags and other craft items that can be purchased by visitors. At other times, villagers were asked to come and sing local traditional songs for the students. In general, this rural morality and these traditional values are taught so as to address the issue of the perceived lack of morality that is prevalent in modern society. These activities promote behaviour that has the potential to mitigate one's environmental impact, such as frugality, harmony, and thoughtfulness, and they have the potential to play a role in the formation of environmental subjects.

Establishing Rural Cooperatives

According to HE, one of the greatest threats to rural society that the NRRM seeks to mitigate are external market forces that threaten the economic viability of small-scale agriculture.⁴³² The present-day NRRM is an extension of the early Rural Reconstruction movement led by James Yen and Confucian scholar Liang Shuming in the 1920s. Although the original movement moved from mainland China to Taiwan and on to agrarian societies in the Philippines, Africa, and Latin America, it never made it back to the mainland. Instead, the new movement gained momentum on the mainland in the 1990s initiated by concerned academics such as Wen Tiejun. One of the key ways to strengthen rural societies that its proponents advocate is by establishing rural cooperatives. As noted above, they argue that rural cooperatives make rural communities more resilient in the face of these market pressures, enabling small-scale farmers to band together and survive.

In Luoja Village, local families invest in the cooperative—about 80 families have invested around 2 million RMB—which they use to support their farms. Traditionally, the locals used to multicrop and were relatively self-sufficient—HE says there was a popular saying at the time that Lingbao people don't like to leave home.⁴³³ Challenging tradition, however, in the 1980s, one of the locals came back from studying in Japan, and on the way passed through Yantai in Shandong,⁴³⁴ bringing with him a new type of apple that was well-suited to growing in the region. Since that time, partly due to the new variety and partly due to national policy, orchards have proliferated to the point that about 70 to 80 percent of the region is now dedicated to growing apples, with the next main crops being walnuts and dates. By forming a farming cooperative, they have been able to increase the profit they get per *jin* of apples,⁴³⁵ with their apples being sold as far away as Guangdong. So far, the cooperatives that have been established under the aegis of Hong Nong Academy have been successful and have garnered the support of local officials and farmers.

⁴³² Day, Alexander, "The End Of The Peasant? New Rural Reconstruction In China," *boundary 2* 35, no. 2 (2008): p57.

⁴³³ See Appendix 4.

⁴³⁴ Yantai is well-known in China for the deliciousness of its apples.

⁴³⁵ The standard base measurement used in China, equivalent to 500 grams.

Developing Ecological Technology

Fortunately for Hong Nong Academy and the locals of Luoia Village, the lack of local industries means that the land in the area has not succumbed to contamination. By taking advantage of this, they can investigate organic agricultural techniques in their organic testing grounds for ecological apples—see Appendix 5, photo 25.

The agricultural methods adopted ensure that there is no use of chemical fertilisers or pesticides, herbicides, growth hormones, swelling agents, colouring agents, or any other man-made synthetic materials. One of the workers at Hong Nong Academy, Che Haisheng, recounted the story of the time one of the farmers asked him what was meant by organic agriculture. When Che had finished explaining it to him, the farmer said, “Oh, that’s what we used to do before the leaders told us we had to use fertilisers and pesticides.” In some rural areas, there still exists a connection with the pre-industrial era, and at Hong Nong they hope to utilise that link and to find out what contributions traditional methods can make to help render modern agriculture more sustainable.

In present-day China, whilst food security is not as much of an issue as it was in the past, food safety has become a new source of anxiety. As the old saying goes, *min yi shi wei tian*—food is God—meaning that food has a very important place in China culturally and traditionally has strong links with Chinese medicine in its role in the promotion of health and well-being. Hence, there are people throughout China running such experiments with organic agriculture, community supported agriculture (CSA), and other methods that have a potential role in remedying this problem.⁴³⁶ Some of the biggest issues facing agriculture in China, according to HE, are soil degradation and overreliance on oil that comes from industrial-scale mechanised agriculture. By developing ecological technology, it is hoped that methods can be used to promote healthy soil, organic farming practices, and community involvement in agriculture to achieve food safety and food security. Imparting this knowledge of sustainable methods of agriculture, then, is one of the ways that Hong Nong Academy works toward creating environmental subjects.

Imparting Traditional Medical and Hygiene Knowledge

Another of the goals that HE has for Hong Nong Academy is imparting knowledge of traditional medicine and hygiene to its visitors. Chinese traditional medicine has a long history, and whilst some of its techniques involve the use of herbal remedies for illnesses (similar to Western medicine), it also promotes healthy diet, lifestyles, and exercise to achieve health and long life. For example, one of the classes run at Hong Nong Academy is called healthy food and drink (*jiankang yinshi*)—it discusses various traditional foods and beverages and the various health benefits associated with their consumption. They conduct classes on massage, which plays an important role in Chinese medicine. During my stay at the academy, every morning before breakfast the students would go outside and perform exercises based on tai chi. These exercises would last for about ten minutes, and the students would gather in the courtyard in the subzero temperatures performing them under the instruction of Che Haisheng. These classes are designed not only to teach the specific movements involved in tai chi, but also the health benefits of such traditional methods of exercise. In this way, the value of traditional medicine is shared with the students.

They also run classes specifically for the older people of the village. For example, in 2013 just after the academy was established, a specialist in health visited the academy to teach them different activities

⁴³⁶ One particularly salient example is CAS Professor Jiang Gaoming’s Ecological Farm that I had the good fortune of visiting in 2014. He wrote a book about his experiments: 蒋高明, *生态农场纪实* (北京: 中国科学技术出版社, 2013).

and breathing exercises for maintaining health such as *ba duan jin* and other styles of *qi gong*.⁴³⁷ Classes are also held on etiquette, hygiene, and cleanliness, as well as how to address common ailments. Imparting traditional medicine and hygiene knowledge is especially important in rural areas as they do not have convenient access to the medical facilities that exist in cities. In this way, teaching people about traditional medicine may have a similar effect to the bare foot doctors of the Cultural Revolution era. It also serves to educate people on traditional methods of health and hygiene, the logic of which is not just based on curing illnesses, but on preventing illness from occurring in the first place. By imparting knowledge with people who attend the classes, the aim of the academy is to create subjects who are concerned with and able to manage their own health and well-being. This aspect of the academy's work, then, especially as it promotes clean eating of healthy, non-processed foods, does seek to instil participants with ecological values that may serve to create environmental subjects.

The Future of Hong Nong

Hong Nong Academy does not receive much financial support from the local government, although they do allow it to use the school grounds for free. HE justifies this by saying that if they were dependant on financial support from the government from the beginning they would be less likely to succeed, becoming dependant on hand-outs. So first she has resolved to establish Hong Nong and prove its viability—if it turns out to be successful, it would warrant the attention of the local government and then warrant financial support for its further development. The local government is supportive in other ways too, by participating in local classes and being active within the community. For example, the village secretary, Wang Xianceng, described how within a year of Hong Nong Academy being established three very salient changes occurred in the village: there was no longer a problem with piles of rubbish along the streets; people in the village were more civilised (there were fewer instances of public disputes and fighting); and Luojia Village's eco-agriculture cooperative venture had already shown itself to be viable.⁴³⁸ The story of Hong Nong Academy is only just beginning; at the time of writing, it has only been three years since it was established. However, it is one that warrants our attention as it is indicative of how people at the grassroots are taking the initiative in solving the issue of rural development in China. If Hong Nong proves viable, it will serve as an example for other villages in the region to undertake similar projects. Where the classes given at the academy serve to promote values in line with ecological values, then it also plays a significant role in the creation of environmental subjects, by engaging in moralistic education aimed at instilling in people ecological values. Similarly, the success of the rural cooperative can also be an example for others to follow. Once this base is established, HE notes, for it to be further successful it will require more than just local support: it will also need the support of people from nearby Xi'an, Zhengzhou, and Luoyang.

HE established Hong Nong as a means of rejuvenating her hometown, but also hopes that from this it can play an active role in education for locals and visitors alike. It is, at its heart, an experiment that attempts to provide some answers to the problem of how to develop rural China, and provides a foundation for other rural areas that might like to follow this example. China is changing rapidly, and as rural areas lag behind the urban they provide a link to China's past. Hong Nong can help to preserve local traditions and culture, as well as teach people about the local area and foster personal growth in its visitors. Further, it can provide a platform for raising awareness about other issues in China such as food safety, the link between modern lifestyles and environmental degradation, and how to promote ethical relations between people and nature. By combining training in the humanities with

⁴³⁷ *Qi gong* refers to traditional Chinese methods for promoting health or martial arts by combining techniques for posture, breathing, movement, and meditation.

⁴³⁸ 灵宝市弘农书院, "弘农书院工作简报," ed. 何慧丽 (弘农书院, 2014), p7.

indigenous knowledge and agricultural work, it also promotes the importance of learning through [physical] experience,⁴³⁹ and it offers a chance for visitors to change their worldview through an experience of life in rural China. During our interviews, HE related a story of one visitor who was so moved by the experience that, on the final day, the person stood on a platform overlooking the valley and cried out, “I love my hometown, I will come back one day and help rebuild; my hometown will become a more beautiful place!” Such an experience speaks volumes about the mind-set that pervades modern China—that rural China is backwards, uncivilised, and undeveloped—and how this kind of project can serve to change this mind-set. However, HE understands that it is naïve to think that we can return to some idealised vision of the richness of the past. Rural life, like all life, is changing along with the rest of humankind.

The Lesson of Hong Nong

When considering this case study, it is evident that by attending Hong Nong Academy, the classes given can serve to help people become more ecologically civilised. This is because the primary goal of the academy is education; it aims to work on the knowledge and values of subjects through education, and in so doing create a better understanding and awareness of some important issues facing the world today. In this way, Hong Nong Academy works alongside paternalistic measures of governance implemented by the Chinese government, with its moralistic education being provided to impart ecological values to the subjects being educated. Hence, Hong Nong Academy’s role in becoming an ecological civilisation has the potential to play an important part in the creation of environmental subjects.

The adoption of the slogan ecological civilisation into the official discourse of the CCP indicates the gravity with which the Chinese government views the impending environmental crisis and the imperative of environmental protection. In promoting this slogan, it has given a green light to academics and activists alike to contribute to the cause of environmental remediation through academic work and grassroots movements. One salient example of how this works is HE’s Hong Nong Academy. With the goals of promoting moral education, improving the environment, and working toward ensuring a safe food supply, the academy has been well-received by locals, university students (from China and abroad), and the local government. How effective it is in achieving its goals, however, will likely remain open to speculation. Whether or not an environmental subject has been created is a difficult thing to measure. As such, this analysis focuses chiefly on the *attempts* at creating environmental subjects through techniques of governance. In that light, the case of Hong Nong Academy provides an interesting account of one among many institutions arising in modern China that aim to play a role in the environmental restoration of China, doing so under the banner of becoming an ecological civilisation.

⁴³⁹ The word used in Chinese is 体验, which is differentiated from experience more generally as it means having physically experiencing something.

Conclusion

As the world hurtles toward the future, the environmental consequences of our behaviour will become more evident. One of the most unfortunate eventualities of this is that the actions of a minority have come to imperil the majority, especially in the developing world. Although it is too late to stop all the manifestations of the looming ecological crisis, at the very least we can mitigate its worst effects, and at the very best, reverse this trend and learn from it so that we do not make the same mistakes in the future. The idea of ecological civilisation that has emerged from China promises an alternative future, one in which people live sustainably and in harmony with nature, recognising the role we must play in taking care of the planet and the fragile ecosystems it is home to.⁴⁴⁰ But this is not a new idea, and it is easier said than done; for it to be realised, we must work together to change our thinking and our actions.

In this study, I started with a look at the historic and current trends of environmental degradation, aiming to show the connection between development and environmental degradation. The further point was made that this has been a key feature of human development since ancient times and China has been no different; even though some ancient teachings may be considered examples of ecological thinking, they were rarely, if ever, put into practice. Following, I detailed the origins and development of the concept of ecological civilisation that is now actively promoted by the Chinese government. Given that it is more than just rhetoric, I demonstrated that it calls for a change in the development model based on a shift in ideals that promote cooperation, a healthy environment, and the common good.

It was with this in mind that I examined the relevant literature to understand exactly why development necessarily leads to environmental degradation. From the literature review, the most compelling argument found was that the roots of the looming ecological crisis are not to do with the economic or political systems in place per se, but the values that guide these systems—this revelation led to the conclusion that the way to relieve this tension between development and the environment is through a shift in values and practices. Such a shift, from valuing rapid industrialisation and wealth generation to an approach that considers the value of the environment implied by ecological civilisation, is indicative of an important shift in governance in China. This, then, falls in line with the basic principles of becoming an ecological civilisation found in the first part of this dissertation, which naturally led to the question guiding this thesis: What does the concept of ecological civilisation tell us about the techniques and methods of environmental governance employed in China?

To explore this question, I utilised a theoretical framework drawn from Foucault's theory of governmentality to understand the methods of governance employed to create environmental subjects, that is to say, people who come to care about the environment. Using this theoretical framework, I argue that China's turn to ecological civilisation indicates the environmentalisation of the Chinese state and its pastoral care. This means that the government has widened the scope of the biopolitical, the chief aim of which is to secure the health and well-being of the population, to include environmental health. This is evidenced first through an analysis of relevant policy, and following

⁴⁴⁰ Interestingly, I recently learned that a big debate in environmental ethics surrounds whether or not humans should adopt a caretaker role on the planet—the argument being that a caretaker role is still considered an anthropogenic worldview, and there is compelling evidence that the life on earth and the earth's ecosystems do not need us and indeed would be better off without us. See for example: Weisman, Alan, *The World Without Us* (New York: Thomas Dunne Books/St. Martin's Press, 2007). Thanks go to Professor Brian G. Henning of Gonzaga University for this insight.

through examining findings from fieldwork conducted in a site that became polluted due to unchecked development, and currently in the process of environmental remediation.

I investigated how those in power might attempt to instigate this formidable but necessary shift in values and practices. I found that, in the Chinese context, these attempts are best understood as operating according to what is called weak paternalism, a technique of governance that couples intervention in the liberty of action of a population with moralistic education that would render intervention unnecessary. To explore the applications of governmental and paternalist theory further, I utilised three case studies as evidence of the operations of these techniques of governance. In these three instances, we see cases of governmental techniques at work imposed from above through traditional government and through institutions of discipline such as Hong Nong Academy. These methods are instances of weak paternalism as they are implemented to empower the individual to self-govern and to become autarchic, so that their desires become synchronised with the values promoted by the state. By paternalism, it is meant that they are an intervention with the population's liberty of action rationalised in terms of ecological values that seek to improve the welfare of the population. Weak paternalism is paternalistic action that simultaneously promotes moralistic education with the aim to create a condition of autarchy, rendering the paternalistic interventions redundant. This is typified by the ecological civilisation campaign, which demonstrates a governing behaviour over the state-society relationship that utilises moral persuasion via weak paternalism, the object being to transform individual behaviour and indeed consciousness so as to realise a sustainable future.

One of the key problems identified by this study is that the core tenets that make up the concept of ecological civilisation, especially the central notion that our model of development is unsustainable, are hardly novel revelations. Early ecological theorists such as Leopold and Bookchin were writing of these issues well over half a century ago, seemingly with little influence on governments. The key difference now, perhaps, is that the problem has now become so urgent that if nothing is done soon, the anthropocene truly will leave an indelible mark on the planet. At any rate, it seems clear that Western nations are holding back in taking a leading role in addressing this most pressing of issues, creating clear space for China to lead the way if it so wishes.

This idea is not uniquely Chinese, but what is exceptional is the way that the Chinese government have taken this idea and incorporated it as guiding thought for policy prescriptions, committing itself to a change in a development model that values the environment over financial gains. This feeds into a greater narrative that asks important questions, such as how to change people's behaviour so that they reject consumer capitalism and its relentless advocacy of consumption and its tendency to waste production. Importantly, it must also be noted that these changes are going to be especially crucial and necessary in the developed world; for example, consumer culture is deeply embedded within the Western world—especially the US—and once such a lifestyle becomes the norm in society it is extremely difficult to sway people away from it. In contrast, people from a developing nation who are used to subsistence living or austere lifestyles and whose daily needs are met mostly by utilising materials available in their locality, have few wants and are limited by their relative poverty. In a country like China with a large population yet to or only recently experiencing a life of hyperconsumption, it may be easier to imagine a life without all that extra exchange-value beyond use-value. One of the biggest challenges for the ecological civilisation campaign is how to incorporate the developed world into this outlook when the values that serve as the foundation for these societies (overproduction, hyperconsumption, an emphasis on individual freedoms over social responsibility) will need to be changed, even though these values are so deeply entrenched. In sum, the Chinese

approach is worthy of taking more seriously in general and in particular by the Western Sinology community to appraise its veracity.

Appendices

Appendix 1 – Glossary of Chinese Terms

bà dà gōngchéng 八大工程

bā dà gōnghài shìjiàn 八大公害事件

bā duàn jǐn 八段锦

bǎinián guóchǐ 百年国耻

bàofāhù 暴发户

bǎo gōngshuǐ 保供水

Běijīng shēngtài wénmíng gōngchéng yánjiūyuàn 北京生态文明工程研究院

Chángsānjiǎo 长三角

chéngshí shǒuxìn 诚实守信

chéngzhōngcūn 城中村

chāichú wéifǎ jiànzhù 拆除违法建筑

chuántǒng sān dà zhīzhù chǎnyè 传统三大支柱产业

chūnjié 春节

chū zé dì 出则弟

Dàfàn 大坂

dānwèi 单位

dàodé jiāotáng 道德讲堂

Dàodé Jīng 道德经

Dà Xué 大学

Dèng Xiǎopíng 邓小平

dìqiú nǎo 地球脑

Dìzǐ Guī 弟子规

Dùn fù shūyuàn 敦复书院

duō guī héyī 多规合一

fādá xīnxīwǎngluò 发达信息网络

fàn ài zhòng 泛爱众

fáng hóngshuǐ 防洪水

fánshì pài 凡是派
Fāng Zhāohuī 方朝晖
Fèi Xiàotōng 费孝通
Féng Guīfēn 冯桂芬
fù'ài zhǔyì 父爱主义
Fújiàn 福建
fūqī hé mù 夫妻和睦
fǔzhù wénmíng 辅助文明
gǎigé chuàngxīn 改革创新
gǎn'ēn cí 感恩词
gēngdú wénhuà 耕读文化
gòngjiàn wénmíng chéngshì' 共建文明城市
gōngyè wénmíng 工业文明
Guǎngzhōu 广州
guānxì 关系
gǔdài wénhuà 古代文化
Guìzhōu 贵州
guójiā xīnxíng chéngzhèn huà 国家新型城镇化
guótǔ kōngjiān 国土空间
Hǎiguó Túzhì 海国图志
Hángǔ guān 函谷关
Hángzhōu 杭州
Hé Huìlì 何慧丽
Hénán 河南
héxié shèhuì 和谐社会
Hè Xuěfēng 贺雪峰
hézuòshè 合作社
hóng'èrdài 红二代
Hóng Liàngjí 洪亮吉

Hóng Nóng shūyuàn 弘农书院
hóng xiàn 红线
hóngyáng nónggēng wénmíng 弘扬农耕文明
huánghé 黄河
huánjìng yǒuhǎoxíng shèhuì 环境友好型社会
huánjìng zhīqíng quán 环境知情权
huàxué 化学
Hú Jǐntāo 胡锦涛
Jiāng Zémín 江泽民
jiànkāng yǐnshí 健康饮食
jiànshè shèhuì zhǔyì xīn nóngcūn 建设社会主义新农村
jiànshè shēngtài wénmíng 建设生态文明
Jiǎ Wèiliè 贾卫列
jiāzhǎngshì tǒngzhì 家长式统治
jīběn guó策 基本国策
jié néng jiǎnpái 节能减排
jìlǜ zǔ 纪律组
jīn 斤
jǐn 谨
jīngjì xúnhuán 经济循环
Jīng-Jīn-Jì 京津冀
jīngmíng 精明
jīngshén wénmíng 精神文明
jǐnzhǐ kāifāqū 禁止开发区
jiù chǎng qū 旧厂区
jiù rènzhài qū 旧住宅区
Jùfēng 巨峰
Kāifèng 开封
kěchíxù fāzhǎn 可持续发展

kèfú è'xí 克服恶习
kēxué fāzhǎnguān 科学发展观
kězàishēng néngyuán 可再生能源
kōngjiān jūnhéng 空间均衡
kōngxīnhuà 空心化
kuàizhuàng jīngjì 块状经济
láodòng zǔ 劳动组
Lánkǎo 兰考
lántú 蓝图
Liáng Shùmíng 梁漱溟
liǎngxíng shèhuì 两型社会
liǎng zuò shān lùn 两座山论
Lǐ Dàzhāo 李大钊
Lǐ Hóngwéi 李宏伟
Língbǎo 灵宝
líng róngrén 零容忍
Lín Yīfū 林毅夫
Lín Zéxú 林则徐
Líu Zōngchāo 刘宗超
Lì Yǐníng 厉以宁
luàn rèng lājī bù wénmíng 乱扔垃圾不文明
Luójiā cūn 罗家村
Luòyáng 洛阳
lǜsè chéngzhènghuà 绿色城镇化
lǜshuǐ qīngshān jiùshì jīnshān yínshān 绿水青山就是金山银山
Mǎlǐngjiǎo 马岭脚
mántou 馒头
Máo Zédōng 毛泽东
měilì xiāngcūn jiànshè 美丽乡村建设

míngbai 明白
mínsù 民宿
mín yǐ shí wéi tiān 民以食为天
mózhe shítou guò hé 摸着石头过河
nánshuǐ běidiào 南水北调
nánzūn nǚbēi 男尊女卑
niúnǎi hé 牛奶河
nóngmín 农民
nóngmó 农膜
nóngyè wénmíng 农业文明
pái láoshuǐ 排涝水
pǐndé 品德
Pǔjiāng xiàn 浦江县
qiānchéng yīmiàn 千城一面
Qiántáng jiāng 钱塘江
qì gōng 气功
qìhòu biànhuà 气候变化
qínggēng yǔdú, zhīxíng héyī 晴耕雨读，知行合一
Qīngshuǐ Zhìwū Língdiǎn Xíngdòng 清水治污零点行动
qīn rén 亲仁
qīulíng qū 丘陵区
ràng yībùfen rén xiān fùqǐlái 让一部分人先富起来
rén yú zìrán de héxié 人与自然的和谐
ruǎn zhuólù 软着陆
rù zé xiào 入则孝
sānběi fánghùlín 三北防护林
sān gǎi yī chāi 三改一拆
sān gè dài biǎo 三个代表
Sānménxiá 三门峡

sān nóng 三农
shàndài tārén 善待他人
Shǎnxī 陕西
Shānxī 山西
Shāndōng 山东
shēngtài bǔcháng 生态补偿
shēngtài huánjìng 生态环境
shēngtài jiànshè 生态建设
shēngtài liánghǎo de wénmíng fāzhǎn dàolù 生态良好的文明发展道路
shēngtài píng héng 生态平衡
shēngtài shěng 生态省
shēngtài wénhuà 生态文化
shēngtài wénmíng 生态文明
shēngtài wénmíng guān 生态文明观
shēngtài wénmíng jiàzhígūān 生态文明价值观
shēngtài wénmíng jùlèbù 生态文明俱乐部
shēngtài wénmíng xiānxíng shìfàn qū 生态文明先行示范区
shēngtài wénmíng yìshí 生态文明意识
shēngtài xúnhuán 生态循环
shēngtài xiūfù 生态修复
shēngtài yòngdì 生态用地
shímòhuà 石漠化
shìxiàn 市县
shì nóng gōng shāng 士农工商
shī yí chángjì yǐ zhì yí 师夷长技以制夷
shǒubiǎo gē 手表哥
shuǐjīng 水晶
sìhéyuàn 四合院

Sūjiā 甯家
sùzhì 素质
tā hěn yǒu wénhuà 他很有文化
taijí 太极
tèdà chéngshì 特大城市
tiān rén héyì 天人合一
tuīgēng huánlín 退耕还林
tuīmù huáncǎo 退牧还草
Wáng Yīngjié 王英杰
Wèi Yuán 魏源
wénhuà 文化
wényì 文艺
wényì zǔ 文艺组
wénzì 文字
wǔ shuǐ gòng zhì 五水共治
wú wéi 无为
wǔ wèi yītǐ 五位一体
wùzhì wénmíng 物质文明
xiàndàihuà 现代化
xiào 孝
xiǎokāng shèhuì 小康社会
Xī'ān 西安
Xiànchéng 县城
xiān wūrǎn hòu zhìlǐ 先污染后治理
xiānzhì kāifā qū 限制开发区
xiāngcūn dàodé fùxīng 乡村道德复兴
Xí Jīnpíng zhòngyào jiǎnghuà 习近平重要讲话
xìn 信
xíngzhèng cūn 行政村

xīn xiāngcūn jiànshè cùjìn huì 新乡村建设促进会
xīn xiāngcūn jiànshè yùndòng 新乡村建设运动
xìnxī gāosù gōnglù 信息高速公路
xìnxī wénmíng 信息文明
xuéxí zǔ 学习组
xúnhuán 循环
xúnhuán jīngjì 循环经济
Yāntái 烟台
Yán Yángchū (James Yen) 晏阳初
yāogǔ 腰鼓
yáodòng 窑洞
yīdài yīlù 一带一路
yī gè shìxiàn yī gè guīhuà、yī zhāng lántú 一个市县一个规划、一张蓝图
yǐ rén yú zìrán héxié fāzhǎn 以人与自然和谐发展
Yìwū 义乌
yíxià zhī biàn 夷夏之辨
yōuhuà kāifā qū 优化开发区
yuánshǐ wénmíng 原始文明
yuánshǐ zhuàngtài 原始状态
yúli xuéxí 余力学习
Yǔwángtái 禹王台
zāng, luàn, chà 脏、乱、差
Zēng Guófān 曾国藩
Zhāng Xiàodé 张孝德
Zhèjiāng 浙江
Zhèjiāng wèishēng huánjìng zuì chà xiàn 浙江卫生环境最差县
zhēngyǎn kàn shìjiè 睁眼看世界
zhèngzhì huánjìng 政治环境
zhèngzhì wénmíng 政治文明

Zhèngzhōu 郑州
zhī'ēn túbào 知恩图报
Zhījiāng xīn yǔ 之江新语
zhì wūshuǐ 治污水
zhòngdiǎn kāifā qū 重点开发区
Zhōngguó nóngyè dàxué 中国农业大学
Zhōngguó rénmin dàxué 中国人民大学
Zhōngguó tèsè shèhuì zhǔyì 中国特色社会主义
Zhōngguó xíngzhèng xuéyuàn 中国行政学院
Zhōnghuá wénmíng 中华文明
zhuā jiéshuǐ 抓节水
zhuǎnxíng shēngjí 转型升级
zhǔdǎo wénmíng 主导文明
Zhū Róngjī 朱镕基
Zhūsānjiǎo 珠三角
zhǔtǐ gōngnéng qūhuà 主体功能区划
zhūzi 珠子
zīyuán jiéyúēxíng shèhuì 资源节约型社会
zǒnglǐ yámen 总理衙门
zǒu xīnxíng gōngyèhuà dàolù 走新型工业化道路
zuò gè wénmíng rén 做个文明人
zūndào guìdé, héhé shēngtài 尊道贵德, 和合生态
zūnlǎo àiyòu 尊老爱幼

Appendix 2 – Evolution of Environmental Discourse Used By Chinese Government

Chinese Term	English Term	Year	Context
生态平衡	Ecological balance	1982	Work report of 12 th NPC; idea comes from Gaia Hypothesis, 1974
环境保护	Environmental protection	1987	“ 13 th NPC
环境意识	Environmental awareness	1992	“ 14 th NPC
生态环境	Ecological/natural environment (as opposed to political etc.)	1992	“
可持续发展	Sustainable development	1997	“ 15 th NPC; idea comes from <i>Brundtland Report</i> , 1987
人与自然的和谐	Harmony between people and the environment	2002	“ 16 th NPC
生态良好的文明发展道路	Development road toward a civilisation with a beautiful environment	2002	“
走心新工业化道路	Road toward a new style of industrialisation	2002	“
两型社会	Two-oriented society (that is resource-conserving & environmentally friendly)	2007	“ 17 th NPC
环境友好型社会	Environmentally friendly society	2007	“
资源节约型社会	Resource conserving society	2007	“
循环经济	Circular economy	2007	“
可再生能源	Renewable energy	2007	“
节能减排	Energy conservation and emissions reduction	2007	“
生态修复	Ecological restoration	2007	“
气候变化	Climate change	2007	“
生态补偿	Ecological compensation	2007	“
生态文明	Ecological civilisation	2007	“
两座山论	Two Mountains Theory	2013	Xi Jinping’s visit to Kazakhstan

Appendix 3 – Paraphrased Ecological Civilisation Documents

Suggestions

“The CCP Central Committee and State Council’s Suggestions on Hastening the Promotion of Becoming an Ecological Civilisation”

The first section outlines the overall requirements; this also includes establishing the guiding thoughts, which it identifies as being Deng Xiaoping theory, the Three Represents, the Scientific Outlook of Development, the Spirit of the Eighteenth CCP Central Committee (CCPCC) and its Four Plena, as well as the spirit of Xi Jinping’s Orations. Following, it outlines the basic principles that form the basis of the developing into an ecological civilisation, such as the frugal use of resources, environmental protection and environmental rejuvenation, green development, and low-carbon development and circular development with transformations in methods of production. The main objectives that are hoped to be achieved are the realisation of the two-oriented society as mentioned in the 2007 NPC report; the establishment of main functional areas as outlined in the third plenary session of the Eighteenth CCPCC; and there will also be improvement in the quality and effectiveness of economic development, a widespread promotion of ecological values among the populace, the achievement of a moderately well-off society, and an overall improvement of the condition of the environment within China.

The second section of the document outlines the plans for the demarcation of functional areas for development, along similar lines to those stipulated in the document from the third plenary session of the Eighteenth CCPCC, as well as the optimisation of the pattern for the development of national territorial spaces. This section consists of four subsections, entitled: actively implement the strategy of main functional zones, vigorously promote green townisation, hasten the development of a beautiful countryside, and strengthen the scientific development of maritime resources and the protection of the [ecological] environment.⁴⁴¹ The first subsection clearly stipulates that the plan for main functional zones should be implemented and that supporting policies for finance, investment, industry, land, population, and the environment should be strengthened, with each of these having performance evaluation systems in place. It calls for a simplification of the plan under a single guiding blueprint (*lantu*) under the slogan ‘many plans combined’ (*duo gui heyi*), which would guide economic and social development, the city and the countryside, land use and environmental protection. As well as restating the commitment to demarcating areas based on their potential (or lack thereof) for development, it also stipulates that there should be provisions made to increase the amount of living space and land that serves an ecological function (*shengtai yongdi*), and for the protection and expansion of green areas, bodies of water, wetlands, and other such ecological spaces.

The second subsection stipulates guidelines for what it calls green townisation (*lüse chengzhenhua*), which is to be done in accordance with the official document: “A National Plan for a New Kind of Townisation 2014–2020” (*guojia xinxing chengzhen hua*), which outlines how new towns should be built in accordance with local carrying capacities.⁴⁴² The importance of this document should be noted, as the development of China’s cities will have a large role to play in China’s future environmental health; this document recognises that over the coming years many rural citizens will be migrating into

⁴⁴¹ As Geall notes, in the Chinese language the word for environment has a wide meaning, so is sometimes referred to as the ecological environment (*shengtai huanjing*) so as to distinguish it from, say, the political environment (*zhengzhi huanjing*)—see Geall and Ely, “Ecological Civilisation,” p5.

⁴⁴² In 2014, the CCP released a document detailing the proposed plan for so-called townisation. It can be found here: 国务院, 中共中央, “国家新型城镇化规划 (2014-2020年),”

towns, and this plan is designed to facilitate that. This plan seeks to limit the growth of new cities to avoid the phenomenon of megacities (*teda chengshi*), to build cities whilst considering the potential environmental impact, so as to preserve the environment as well as sites of historical and cultural significance; it also takes the concept of ecological civilisation as one of its guiding principles. Interestingly, it also stipulates that cities should have their own special style that promotes local diversity, so as to avoid the phenomenon of every city looking the same (*qiancheng yimian*). It stipulates that population density should be increased in cities by restricting land supply to avoid urban sprawl. It also encourages the development of green architecture, low-carbon transport systems, and it states that cities should be designed and maintained in such a way as to promote environmental values and increase standards of living. The third subsection of this section calls for the rejuvenation of rural areas (*meili xiangcun jianshe*), which calls for the improvement of infrastructure in rural areas, improvement of buildings and roads, cleaning up rural pollution, improving food safety, and developing the tourism industry. The final subsection outlines the need for sustainable and scientific development of maritime resources and environmental protection.

The third section stipulates the need for technological innovation as well as structural change in industry so as to make it more environmentally friendly. It outlines the need to ameliorate the contradictions between economic development and environmental resources to create industry that is technologically advanced, is thrifty in the use of resources, and is low pollution—so as to achieve the objectives of green production and a green economy, as well as to lessen the environmental impact of development. This section consists of three subsections entitled: promote scientific innovation, adjust and optimise the industrial structure, and develop green industry. These subsections touch upon the need for the promotion of research that encourages innovation in technology to promote thrift in the use of resources, resource recycling, new energy, pollution control, and ecological restoration. In optimising industrial structure, it is a focus on upgrading industries so that they are low-carbon, incorporating new technologies, and eliminating obsolete and environmentally unsound practices. This will then encourage the development of green industry, which will incorporate these new technologies and structural optimisations.

Section four contains guidelines for transformation in the efficient use and reuse of resources. It notes that frugal use of resources will help alleviate restrictions related to resource scarcity and that it is also important for environmental protection. It stipulates that in order to achieve the efficient use of resources, energy-saving and emissions reduction (*jienerg jianpai*) must be promoted throughout society, and the circular economy must be developed in the production, circulation, and consumption of goods. This section consists of three subsections, entitled: advance with energy saving and emissions reduction, develop the circular economy, and increase resource conservation. The main body of this section relates the need to promote emissions reduction, develop the circular economy, and encourage thrift in the use of resources.

Section five contains guidelines for strengthening ecological systems and the effectiveness of environmental protection so as to improve the quality of the environment. It states that a healthy environment is a necessary public good that offers great benefit to the well-being of the people. It also notes that the people should be able to breathe fresh air, to have access to clean water, and live in a healthy environment. This section contains three subsections: the protection and restoration of natural ecosystems, to thoroughly advance pollution prevention, and to actively respond to climate change. Some of the imperatives outlined in this section are the need to protect areas of ecological importance; to take human and environmental health as a core value; and to implement a range of measures to tackle climate change, from pollution reduction to ecological restoration to monitoring and warning systems.

Section six is potentially the most crucial section in this document, in which it outlines concrete policy changes that are necessary for the implementation of systems and institutions for the creation of an ecological civilisation. Its stated aims are to hasten the construction of a systematic and comprehensive institutional system of ecological civilisation that would guide, normalise, and constrain actions for the development, use, and protection of the environment, so that environmental protection would be systematically governed. This section contains ten subsections: improving laws and regulations; improving systems of standardisation; improving systems of natural resources usage rights and usage supervision; improving environmental monitoring systems; strictly adhering to resource, environment, and ecological red lines; improving economic policy; putting in effect marketisation mechanisms; improving compensation mechanisms for ecological protection; improving systems that assess political performance; and improving systems for investigating responsibility [for environmental damage].

This section stipulates the need for laws and standards for environmental protection, as well as for establishing systems to manage environmental property rights, supervisory systems, and the demarcation of a red line that clearly stipulates the rights and obligations of those who are using resources. This section also outlines the need for improvement in economic policy, market systems, ecological compensation systems, alignment with international norms, and, importantly, for a change in how political performance is evaluated. Subsection 25 stipulates that environmental performance indicators will become crucial in evaluating political achievements, and that any incidents in which units (*danwei*) or individuals have engaged in unlawful activities that disregard the objectives of emission control standards and frugal use in resources, or that have resulted in serious environmental damage will be punished in accordance with the law, as well as receiving a permanent stain on their political performance record. This is to be particularly important in areas that have been marked as areas demarcated for limited development or prohibited for development. Further, those units or individuals who have engaged in activities that are considered as beneficial for the environment will be given encouragement rewards.

The seventh section of this article outlines how to strengthen supervision of statistical monitoring and law enforcement for becoming an ecological civilisation. Its stated aim is to guarantee the development of ecological civilisation through monitoring and supervisory systems that would identify weaknesses in the system. It consists of two subsections: strengthening statistical monitoring and strengthening the supervision of law enforcement. The main part of this section emphasises the need for increased ability to monitor resources such as energy sources, mining resources, water, air, and forests; it also stresses the need for supervision of law enforcement and that any actions considered against the laws and regulations should be implemented using a zero-tolerance approach (*ling rongren*).

The eighth section of this document outlines the need for the promotion of environmental values within society. It states that ecological civilisation is the responsibility of every industry and every person and that everyone must be mobilised for lifestyles to become green. This section consists of three subsections: increase environmental awareness among the people, train [the people] how to live green lifestyles, and encourage the participation of the masses. This will be achieved by increasing the awareness of ecological civilisation (or making people more ecologically civilised) through the positive promotion of ecological culture, virtues making it a part of the mainstream, and making it one of the core socialist values, and that it will be promoted in education from the early years of childhood to the education of party members and officials. This will also involve promoting green lifestyles such as ideals of low consumption, and it will also require that these values are promoted through public participation.

The final section of this document stipulates the strengthening of organisations and the leadership, so that they all comply with the requirements of becoming an ecological civilisation. It states that improvement of ecological civilisation development requires exploration and innovation and that this will drive the blueprint for an ecological civilisation into becoming a reality. This section contains four subsections: strengthening the coordination of the overall plan, exploring effective methods, expanding and developing international cooperation, and doing the best in implementation. This section outlines the need for creating model eco-civilisation development zones (much like the SEZs) and the imperative of wider cooperation with the international community, as well as emphasising the necessity that all members of government must do their best in adhering with the requirements of this document.

Plan

“An Overall Plan for Ecological Civilisation System Reform”

The first section outlines the requirements of ecological civilisation system reforms and enunciates the leading thought, concepts, and principles that guide the document, as well as the institutions and systems that will need to be implemented. It identifies six concepts to be established, six principles to be adhered to, and eight institutions to be constructed. The six concepts to be established are: respect, to be in tune with and protect the environment; integration of development and [environmental] protection; Xi Jinping’s TMT, that “clear waters and green mountains are as valuable as mountains of gold and silver”; the value of nature and natural capital; spatial balance;⁴⁴³ and that all natural features are complex integrated systems. The six principles to be adhered to are: the correct direction of reforms, the public nature of natural resource assets, the integration of urban-rural environmental governance systems, incentives and restraints, active international engagement and cooperation, and the combination of experimentation first alongside promoting overall coordination. Finally, it announces that by 2020 there are eight institutions and systems to be constructed so as to realise the goal of becoming an ecological civilisation: institutions for natural resource assets property rights, institutions for the development and protection of national territorial spaces, spatial planning systems, institutions for economic resource management, institutions for resource use compensation and ecological compensation, systems for environmental governance, market systems for environmental governance and environmental protection, and institutions for the appraisal of environmental performance and investigating responsibility (for environmental damage). It also outlines many of the environmental problems that China faces today, urging that they need to be addressed, although without concrete measures stating how they are to be addressed. However, this can be seen as leaving the CCP with some flexibility in dealing with these issues, the most important thing being that the issues are largely identified.

The second section is dedicated to the need for robust institutions to determine the rights to natural resource assets. This section contains five subsections entitled: establish a unified rights registration system, establish natural resource production rights system clearly showing rights and responsibilities, improve national natural resource management systems, explore the construction of a system for classification [between local and central government] of the exercise of property rights, and develop experiments for defining usage rights for waterways and wetlands. For this to take place, there must be established a unified registration system that clearly defines the rights to use particular resources such as water, forests, and grasslands. There also need to be systems in place that clearly define the rights and responsibilities for the use of natural resources, including the distribution of use and profits as well as the rights to allow others to use as well as to lease these resources. There must also be a robust organisation for national natural resource management, investigations into the establishment of a divided exercise of property rights that ascertains which resources are to be the responsibility of the central government and which are the responsibility of local governments. The main resources over which central government will exercise direct authority is oil; natural gas; rare and precious mineral resources; important state-owned forests; large rivers, lakes, and rivers that flow across borders; wetlands and grasslands that serve important ecological functions; maritime and intertidal zones; rare and endangered flora and fauna; and some national parks. There will also be experiments into opening up rights to some rivers and wetlands including in Gansu and Ningxia.

⁴⁴³ *Kongjian junheng* means that there is a balance achieved between living spaces, environmental spaces, and spaces used for economic development, so as to ensure regions do not exceed their environmental carrying capacities.

The third section of this document calls for the establishment of institutions for the protection and development of national territorial spaces. This is divided into four subsections: improve the institutions for main functional areas, improve institutions for the use and supervision of national territorial spaces, establish national park systems, and improve institutions for the supervision of natural resources. This calls for the improvement of institutions for main functional areas, so that the areas can be divided along the lines called for in the third plenum of the Eighteenth NPC report. It also calls for robust institutions to supervise the use of national territorial spaces, to establish national park systems that would protect areas of important ecological significance, and to improve institutions for the supervision of natural resources.

Section four of the document calls for the establishment of systems for spatial planning. This section is divided into three subsections: formulate spatial planning, advance the notion of simplification in planning (*duoguiheyi*), and innovation in the formulation of methods of spatial planning in cities and counties. This section calls for the drawing up of spatial plans that would act as a guide for the development of national territorial spaces, so as to ensure sustainable development. There will be three demarcations—national, provincial, and town/county (*shixian*) levels. It also calls for experiments to be conducted at the provincial levels for spatial planning and for preparation for spatial planning in the Beijing/Tianjin/Hebei region (*Jing-Jin-Ji*). It also calls for the promotion of what it calls simplification in planning, a concept that was first tested in a city called Yulin, and calls for a singular plan and blueprint for the development of the economy, urban and rural areas, land use, and the ecological environment. Its specific duties are stated as: to reasonably decide a time frame for the plan, to reasonably decide the aims of the plan, to reasonably decide the obligations central to the plan, and to construct a combined and harmonised mechanism for a city/county spatial plan.⁴⁴⁴ In the context of this document, it similarly calls for one plan for the city/county, one blueprint.⁴⁴⁵ It calls for the demarcation of production spaces, living spaces, and ecological spaces to clearly define areas for developing townisation, industry, and rural residence, as well as protection areas for arable land, forests, grasslands, rivers, lakes, and wetlands, as well as plans for space for the areas underneath cities. It also calls for innovation in methods for spatial planning in cities and counties, also calling for greater public participation—even in regard to supervising and notifying of activities that are against regulations—and strengthening the scientific basis and transparency of these plans.

The fifth section of this document outlines the need to improve the institutions that govern natural resource asset management and the frugal use of resources. This section consists of ten subsections: improvements for the strictest institutions for the protection of arable land and institutions for the frugal use and the intensified use of land; improvements for the strictest institutions for water resource management; establish institutions for the management of and thrift in resource consumption; establish institutions for the protection of natural forests; establish institutions for the protection of grasslands; establish systems for the protection of wetlands; establish institutions that protect and prohibit the development of desertified lands; improve institutions for the protection and development of maritime resources; improve institutions for the protection, use, and development of mineral resources; and improve institutions for resource recycling. This section details guidelines for institutions that protect agriculture-use land to ensure that it stays productive and healthy, as well as institutions that manage the use of water resources to ensure fair water distribution and the protection of aquatic systems to ensure water safety. There will also be institutions for the management and frugal use of energy resources, natural forests, grasslands, wetlands, the prevention

⁴⁴⁴ "什么是“多规合一”，" 榆林日报.

⁴⁴⁵ The phrase used is: *yi ge shixian yi gei guihua, yi zhang lantu*.

of desertification, protection of maritime resources, management and use of mineral resources, and institutions to ensure the circular usage (recycling) of resources.

Section six of this document outlines measures to implement robust institutions for a user-pays system for resources, as well as ecological compensation. It consists of eight subsections: hasten price reforms for natural resources and their products; improve institutions for the paid use of land resources; improve institutions for the paid use of mineral resources; improve institutions for the paid use of maritime [and island] resources; hasten environmental and resource tax reforms; improve mechanisms for ecological compensation; improve mechanisms that govern the allocation of funding for the restoration and protection of the environment; and establish institutions for the restoration of arable land, grasslands, and bodies of water. It advises reforms in the pricing of natural, mineral, and maritime resources and their products, based on the principles of how their exploitation affects society and creates mechanisms for estimating the costs of using resources. It then calls for better institutions to govern land-use and advises increasing the price for which industry rents land and decreasing the overall amount of land used by industry. It also calls for reforms in the taxation of resources, the improvement of mechanisms for ecological compensation, and mechanisms for funding for environmental protection and restoration, as well as establishing institutions for the rehabilitation of arable land, grasslands, rivers, and lakes.

The seventh section of this document outlines the establishment of robust systems for environmental governance. It consists of six subsections: improve pollution emission licencing systems, establish regional linking mechanisms for pollution control, establish systems and institutions for rural environmental governance, improve institutions for transparency of environmental information, strictly implement institutions for compensation for environmental damage, and improve institutions for the management of environmental protection. This section stipulates that a licencing system for pollution will be established that is national in scope and encompasses and is mandatory for all polluting industries to obtain a licence to pollute. It calls for mechanisms to link regions in pollution prevention, such as in the Beijing, Tianjin, and Hebei (*Jing-Jin-Ji*) region; the Yangtze River Delta (*Changsanjiao*); and the Pearl River Delta (*Zhusanjiao*) and to integrate planning, standards, environmental assessment, monitoring, and law enforcement.⁴⁴⁶ It also calls for the establishment of a mechanism for environmental governance in rural areas that encompasses such rural issues as chemical fertilisers and pesticides, waste agricultural-use plastic (*nongmo*), and pollution from livestock. It continues by calling for institutions that proffer open information on the environment, so that all information about local water sources, air, and pollution will be publicly available, including information on monitoring. It also stipulates the prominent role the media will have in disseminating environmental information, including environmental awareness. It also seeks to establish an environmental protection network that will provide a platform and institutions for reporting on environmental issues. It also seeks to strengthen institutions for implementing compensations in cases of environmental degradation in accordance with the law and improving institutions for managing environmental protection.

Section eight of this document calls for robust environmental governance and ecological protection through market systems. It consists of six subsections: cultivate market entities that care for the environment, implement trading systems for energy usage rights and carbon emissions rights, implement trading systems for pollution emissions rights, implement trading systems for water rights, establish systems for green finance, and establish a unified system for green production. In this section,

⁴⁴⁶ For more information on this plan for the *Jing-Jin-Ji* region, see: Wu, Dan, Yuan Xu, and Shiqiu Zhang, "Will Joint Regional Air Pollution Control be More Cost-Effective? An Empirical Study of China's Beijing-Tianjin-Hebei Region," *Journal of Environmental Management* 149 (2015).

it calls for the fostering of environmental governance and environmental protection in market entities. This will take place through the encouragement of industries that develop environmentally friendly practices by implementing policies and mechanisms. It will also take place by encouraging investment finance into the environmental protection market. It also outlines the implementation of energy resource usage rights and for a carbon trading scheme, the implementation of a pollution trading scheme, water rights trading scheme, and the establishment of a green finance system.

Section nine of this document is entitled: improving institutions for the assessment of ecological civilisation performance and for investigating accountability. This section contains five subsections: establish a goals system for ecological civilisation, establish mechanisms for monitoring and early-warning systems for resources and environmental carrying capacity, explore and prepare a natural resource balance sheet, implement a natural resource outgoing audit for leaders and cadres, and establish lifelong accountability systems for environmental damage liability. This section is of importance as it stipulates the need to research actionable and visible index systems that serve as indicators of green development vital to quantitatively representing whether or not ecological civilisation targets are being met. It calls for the formulation of examinable targets that denote ecological civilisation development, so that systems for the evaluation of development include resource consumption, environmental damage, and ecological benefits. Importantly, these evaluations and examinations will be specific to different regions and differ depending on their status in accordance with the demarcation of their particular functional zone. This section also includes establishing mechanisms for monitoring and reporting environmental carrying capacity of different regions, as well as investigating proposals for a balance sheet for resource production as a method for calculating resource depletion. It also calls for implementing natural resource audits for outgoing leaders and cadres, and the establishment of a system that would mean any officials that fails to improve the environment in accordance with these indicators would receive a permanent blackmark on their political achievement record.

The final section of this document calls for safeguards that ensure ecological civilisation system reforms. This section contains five subsections: strengthen the leading role of ecological system reforms, actively develop pilot experiments [in accordance with this document], improve laws and regulations, strengthen guidance by public opinion, and strength supervision and implementation. This section relates the need for all departments to study and understand the concept of ecological civilisation, so that all departments are able to implement these reforms in a timely manner. It then requires that there should be positive development of experimental areas for the implementation of ecological civilisation reforms, and for the improvement in laws and regulations such as property rights for natural resource assets, national territorial spaces development protection, national parks, spatial planning, maritime resources, combatting climate change, protection of the quality of arable land, water management, protection of grasslands, protection of wetlands, pollution licences, and environmental damage compensation. It then calls for greater leadership from public opinion and instilling ecological civilisation values in the people such as ecological culture (*shengtai wenhua*), ecological civilisation awareness (*shengtai wenming yishi*), encouraging green lifestyles so as to create an atmosphere that advocates ecological civilisation and promotes the developing into an ecological civilisation. Finally, it calls for strengthening the supervision of the implementation of these reforms through the establishment of groups to monitor and evaluate the performance of reforms, and in the case that problems are encountered will report these issues to the Central Party Committee and the State Council.

Appendix 4 – Original Chinese Text for Reference

This section contains passages that I have translated and included in the dissertation with references in the footnotes. I have provided this section so that you can read the original language for yourself.

Footnote 98)

“今后必须在坚决控制人口增长、坚决保护各种农业资源、保持生态平衡的同时，加强农业基本建设，改善农业生产条件，实行科学种田，在有限的耕地上生产出更多的粮食和经济作物，并且全面发展林、牧、副、渔各业，以满足工业发展和人民生活提高的需要。”

Footnote 100)

“同志们！这里还要特别指出，人口控制、环境保护和生态平衡是关系经济和社会发展全局的重要问题。”

Footnote 107)

“生态文明观念在全社会牢固树立。”

Footnote 108)

“大力推进生态文明建设”

Footnote 129)

“我们既要绿水青山，也要金山银山。宁要绿水青山，不要金山银山，而且绿水青山就是金山银山。”

Footnote 130)

“我们追求人与自然的和谐，经济与社会的和谐，通俗地讲，就是既要绿水青山，又要金山银山。”

Footnote 146)

“今日或未来中国文化的最高理想，不应是追求一个经济富国、政治大国或军事强国，也不是为了追求主宰人类事物或凌驾于他人之上的霸权，更不是为了证明来自于华夏中心论的种族优越性；而是追求一个伟大文明的理念，一种可使一个民族长治久安永远立于世界民族之林而不败的伟大文明理想，它基于中华民族今后发展的千年大计、万年大计。”

Footnote 170)

“全国哲学社会科学规划办公室。”

Footnote 171)

“生态文明与生态伦理的信息增殖基础。”

Footnote 174)

“建设山川秀美的生态文明社会。”

Footnote 337)

“中国现实情况的复杂性给了道德父爱主义以很大的发挥空间，这种父爱般的关怀不是父权，更不是威权，而是如同父亲在子女具备一定自主能力之前对其品格的教育和培养那样。。。”

Footnote 359)

“城市主体功能区，农业主体功能区，生态主体功能区 and 其他类主体功能区” respectively.

Footnote 360)

“谁开发谁保护、谁破坏谁恢复、谁受益谁补偿、谁排污谁付费。”

Footnote 365)

“有法不依、违法不究、执法不严。”

Footnote 369)

“加快推进生态文明建设是加快转变经济发展方式、提高发展质量和效益的内在要求，是坚持以人为本、促进社会和谐的必然选择，是全面建成小康社会、实现中华民族伟大复兴中国梦的时代抉择，是积极应对气候变化、维护全球生态安全的重大举措。”

Footnote 370)

“开创社会主义生态文明新时代。”

Footnote 380)

“国家生态文明先行示范区建设方案。”

Footnote 423)

“你要看中国的文化的根，是在西安。”

Footnote 428)

“感谢父母养育之恩，感谢老师辛勤教导，感谢同学开心帮助，感谢农夫辛勤劳作，及所有付出的人，让我们快乐的生活在感恩的世界。”

Footnote 433)

“灵宝人，从来不爱出门。”

Appendix 5 – Photos

Photo 1)



What the rivers looked like before the cleanup – shows clearly why they were called “milky rivers.”

Photo source: <http://yp.qc188.com/news/201305/12261.html>

Photo 2)



A photo of one of the illegal workshops in Pujiang, taken from the internet as I was not able to take some myself.

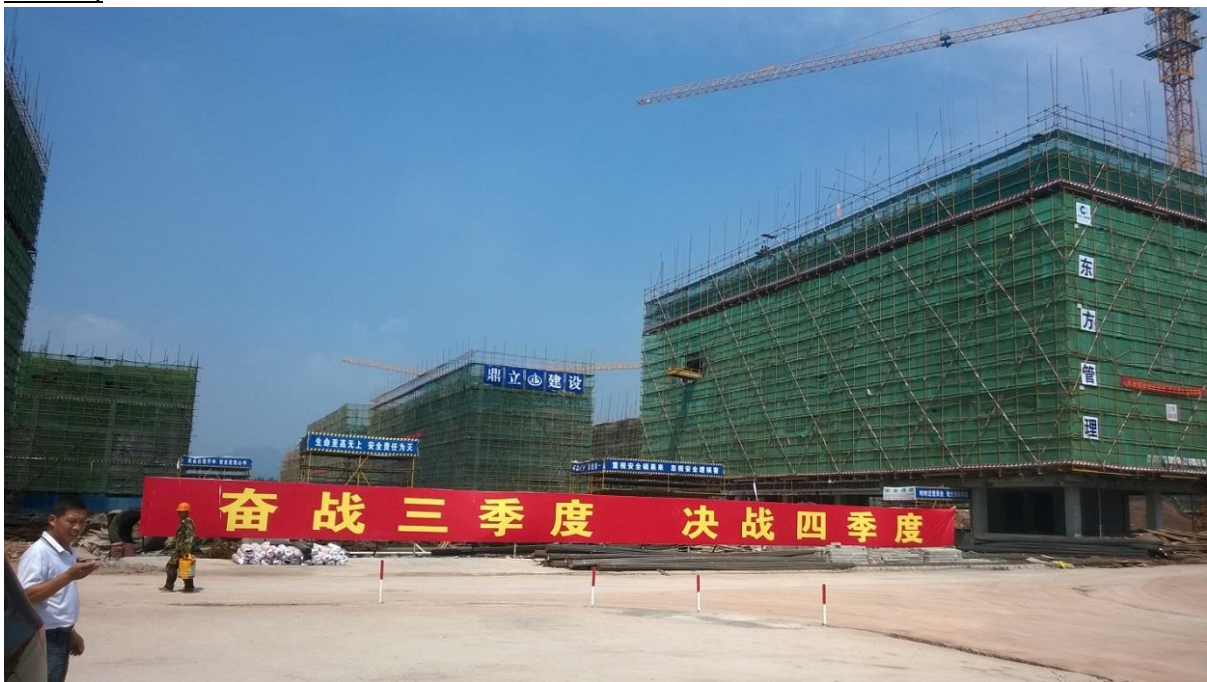
Photo source: http://119.china.com.cn/fhjd/txt/2014-08/06/content_7122902.htm

Photo 3)



This is the outside of one such small crystal glass workshop that makes beads.

Photo 4)



One of the new factory zones under construction in 2014.

Photo 5)



A sign at the new centralised crystal glass facility, showing some of the old, illegal workshops and promoting the new development.

Photo 6)



The other side of the sign in photo 5.

Photo 7)



One of the new style factories, in 2015.

Photo 8)



Inside one of the new workshops in the new factory, 2015.

Photo 9)



Inside another workshop in a new-style factory, 2015.

Photo 10)



A sign in the Dafan region of Pujang county promoting the FWAT campaign.

Photo 11)



One of the villages I stayed in, this photo shows one of the waterways running through the village.

Photo 12)



One of the villages in the Dafan region, in the process of being upgraded to become a tourism hotspot.

Photo 13)



In many of the villages, around the small workshops, the ground is littered with small glass beads.

Photo 14)



A sign in one of the villages, stating that "everyone must be mindful of protecting the environment, dumping rubbish is forbidden.

Photo 15)



This photo is taken in Malingjiao One of the villages

Photo 16)



This is also taken in Malingjiao, the same village but from a different angle.

Photo 17)



This photo is of one of the reservoirs in Pujiang county. This was taken from a restaurant built opposite to try and capitalise on tourism.

Photo 18)



This photo is taken in one of the villages I stayed in, showing the new sewer system going in to the village.

Photo 19)



This is a different village, in the Dafan region, where they were also upgrading the sewerage system.

Photo 20)



The sign reads: Construct a forested Pujiang, improve ecological civilisation.

Photo 21)



An example of an opulent multi-storey village house in Pujiang county.

Photo 22)



A group photo from when I left the Academy. The sign behind my head reads: 人法地、地法天、天法道、道法自然 – a famous passage from the Daode Jing which expresses the idea of the interconnection of all things.

Photo 23)



The old school building where I stayed. The characters on the left are obscured but are: 尊道贵德 – also from the Daode Jing.

Photo 24)



Posters that were stuck on the wall of my room. From left to right: Laozi, Confucius, and Liang Shuming.

Photo 25)



One of the workers at Hong Nong showing how to work the loom.

Photo 26)



The sign reads: Organic experimental grounds for ecological apples.

Photo 27)



An old, disused yaodong.

Photo 28)



These yaodongs have been maintained, but are only used for storage.

Bibliography

- Administration, US Energy Information. "International Energy Statistics." <http://www.eia.gov/cfapps/ipdbproject/IEDIndex3.cfm#>.
- Agency, U.S. Environmental Protection. "Ozone and your Patients' Health: Training for Health Care Providers." <https://www3.epa.gov/apti/ozonehealth/fq.html>, accessed: 05/05/2016.
- Agency, United States Environmental Protection. "Aquatic Life Ambient Water Quality Criteria for Ammonia - Freshwater." <http://water.epa.gov/scitech/swguidance/standards/criteria/aqlife/ammonia/upload/Aquatic-Life-Ambient-Water-Quality-Criteria-for-Ammonia-Freshwater-2013-Fact-Sheet-April.pdf>, accessed: 12/07/2016.
- Agrawal, Arun. "Environmentality: Community, Intimate Government, and the Making of Environmental Subjects in Kumaon, India." *Current Anthropology: A World Journal of the Human Sciences* 46, no. 2 (2005): 161-81.
- Agrawal, Arun. *Environmentality: Technologies of Government and the Making of Subjects*. New ecologies for the twenty-first century. Durham: Duke University Press, 2005.
- Archard, David. "Paternalism Defined." *Analysis* 50, no. 1 (1990): 36-42.
- Association, Scottish Environmental Protection. "Manganese Fact Sheet." <http://apps.sepa.org.uk/spripa/Pages/SubstanceInformation.aspx?pid=106>, accessed: 12/07/2016.
- Bakken, Børge. *The Exemplary Society: Human Improvement, Social Control, and the Dangers of Modernity in China*. Studies on contemporary China. Oxford [England] ; New York: Oxford University Press, 2000.
- Bao, Maohong. "Environmental History in China." *Environment and History* 10, no. 4 (November 2004).
- Barmé, Geremie, and Jeremy Goldkorn. *Civilising China = Wen Ming Zhong Hua*. China Story Yearbook.
- Behrmann, Elisabeth. "Green Batteries' Graphite Adds to China Pollution." *Bloomberg*, 1 May 2014, <http://www.bloomberg.com/news/articles/2014-03-14/teslas-in-california-help-bring-dirty-rain-to-china>, accessed: 06/05/2016.
- "Beijing Polluters Fined 183 mln Yuan Last Year." Xinhua, http://news.xinhuanet.com/english/2016-01/08/c_134988114.htm.
- "Beijing Pollution Fines Surpass 100 mln Yuan." Xinhua, http://news.xinhuanet.com/english/2015-10/13/c_134708978.htm.
- Bell, Daniel. *The China Model: Political Meritocracy and the Limits of Democracy*. Princeton: Princeton University Press, 2015.
- Bell, Daniel. *The Coming of Post-Industrial Society: A Venture in Social Forecasting*. London: Heinemann Educational Books Ltd, 1974.
- Best, Steven. "Murray Bookchin's Theory of Social Ecology: An Appraisal of *The Ecology of Freedom*." *Organization & Environment* 11, no. 3 (September 1998 1998): 334-53.

- Bookchin, Murray. *The Ecology of Freedom: the Emergence and Dissolution of Hierarchy*. Palo Alto, Calif.: Cheshire Books, 1982.
- Bookchin, Murray. *Toward an Ecological Society*. Montréal ; Buffalo: Black Rose Books, 1980.
- Brahic, Catherine. "The Five Oldest Acts of Environmental Destruction." *New Scientist*, 3rd November, <http://www.newscientist.com/article/dn15102-the-five-oldest-acts-of-environmental-destruction.html>, accessed: 007/12/2015.
- Branigan, Tania. "Chinese Figures Show Fivefold Rise in Babies Sick From Contaminated Milk." *The Guardian*, 2 December 2008, <http://www.theguardian.com/world/2008/dec/02/china>, accessed: 06/05/2016.
- Bray, David. *Social Space and Governance in Urban China: The Danwei System from Origins to Reform*. Stanford, Calif.: Stanford University Press, 2005.
- Bullock, Emma C. "A Normatively Neutral Definition of Paternalism." *The Philosophical Quarterly* 65, no. 258 (2015).
- Burgh, Hugo de, and Zeng Rong. *China's Environment and China's Environment Journalists: A Study*. Bristol, UK; Chicago: Intellect, 2011.
- CCP. "中共中央 国务院关于加快林业发展的决定." 新华网, http://news.xinhuanet.com/zhengfu/2003-09/11/content_1075042.htm.
- Chakrabarty, Dipesh. "Postcolonial Studies and the Challenge of Climate Change." *New Literary History* 43, no. 1 (2012): 1-18.
- "China Air Pollution Shifts West in First Quarter: Greenpeace." *The Express Tribune*, 20 April 2016, <http://tribune.com.pk/story/1088566/china-air-pollution-shifts-west-in-first-quarter-greenpeace/>, accessed.
- "China NGOs Win Landmark Environmental Lawsuit." Xinhua Net, http://news.xinhuanet.com/english/2015-10/29/c_134763719.htm.
- Clayton, Philip , and Justin Heinzekehr. *Organic Marxism: An Alternative to Capitalism and Ecological Catastrophe*. Toward Ecological Civilization. Claremont, California: Process Century Press, 2014.
- Cobb, John B. "Necessities for an Ecological Civilization." religion-online.org, <http://www.religion-online.org/showarticle.asp?title=3605>, accessed: 9/10/2016.
- Commoner, Barry. *The Closing Circle: Nature, Man, and Technology*. 1st ed. New York: Knopf, 1971.
- Conly, Sarah. *Against Autonomy: Justifying Coercive Paternalism*. Cambridge: Cambridge University Press, 2013.
- Crosby, Alfred W. *The Columbian Exchange: Biological and Cultural Consequences of 1492*. Contributions in American studies, no. 2. Westport, Conn: Greenwood Pub. Co., 1972.
- Daly, Herman E. *Beyond Growth : The Economics Of Sustainable Development*. Boston: Beacon Press, 1996.

Daly, Herman E., John B. Cobb, *et al.* *For the Common Good: Redirecting the Economy Toward Community, the Environment, and a Sustainable Future*. 2nd ed. Boston: Beacon Press, 1994.

Darier, Éric. *Discourses of the Environment*. Oxford, UK; Malden, Mass., USA: Blackwell, 1999.

Day, Alexander. "The End Of The Peasant? New Rural Reconstruction In China." *boundary 2* 35, no. 2 (2008): 25.

Dean, Mitchell. *Governmentality: Power and Rule in Modern Society*. 2nd ed. London; Thousand Oaks, Calif.: SAGE, 2010.

"The Decision on Major Issues Concerning Comprehensively Deepening Reforms in Brief." China.org.cn, http://www.china.org.cn/china/third_plenary_session/2013-11/16/content_30620736_5.htm, accessed: 11/12/2016.

"Declaration of the United Nations Conference on the Human Environment." <http://www.unep.org/Documents.Multilingual/Default.asp?documentid=97&articleid=1503>.

Demick, Barbara. "'Airpocalypse': Severe Pollution Cripples Northeastern China." *LA Times*, 22nd October, <http://www.latimes.com/world/worldnow/la-fg-wn-pollution-northeastern-china-20131022-story.html>, accessed: 07/12/2015.

Development, International Institute for Sustainable. "An Environmental Impact Assessment of China's WTO Accession: An Analysis of Six Sectors." <https://www.cbd.int/impact/case-studies/cs-impact-cciced-eia-en.pdf>.

"Di Zi Gui: Standards for Being a Good Student and Child." 弟子规公益网, <http://www.dizigui.cn/diziguienglish.asp>, accessed: 11/12/2016.

Diamond, Jared M. *Guns, Germs, and Steel: The Fates of Human Societies*. New York: W. W. Norton, 2005.

Dreyfus, Hubert L., and Paul Rabinow. *Michel Foucault, Beyond Structuralism and Hermeneutics*. Chicago: University of Chicago Press, 1982.

DuBois, Marc. "The Governance of the Third World: A Foucauldian Perspective on Power Relations in Development." *Alternatives: Global, Local, Political* 16, no. 1 (1991): 1-30.

Dubos, René J. *So human an animal*. New York: Scribner, 1968.

Dutton, Michael Robert. "Lead Us Not Into Translation: Notes Toward A Theoretical Foundation For Asian Studies." *Nepantla: Views from South* 3, no. 3 (2002): 43.

Dworkin, Gerald. "Defining Paternalism." Chap. 1 In *Paternalism: Theory and Practice*, edited by Christian Coons and Michael Weber. New York: Cambridge University Press, 2013.

Dworkin, Gerald. "Paternalism." *The Monist* Jan, no. 1 (1972).

Dynon, Nicholas. "'Four Civilizations' and the Evolution of Post-Mao Chinese Socialist Ideology." *The China Journal*, no. 60 (2008): 83-109.

"Earth Overshoot Day." Global Footprint Network, <http://www.overshootday.org/>, accessed: 5/10/2016.

Economy, Elizabeth. *The River Runs Black: The Environmental Challenge To China's Future*. 2nd ed. Ithaca: Cornell University Press, 2010.

Ehrlich, Paul R. *The Population Bomb*. A Sierra Club-Ballantine book. New York,: Ballantine Books, 1968.

Elvin, Mark. "The Environmental Legacy of Imperial China." *The China Quarterly* 156, no. Special Issue: China's Environment (1998): pp733-56.

Elvin, Mark. *Retreat of the Elephants: An Environmental History of China*. 1st ed. New Haven: Yale University Press, 2004.

Ewen, Stuart. *Captains Of Consciousness: Advertising And The Social Roots Of The Consumer Culture*. New York: McGraw-Hill, 1976.

Fairbrother, Gregory P. "The Chinese Paternalistic State and Moral Education." Chap. 2 In *Citizenship Education in China: Preparing Citizens for the Chinese Century?* New York: Routledge, 2013.

Fang, Jinqi, and Zhiren Xie. "Deforestation in Preindustrial China: The Loess Plateau Region as an Example." *Chemosphere* 29, no. 5 (1994): 17.

Farh, Jiing-Lih, and Bor-Shiuan Cheng. "A Cultural Analysis of Paternalistic Leadership in Chinese Organizations." Chap. Four In *Management and Organizations in the Chinese Context*, edited by J. T. Li, Anne S. Tsui and Elizabeth Weldon. Great Britain: Palgrave Macmillan UK, 2000.

Feinberg, Matthew, and Rob Willer. "The Moral Roots of Environmental Attitudes." *Psychological Science* 24, no. 1 (2013): 56-62.

Foucault, Michel. *Discipline and Punish: The Birth of the Prison*. 1st American ed. New York: Pantheon Books, 1977.

Foucault, Michel. *Dits et Écrits: 1954-1988*. Bibliothèque des sciences humaines. 4 vols Paris: Editions Gallimard, 1994.

Foucault, Michel, Mauro Bertani, et al. *Society Must be Defended: Lectures at the Collège de France, 1975-76*. 1st ed. New York: Picador, 2003.

Foucault, Michel, Michel Senellart, et al. *The Birth of Biopolitics: Lectures at the Collège de France, 1978-79*. Basingstoke England ; New York: Palgrave Macmillan, 2008.

Foucault, Michel, Michel Senellart, et al. *Security, Territory, Population: Lectures at the Collège de France, 1977-78*. Basingstoke; New York: Palgrave Macmillan : République Française, 2007.

"Four out of Five Most Polluted Cities in the World Now in India." *The News Minute*, 12 May 2016, <http://www.thenewsminute.com/article/four-out-five-most-polluted-cities-world-now-india-43130>, accessed.

Geall, Sam, and Adrian Ely. "Ecological Civilisation." In *Innovation for Sustainability in a Changing China: Exploring Narratives and Pathways*: STEPS Centre, 2015.

Goldman, Michael. "Eco-Governmentality and the Making of an Environmental State." Chap. 5 In *Imperial Nature: The World Bank and Struggles for Social Justice in the Age of Globalization*. Yale Agrarian Studies Series. New Haven; London: Yale University Press, 2005.

Goodin, Robert E. "Permissible Paternalism: In Defense of the Nanny State." Chap. 11 In *The Essential Communitarian Reader*, edited by Etzioni Amitai. Maryland US: Rowman & Littlefield Publishers Inc, 1998.

Greenhalgh, Susan. "Governing Chinese Life: From Sovereignty to Biopolitical Governance." Chap. 7 In *Governance of Life in Chinese Moral Experience: The Quest for an Adequate Life*, edited by Everett Zhang, Arthur Kleinman and Weiming Tu. New York: Routledge, 2011.

Guldin, Gregory Eliyu. *Farewell To Peasant China : Rural Urbanization And Social Change In The Late Twentieth Century*. Studies on contemporary China. Armonk, N.Y.: M.E. Sharpe, 1997.

Guo, Sujian, and Baogang Guo. *Challenges facing Chinese political development*. Lanham, MD: Lexington Books, 2007.

Han, Chu. "The Human Cost of Living in the 'Mercury Capital' of China." China Dialogue, <https://www.chinadialogue.net/article/show/single/en/7204-The-human-cost-of-living-in-the-mercury-capital-of-China>.

Hardin, Garrett. "An Ecolate View of the Human Predicament." *Alternatives* 7, no. 2 (1981): 242-62.

Harrabin, Roger. "China 'Deserves More Credit' for Renewable Energy Effort." <http://www.bbc.com/news/business-33143176>.

He, Baogang. *The Democratisation of China*. London: Taylor and Francis, 2002.

Hindess, Barry. *Discourses of Power: From Hobbes to Foucault*. Oxford, UK ; Cambridge, Mass.: Blackwell Publishers, 1995.

Holbig, Heike. "Shifting Ideologies of Research Funding: The CPC's National Planning Office for Philosophy and Social Sciences." *Journal of Current Chinese Affairs* 43, no. 2 (2014): 13-32.

Hu, Angang. "China's Economic Growth and Poverty Reduction." Seminar Paper,(2003). <https://www.imf.org/external/np/apd/seminars/2003/newdelhi/angang.pdf>.

Huang, Zhen. "China's Environmental Protection Law Lays Groundwork for Greater Transparency." Asia Foundation, <http://asiafoundation.org/in-asia/2014/05/28/chinas-environmental-protection-law-lays-groundwork-for-greater-transparency/>.

Huters, Theodore, Roy Bin Wong, et al. *Culture & State in Chinese History: Conventions, Accommodations, and Critiques*. Irvine studies in the humanities. Stanford, Calif.: Stanford University Press, 1997.

"The Institute for the Postmodern Development of China - Official Website." Institute for the Postmodern Development of China, accessed: 11/12/2016.

Jacka, Tamara. "Cultivating Citizens: Suzhi (Quality) Discourse in the PRC." *Positions* 17, no. 3 (2009): pp523-35.

Jackson, Tim. "An Economic Reality Check." TEDGlobal, http://www.ted.com/talks/tim_jackson_s_economic_reality_check, accessed: 5/10/2016.

Jackson, Tim. *Prosperity Without Growth: Economics For A Finite Planet*. 1st ed. London ; Sterling, VA: Earthscan, 2009.

Jacques, Martin. *When China Rules the World: The Rise of the Middle Kingdom and the End of the Western World*. London: Allen Lane an imprint of Penguin Books, 2009.

Jiang, Zhongcheng, Yanqing Lian, *et al.* "Rocky Desertification in Southwest China: Impacts, Causes, and Restoration." *Earth-Science Reviews* 132, no. May (2014): 1-12.

Kao, Ernest. "Thousands Dying in Region From Ozone Pollution Caused by Warming, Chinese University Study Finds." *South China Morning Post*, 13 October 2015, <http://www.scmp.com/news/hong-kong/health-environment/article/1866777/thousands-dying-region-ozone-pollution-caused>, accessed.

Kapp, K. William. "'Recycling' in Contemporary China." *Kyklos* 27, no. 2 (1974).

Kassiola, Joel Jay. "Confucianizing Modernity and "Modernizing" Confucianism: Environmentalism and The Need for a Confucian Positive Argument for Social Change." Chap. 8 In *China's Environmental Crisis: Domestic and Global Political Impacts and Responses*, edited by Joel Jay Kassiola and Sujian Guo, 195-216. New York: Palgrave Macmillan, 2010.

Kassiola, Joel Jay, and Sujian Guo. *China's environmental crisis : domestic and global political impacts and responses*. Environmental politics and theory. 1st ed. New York: Palgrave Macmillan, 2010.

Kleinig, John. *Paternalism*. Philosophy and society. Totowa, N.J.: Rowman & Allanheld, 1984.

Koehn, Peter H. *China Confronts Climate Change: A Bottom-Up Perspective*. Routledge advances in climate change research. Milton Park, Abingdon, Oxon: Routledge/Earthscan, 2016.

Kong, Lingyu. "Local Gov'ts Use Newfound Power to Approve Dirty Coal-Fired Power Plants." Caixin Online, <http://english.caixin.com/2016-01-15/100899841.html>.

Latour, Bruno. *Politics of Nature: How to Bring the Sciences into Democracy*. Cambridge, Mass.: Harvard University Press, 2004.

Leonard, Annie. "The Story of Stuff." <http://storyofstuff.org/movies/story-of-stuff/>.

Leopold, Aldo, Charles Walsh Schwartz, *et al.* *A Sand County Almanac: With Other Essays on Conservation from Round River*. [Enl. ed. New York: Oxford University Press, 1966.

Levitt, Tom. "U.S. Cities Suffer Impact of Downwind Chinese Air Pollution." *China Dialogue*, 17th January 2013.

Li, Tania Murray. "To Make Live or Let Die? Rural Dispossession and the Protection of Surplus Populations." *Antipode* 41, no. S1 (2009): 66-93.

Lieberthal, Kenneth G. *Governing China: From Revolution Through Reform*. 1st ed. New York: W.W. Norton, 1995.

Liu, Jung-Chao, and Social Science Research Council (U.S.). Committee on the Economy of China. *China's Fertilizer Economy*. Edinburgh,: University Press, 1971.

Liu, Zongchao. *An Outlook on Ecological Civilisation*. Xiamen: Xiamen University Press, 2010.

Lora-Wainwright, Anna, Yiyun Zhang, *et al.* "Learning to Live with Pollution: The Making of Environmental Subjects in a Chinese Industrialized Village." *The China Journal* 68 (2012).

Lovelock, James, and Lynn Margulis. "Atmospheric Homeostasis By and For the Biosphere: The Gaia Hypothesis." *Tellus* 26, no. 1-2 (1974): 8.

Lukes, Steven. *Power: A Radical View*. Studies in sociology. London ; New York: Macmillan, 1974.

Ma, Jun. "Ecological Civilisation is the Way Forward." <https://www.chinadialogue.net/article/1440-Ecological-civilisation-is-the-way-forward>.

Marks, Robert. *China: Its Environment and History*. World Social Change. Lanham, Md.: Rowman & Littlefield, 2012.

Marx, Karl. *Das Kapital*. 1999. <https://www.marxists.org/archive/marx/works/1867-c1/index.htm>.

Marx, Karl. "Theses on Feuerbach." Marx/Engels Internet Archive (marxists.org), <https://www.marxists.org/archive/marx/works/1845/theses/theses.htm>, accessed: 9/10/2016.

Marx, Karl, and Friedrich Engels. *The Communist Manifesto*. Camberwell, Victoria: Penguin, 2010.

McLellan, David *Marx*. Fontana Modern Masters. edited by Frank Kermode Glasgow, Great Britain: William Collins Sons and Co Ltd, 1975.

Meisner, Maurice J. *Mao's China and After: A History of the People's Republic*. 3rd ed. New York, NY: Free Press, 1999.

Meléndez-Ortiz, Ricardo, Christophe Bellmann, *et al.* "A Decade in the WTO: Implications for China and Global Trade Governance." ICTSD Programme on Global Economic Policy and Institutions, <http://www.ictsd.org/downloads/2011/12/a-decade-in-the-wto-implications-for-china-and-global-trade-governance.pdf>.

Milbrath, Lester W. *Envisioning a Sustainable Society: Learning Our Way Out*. Albany: State University of New York Press, 1989.

Minter, Adam. *Junkyard planet: Travels in the Billion-Dollar Trash Trade*. First U.S. Edition. ed. New York: Bloomsbury Press, 2013.

Moore, Malcom. "China's 'Airpocalypse' Kills 350,000 to 500,000 Each Year." *The Telegraph*, 07 January 2014, <http://www.telegraph.co.uk/news/worldnews/asia/china/10555816/Chinas-airpocalypse-kills-350000-to-500000-each-year.html>, accessed.

Morrison, Roy. *Ecological Democracy*. Boston, MA: South End Press, 1995.

Morrison, Roy. "Roy Morrison Biography." <http://rmwriter.fatcow.com/id33.html>, accessed: 8/10/2016.

Network, China Education and Research. "Evolution of Internet in China." http://www.edu.cn/introduction_1378/20060323/t20060323_4285.shtml.

"The New Economics Foundation Official Website." New Economics Foundation, <http://neweconomics.org/>, accessed: 11/12/2016.

News, Bloomberg. "Beijing to Close All Major Coal Power Plants to Curb Pollution." *Bloomberg*, 24 March 2015, <http://www.bloomberg.com/news/articles/2015-03-24/beijing-to-close-all-major-coal-power-plants-to-curb-pollution>, accessed.

Organisation, World Health. "Manganese in Drinking-water: Background Document for Development of WHO Guidelines for Drinking-water Quality."
http://www.who.int/water_sanitation_health/dwq/chemicals/manganese.pdf, accessed: 12/07/2016.

Oswald, James. "China Turns to Ecology in Search of 'Civilisation'." 3rd August 2016,
<http://asaa.asn.au/china-turns-to-ecology-in-search-of-civilisation/>, accessed: 5/10/2016.

Oswald, James P. F. "What Does Eco-Civilisation 生态文明 Mean?"
<https://www.thechinastory.org/2014/09/what-does-eco-civilisation-mean/>.

Park, Jacob, Ken Conca, *et al.* *The Crisis of Global Environmental Governance: Towards a New Political Economy of Sustainability*. Environmental politics. London: Routledge, 2008.

Pattberg, Thorsten. "Language Imperialism, Concepts and Civilization: China versus The West." Global Research, <http://www.globalresearch.ca/language-imperialism-concepts-and-civilization-china-versus-the-west/28940>, accessed: 27/12/2015.

Pattberg, Thorsten. "Language, Imperialism and Culture - Dr. Thorsten Pattberg on GRTV." Youtube,
<http://www.youtube.com/watch?v=gvbf7wqwlbs>.

Pavel, Carmen, and Michael Barnett. "Paternalism and Global Governance." *Social Philosophy and Policy* 32, no. 1 (2015): 216-43.

Piketty, Thomas, and Arthur Goldhammer. *Capital in the twenty-first century*. text.

Podoshen, Jeffrey S., Lu Li, *et al.* "Materialism and Conspicuous Consumption in China: A Cross-Cultural Examination." *International Journal of Consumer Studies* 35 (2011): 17-25.

Pogge, Thomas Winfried Menko. *World Poverty and Human Rights: Cosmopolitan Responsibilities and Reforms*. Cambridge ; Malden, MA: Polity, 2002.

"Public Interest Environmental Litigation Case Close in NE China." Xinhua,
http://news.xinhuanet.com/english/2015-12/30/c_134965723.htm.

Pye, Lucian W., and Mary W. Pye. *Asian Power and Politics: The Cultural Dimensions of Authority*. Cambridge: Harvard University Press, 2009.

Rose, Nikolas S., and Peter Miller. "Political Power Beyond the State: Problematics of Government." *The British Journal of Sociology* 43, no. 2 (1992): 173-205.

Shapiro, Judith. *Mao's War Against Nature: Politics and the Environment in Revolutionary China*. Studies in Environment and History. Cambridge; New York: Cambridge University Press, 2001.

Si, Meng. "An Insight into the Green Vocabulary of the Chinese Communist Party." *China Dialogue*, 15th November 2013.

Sigley, Gary. "Chinese Governmentalities: Government, Governance and the Socialist Market Economy." *Economy and Society* 35, no. 4 (2006): 487-508.

Simms, Andrew, and Ruth Potts. "The New Materialism: How Our Relationship with the Material World Can Change for the Better." edited by Schumacher College. Totnes, UK: The Real Press, 2012.

Simons, Craig. *The Devouring Dragon: How China's Rise Threatens Our Natural World*. New York: St. Martin's Press, 2013.

Smil, Vaclav. *The Bad Earth: Environmental Degradation in China*. Armonk, N.Y; London: M.E. Sharpe; Zed Press, 1984.

Snow, Edgar. *Red Star Over China*. 1st rev. and enl. ed. New York,: Grove Press, 1968.

Spence, Jonathan D. *The Search For Modern China*. 3 ed. New York: W. W. Norton and Company, 2013.

Staedter, Tracy. "7 of 10 Most Air-Polluted Cities Are in China." *Discovery*, 16 January 2013, <http://news.discovery.com/earth/weather-extreme-events/7-of-10-most-air-polluted-cities-china-130116.htm>, accessed.

Teng, Ssu-yu, and John K. Fairbank. *China's Response to the West: A Documentary Survey, 1839-1923*. Cambridge: Harvard University Press, 1954.

Thaler, Richard H., and Cass R. Sunstein. *Nudge: Improving Decisions About Health, Wealth, and Happiness*. New Haven: Yale University Press, 2008.

Thogersen, Stig. "Parasites or Civilisers: The Legitimacy of the Chinese Communist Party in Rural Areas." *China: An International Journal* 1, no. 2 (2003): 200-23.

Twitchett, Denis Crispin, and John King Fairbank. "The Cambridge History of China." v. <1, 3, 5-15 >. Cambridge England; New York: Cambridge University Press, 1978.

Tylor, Edward Burnett Sir. *Anthropology [electronic resource]: An Introduction to the Study of Man and Civilization / Edward Burnett Tylor*. Introduction to the study of man and civilization. edited by Toronto University of London: London : Macmillan, 2007.

Uekötter, Frank. *The Turning Points of Environmental History*. Pittsburgh, Pa.: University of Pittsburgh Press, 2010.

Veblen, Thorstein. *The Theory of the Leisure Class*. Oxford World's Classics. Oxford; New York: Oxford University Press Inc., 2007.

Vukovich, Daniel F. *China and Orientalism: Western Knowledge Production and the P.R.C.* Postcolonial politics. Milton Park, Abingdon, Oxon ; New York: Routledge, 2012.

Wang, Alex. "Environmental Protection In China: The Role of Law." *Chinadialogue*, <https://www.chinadialogue.net/article/show/single/en/745-Environmental-protection-in-China-the-role-of-law>.

Wang, Canfa. "Chinese Environmental Law Enforcement: Current Deficiencies and Suggested Reforms." *Vermont Journal of Environmental Law* 8 (2007).

Wang, Gungwu. *The Chineseness of China: Selected Essays*. Hong Kong ; New York: Oxford University Press, 1991.

Wang, Jin. "China's Green Laws are Useless." *China Dialogue*, <https://www.chinadialogue.net/article/show/single/en/3831--China-s-green-laws-are-useless->.

- Wang, Zheng. *Never Forget National Humiliation: Historical Memory in Chinese Politics and Foreign Relations*. Contemporary Asia in the world. New York: Columbia University Press, 2012.
- Wang, Zheng. "Not Rising, But Rejuvenating: The "Chinese Dream"." *The Diplomat*, 5th February 2013.
- Watts, Jonathan. *When a Billion Chinese Jump: How China Will Save Mankind -- or Destroy It*. London: Faber and Faber, 2010.
- Weisman, Alan. *The World Without Us*. New York: Thomas Dunne Books/St. Martin's Press, 2007.
- Wen, Tiejun. "Deconstructing Modernisation." *Chinese Sociology and Anthropology* 39, no. 4 (2007): 16.
- Wen, Tiejun. "Four Stories in One: Environmental Protection and Rural Reconstruction in China." *Position* 16, no. 3 (2008).
- Wenlin*. (Dictionary software, version 4.1.1). Honolulu, Hawa'ai: University of Hawa'ai, 2012.
- Wu, Dan, Yuan Xu, *et al.* "Will Joint Regional Air Pollution Control be More Cost-Effective? An Empirical Study of China's Beijing-Tianjin-Hebei Region." *Journal of Environmental Management* 149 (1st February 2015): 27-36.
- Xiao, Xiang. *Ecological System Reform*. Trends in China. edited by Li Wu Beijing: Beijing Times Chinese Press, 2014.
- Young, Oran R. "Effectiveness of International Environmental Regimes: Existing Knowledge, Cutting-Edge Themes, and Research Strategies." *PNAS* 108, no. 50 (13th December 2011): 19853-60.
- Young, Robert. "John Stuart Mill, Ronald Dworkin, and Paternalism." Chap. 10 In *Mill's On Liberty: A Critical Guide*, edited by C. L. Ten. Cambridge, UK ; New York: Cambridge University Press, 2008.
- Yu, Keping. "Toward an Incremental Democracy and Governance: Chinese Theories and Assessment Criteria." *New Political Science* 24, no. 2 (2002): 181-99.
- Zhang, Everett, Arthur Kleinman, *et al.* *Governance of Life in Chinese Moral Experience: The Quest for an Adequate Life*. New York: Routledge, 2011.
- Zhang, Lei, Guizhen He, *et al.* "Power Politics in the Revision of China's Environmental Protection Law." *Environmental Politics* 22, no. 6 (2013): 1029-35.
- Zhang, Shuguang. *Economic Cold War: America's Embargo Against China and the Sino-Soviet alliance, 1949-1963*. Cold War International History Project series. Washington, D.C.: Woodrow Wilson Center Press; Stanford, Calif.: Stanford University Press, 2001.
- Липицкий, В. С. " Пути формирования экологической культуры личности в условиях зрелого социализма." *Вестн. Моск. ун-та. Сер. 12, Теория научного коммунизма* 2 (1984): 40-47.
- 严耕, and 杨志华. [Geng Yan] *生态文明的理论与系统建构* [Constructing an Ecological Civilisation Theory and System]. 生态文明丛书. edited by 严耕 北京: 中央编译出版社, 2009.
- "中共中央国务院关于加快推进生态文明建设的意见." 人民日报, <http://politics.people.com.cn/n/2015/0506/c1001-26953754.html>.

中共浦江县委. [CCP's Pujiang County Committee] "强势推进“五水共治” 努力打造秀美浦江." [Emphasise Promoting ‘Five Waters Administered Together’ to Strive to Create a Beautiful Pujiang]. *政策瞭望*, no. 6 (2014).

"中华人民共和国环境保护法（主席令第九号）." [In Chinese]. http://www.gov.cn/zhengce/2014-04/25/content_2666434.htm.

习近平. [Jinping Xi] *治国理政* [The Governance of China]. 新华出版社, 2014.

"习近平“两座山论”的三句话透露了什么信息." [In Chinese]. 新华网, http://news.xinhuanet.com/politics/2015-08/06/c_128099340.htm.

"习近平的“两座山论”有了顶层设计." 央广网, http://news.cnr.cn/native/gd/20150912/t20150912_519852740.shtml.

"什么是“多规合一”." [In Chinese]. 榆林日报, http://szb.ylrb.com/html/2015-03/27/content_18387.htm.

何慧丽, 程晓蕊, *et al.* "当代新农村建设运动的实践总结及反思：以开封10年经验为例." *开放时代*, no. 4月 (2014).

侯仁之. [Renzhi Hou] "敦煌县南湖绿洲沙漠化蠡测：河西走廊祁连山北麓绿洲的个案调查之一." [A cursory investigation into desertification in L ü zhou, Dunhuang County: One case study from around L ü zhou]. *中国沙漠* 1, no. 1 (1981).

"关于加快推动生活方式绿色化的实施意见." [In Chinese]. 环境保护部, <http://www.caepi.org.cn/p/1210/362215.html>.

"关于开展第二批生态文明先行示范区建设的通知(发改环资[2015]3214号)." 发改委网站, <http://news.163.com/16/0113/09/BD6UPSKV00014JB5.html>.

刘宗超. *生态文明观与中国可持续发展走向*. 生态文明丛书. 1st ed. 北京: 中国科学技术出版社, 1997.

刘宗超. [Zongchao Liu] "研究院简介," [Introduction to the Academy]. 北京生态文明工程研究院, accessed: 11/12/2016.

刘湘溶. [Xiangrong Liu] *我国生态文明发展战略研究* [Research On My Country's Ecological Civilisation Development Strategy]. 北京: 人民出版社, 2012.

刘笑言. "自由主义 VS 父爱主义: 国家干预的正当性理由分析." *云南行政学院学报*, no. 5 (2010).

刘笑言. "道德父爱主义与公民教育." *中共长春市委党校学报* [Journal of the Party School of CPC of Changchun Municipal Committee] 109, no. 4月 (2008).

"加一个生态文明如何." <http://rd.yangzhou.gov.cn/jsj/200306/FD7RMPUJWRXAH86E4FI4PT6JBT2IUM5U.shtml>.

"十八届三中全会报告(全文)." [Report from the 3rd Plenary Session of the 18th CCP Central Committee (Full Version)] *云岭先锋网*, 4th June 2015, http://ylxf.yn.gov.cn/html/News/2015/6/4/95150_2.html, accessed: 11/12/2016.

史念海. [Nianhai Shi] "司马迁规划的农牧地区分界线在黄土高原上的推移及其影响." [The Effect of Moving Simaqian's Planned Herding Boundary Demarcations on the Loess Plateau]. *中国历史地理学论丛* 1 (1999).

周鑫. [Xin Zhou] *西方生态现代化理论与当代中国生态文明建设* [Western Ecological Modernisation Theory And The Building Of Ecological Civilisation In Contemporary China]. 北京: 光明日报, 2012.

国务院, 中共中央. "国家新型城镇化规划 (2014-2020年)," [In Chinese]. http://www.gov.cn/gongbao/content/2014/content_2644805.htm.

国务院, 中共中央. "生态文明体制改革总体方案." http://www.mof.gov.cn/zhengwuxinxi/zhengcefabu/201509/t20150923_1472456.htm.

"国家生态文明先行示范区建设方案 (全文)." 发改委, <http://www.china-nengyuan.com/news/55459.html>.

张擅. "在成熟社会主义条件下培养个人生态文明的途径." *光明日报*, 18th February, <http://www.cqvip.com/read/read.aspx?id=49988300>, accessed: 10/12/2015.

彭本利, and 李爱年. "新《环境保护法》的亮点、不足与展望." *环境污染与防治* 37, no. 4 (2015).

戴建平. [Jianping Dai] "把水环境综合整治作为大事来抓." [Emphasise the Importance of a Synthesised Resolution to the Water Problem]. *政策瞭望*, no. 1 (2014).

"敦复书院." [Dunfu Academy]. dfsy.net, <http://dfsy.net/>, accessed: 11/12/2016.

方朝晖. [Zhaohui Fang] *文明的毁灭与新生: 儒学与中国现代性研究* [The Destruction and Rebirth of Civilisation: Research on Confucianism and Chinese Modernity]. 中国当代学术思想文库. 第一版 ed. 北京: 中国人民大学出版社, 2011.

施生旭. "生态文明先行示范区建设的水平评价与改进对策: 福建省的案例研究." *东南学术* 5 (2015).

朝晖. [Hui Chao] "北京法拉利撞兰博基尼: 一个20岁一个21岁." [Beijing Ferrari and Lamborghini: One is 20 and the Other is 21] *驱动之家*, 13th April 2015, <http://news.mydrivers.com/1/413/413568.htm>, accessed: 5/10/2016.

李宏伟. "形塑“环境正义”: 生态文明建设中的功能区划和利益补偿." *当代世界与社会主义*, no. 2 (2013).

李宏伟. "生态文明建设的科学内涵与当代中国生态文明建设." *求知月刊* (2011/12).

李宏伟, and 厉磊. "生态文明与后发地区“绿色崛起”." *开放导报* 2, no. 1 (2014).

李昌平. [Changping Li] *我向总理说实话* [I spoke the truth to the Prime Minister]. 西安: 陕西人民出版社, 2009.

江泽民. "中国共产党第十六次全国代表大会报告," [In Chinese]. <http://www.caijing.com.cn/2008-04-07/100055318.html> - accessed 07/09/2015.

江泽民. "中国共产党第十四次全国代表大会报告," [In Chinese]. <http://www.caijing.com.cn/2008-04-07/100055328.html>.

江泽民. "江泽民在中国共产党第十五次全国代表大会上的报告." <http://cpc.people.com.cn/GB/64162/64168/64568/65445/4526288.html>.

"浙江省人大环境与资源保护委员会关于我省“三改一拆”行动情况的视察报告." [Investigation Report from the Zhengjiang County People's Congress Environment and Resource Protection Committee Meeting About the Situation of Our Province's "Three Transform and One Demolish" Movement]. *浙江人大杂志*, no. 6 (2013).

"浦江县水生态文明建设试点: 实施方案." edited by 浦江县人民政府 [Pujiang County Water Ecological Civilisation Construction Pilot: Implementation Plan], 2014.

"浦江工作报道集." [Collection of Pujiang Work Reports], 2015.

温铁军. [Petrus Liu] "“三农问题”: 世纪末的反思." [Centenary Reflections on the 'Three Dimensional Problem' of Rural China]. *Inter-Asia Cultural Studies* 2, no. 2 (2001): 9.

温铁军. [Tiejun Wen] "全球资本化与制度性致贫." [Global Capitalisation and Systemic Poverty Creation]. *中国农业大学学报 (社会科学版)* 29, no. 1 (March 2012 2012).

温铁军. *八次危机: 中国的真实经验 1949-2009*. 北京: 东方出版社, 2013.

潼泽行雄. "台湾中部地区发生的第二油症事件." [The Second Instance of Youcheng Disease that Occured in Taiwan's Middle Region]. *新疆医学院学报* (1982).

灵宝市弘农书院. "弘农书院工作简报." edited by 何慧丽: 弘农书院, 2014.

王鑫来. [Xinlai Wang] "非法排污危害大 污染环境被批捕." [Due to Toxic Illegal Dumping, Arrest Authorised For Polluter] *人民日报*, 26th Nov 2015, <http://legal.people.com.cn/n/2015/1126/c188502-27856875.html>, accessed: 11/12/2016.

生态文明建设理论卷. [Ecological Civilisation Construction]. 生态文明建设. edited by 陈宗兴 and 朱光辉 2 vols. Vol. 1, 北京: 学习出版社, 2014.

"福建: 从“生态省”到“生态文明先行示范区”." [In Chinese]. 新浪财经, <http://finance.sina.com.cn/leadership/mroll/20150303/234421636043.shtml>.

罗荣渠. [Rongqu Luo] *从【西化】到现代化* [From [Westernisation] to Modernisation]. 合肥市: 黄山出版社, 2008.

胡耀邦. "全面开创社会主义现代化建设的新局面," [In Chinese]. http://www.gov.cn/test/2007-08/28/content_729792.htm.

胡锦涛. "十八大报告." http://www.xj.xinhuanet.com/2012-11/19/c_113722546.htm.

胡锦涛. "胡锦涛在中国共产党第十七次全国代表大会上的报告," [In Chinese] [Hu Jintao's Work Report from the 17th National People's Congress of the Communist Party of China]. <http://www.chinapeople.com/peopleele/pqrty/pqrtyinfo.aspx?pid=4044>.

蒋高明. *生态农场纪实* [Organic Farm Report]. 北京: 中国科学技术出版社, 2013.

许光. [Guang Xu] "浦江县“五水共治”倒逼产业转型升级的经验研究." [Research on the Experience of 'Five Waters Administered Together' so as to Impel Transformation and Upgrading of Industry in Pujiang County]. *当代社科视野*, no. 5 (2014).

"贵州获准建设全国生态文明先行示范区." [In Chinese]. 新华社, http://www.gov.cn/xinwen/2014-06/09/content_2697336.htm.

贾卫列, 杨永岗, *et al.* *生态文明建设概论*. 北京: 中央编译出版社, 2013.

赵帅. "从单一父爱主义到己爱主义与父爱主义的结合——论环境保护的发展及环境知情权的重要性." *法治与社会* [Legal System and Society], no. 7 (2009).

赵紫阳. "赵紫阳在中农国共产党第十三次全国代表大会上的报告," [In Chinese]. <http://cpc.people.com.cn/GB/64162/64168/64566/65447/4526368.html>

钟小代. [Xiaodai Zhong] "五水共治项目对流域经济发展影响的定量分析." [A Qualitative Analysis of the 'Five Waters Administered Together' Project's Effect on the Economic Development of the River Basin]. *低碳世界*, no. 9 (2014).

陈文嘉. [Wenjia Chen] "陕西安监局长杨大才眼镜被曝价值13万." [Shaanxi Safety Bureau Head Yang Dacai's Glasses Revealed To Be Worth 130,000RMB], 6th September 2012, <http://tieba.baidu.com/p/1843686383>, accessed: 5/10/2016.