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Chinese Environmental Law & Policy: A Return to Confucianism

by

Scott William Charles Lindsay

A Thesis

Presented to the Graduate and Research Committee
of Lehigh University in Candidacy for the Degree of
Master of Arts

in

Environmental Policy Design

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of Arts in Environmental Policy Design

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Date Approved

Dr. Frank Pazzaglia
For Dr. John Martin
Gillroy

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ABSTRACT

The purpose of this paper is to develop an alternative theoretical paradigm for developing environmental law and policy in China. The current paradigm that has been adopted is a Western Market Paradigm which has placed an emphasis on economic development over environmental protection. The present study will explain why the use of the Market Paradigm is an inadequate paradigm when creating environmental laws and policies and how it has contributed to the country's environmental degradation. In addition, a Confucian theoretical paradigm will be developed as alternative to the current model of environmental policy and law.

Introduction

China's economic growth in the past three decades has been the fastest among major nations, with a staggering 10% annual increase in gross domestic product (GDP). However, this rapid development has not come without cost, the country's environmental degradation has also accelerated, and its environmental sustainability index is near the bottom among the countries of the world (Chow & Kuai 2002, pg. 247-56). The emphasis on economic development has seen China endure extreme environmental hardships such as; algae blooms, chemical spills, and droughts. Two-thirds of China's 656 cities suffer shortages of water for domestic and industrial use, and pollution aggravates the water scarcity. China has 16 of the world's 20 cities with the worst air pollution and, along with, the world's highest rate of chronic respiratory disease; with a mortality rate five times that of the United States (Liu & Diamond 2008, pg.37-38). Air pollution is estimated to contribute somewhere around the order of 750,000 premature deaths every year. Half the population drinks water that is at least partially polluted and more than half of China's cities are affected by acid rain (Zhang & Smith, 2002).

In order to address these environmental issues China has established an impressive set of environmental goals and developed stringent laws. However, the forces of environmental destruction have overwhelmed protection efforts. For example, China has invested heavily in combating water pollution in one of its largest freshwater lakes, Taihu Lake. Although, the investment has been made by the government to protect the lake, the government has simultaneously permitted hundreds of factories to undo that investment by pouring pollutants into the lake resulting in algal blooms and lack of water for millions of people (Liu & Diamond, 2008 pg.37-38).

The reason for this continued environmental degradation is the Chinese Communists Party's adoption of The Market Paradigm. The Market Paradigm has resulted in environmental

policy and law institutions solely concerned with economic performances. This economic drive for wealth-maximization and continued GDP growth is emphasized in China's 11 year plan with the primary overarching goal of ensuring the expansion of the country's economy. The 11th five-year plan has been titled by many as the "get rich first plan"(Fan 2006, pg.708).

The present emphasis of incorporating China in a global economic market and achieving prosperity through wealth maximization has seen the environment spiral into a cataclysmic pit of epic proportions. The current path of environmental degradation is largely supported through consumerism and by multinational corporations using the country as a pollution sink, meaning as environmental regulations become more stringent in western countries and industries that are "dirty" have found it cheaper to outsource to developing countries such as China, where labor is cheap and few environmental standards are enforced.

The present argument is call for China's government to reject the Market Paradigm which has adversely impacted the health of the country's people and the natural environment, and to restore environmental equilibrium by a returning to the country's indigenous philosophical teachings of Confucianism, adapted as a paradigm for policy design.

I will argue that a return to the indigenous philosophical roots of Confucianism when creating environmental law will alleviate the current environmental degradation that China is enduring. The current environmental laws and policies which have been adopted from the Market Paradigm fail to adequately protect the intrinsic value of the natural environment. The shift to a Confucian Paradigm will achieve an added protection to the environment as the nature and humans are perceived as equals. The following legal philosophical transition will be accomplished by the development of a Confucian Paradigm using the formal template of policy design. In this process I will create a new definition of the individual, collective action problem,

state, principles, material condition, maxims and methodology. The final procedure will be to apply this new theoretical paradigm and connect the logic to the understanding of our duties to nature as argued by Confucius (Gillroy et al pg. 204).

The goal of re-implementing Confucius teachings requires a breakdown of the existing Chinese environmental law and policy design process and redesigning it in line with a Confucianism paradigm. The Confucian Paradigm is important in the environmental law and policy process as it demonstrates the need for a more ecologically sensitive policy system. This paper argues that the first few steps we should take are to learn from the experience of ancestral thought and values, to strengthen legislation and to increase efforts in policy advocating and education.

The Confucian Paradigm will alleviate China's current environmental degradation because it offers an ideological shift from an anthropogenic dominance over nature to one that views man and nature on an equal plane, further The Confucian Paradigm will force the government to act in accordance to what is morally correct in terms of humanity's relationship to nature and drive them to implement the environmental laws that not only serve humans but also the natural world. Most importantly, the Confucian paradigm will remove the Market Paradigm from control of policy decision-making correcting for its contemporary and historical adverse environmental impacts for China through a native Chinese philosophical argument. Confucianism being in line with Chthonic Chinese social convention, should make the transition more natural and therefore easier,

Environmental Policy & Design

In order to fully understand the present thesis environmental policy and design (EPD) must be clearly defined. EPD is a process of creating law through comprehensive policy argument that specifically addresses a dynamic and dialectic world, stressing context sensitivity, and the application of the appropriate paradigm in pursuit of well-argued and justified values. The priority of this approach is to be conscious of the fundamental philosophical presuppositions made by any policy argument about the human agent, the context of their collective action, the possible role of the state in public decision-making and the value placed on the natural environment (Gillroy et al 2008, pg. 3-7).

The EPD approach is a method for the morally driven lawyer to understand environmental law from a comprehensive philosophical approach. In order to achieve this Professor John Martin Gillroy has created a core model for policy design that uses Comprehensive Policy Argument (CPA). CPA is created with the intent of driving the evolution of a law through an integration of both scientific and philosophical ideas. This is unlike traditional policy design as it dialectically addresses both empirical and normative dimensions of law. What truly sets this Policy Design process aside from the traditional policy is that is not only concerned with how environmental policies *are* affecting nature but rather how policies *should* be affecting nature (Gillroy et al 2008, pg13).

This definition of environmental policy and design is reliant on the application of philosophical method to the creation of policy. The adaptation of systematic philosophical arguments for application as paradigms within EPD simplifies the uncertainty connected to the need to comprehensively take into consideration the complex logic of dialectic relations that is an environmental policy. This is done by utilizing pre-existing and logically integrated

philosophical systems like those of Immanuel Kant or Confucius, and adapting them so they can become fundamental, integrated, and systematic logics of concepts within EPD arguments. This is done by understanding them as a set of fundamental assumptions (about individuals, collective action and the role of the state), principle, and material conditions for principle, maxims and methods (Gillroy et al,2008 pg.9). Each paradigm, both that which has created the existing policy and the one deemed best to make changes in it, are then assessed for application to policy through persuasive argument made up of facts, value, and empirical evidence integrated through dialectic method. The goal of EPD is to understand a range of options open to policy maker which is as wide as there are distinct philosophical-policy paradigms for EPD argument (Gillroy et al, 2008 pg. 8-10).

The philosophical paradigm has a presupposition about the individual and what that individual's propensity to act may be. This individual's character is what drives this portion of the development process. Next the collective action process must be determined or what collective action problems exists. The role of the state then must be determined or the definition of its responsibilities in terms of justice and the law (Gillroy et al 2008, pg. 17).

The operating principle(s) is/are the imperative element of the policy design process, as it provides the core normative foundation for the policy argument that justifies the policy. This principle will be derived from the fundamental assumptions already defined. Material condition of the paradigm, which define those things the policy maker can manipulate to express the principle inherent within the paradigm. With an understanding of the material conditions of normative principle, one can define an administrative maxim that provides a shorthand for the manager when making decisions representing the paradigm, and a method that can act to produce policy built upon the fundamental assumptions and core principle, without the need to retrace

this paradigm deconstruction each time one wishes to use it (Gillroy et al 2008, pg. 17). (*See appendix A*)

With this notion the present study is concerned with the development of environmental law and the philosophical predisposition of the paradigm in which the law or policy was created. A policy design is an approach to analyzing and recreating law for the purpose of moving it in a new direction. In order to better understand the concept of environmental policy design and the functions of paradigms, a breakdown of how contemporary Chinese environmental policies and laws are developed is our next subject.

How Policy is created in China today?

The present government structure in the Chinese state is organized hierarchically into several territorial levels: center (or national), province, prefecture, county, and township and village. All governments below the center can be referred to as 'local'. In addition to territorial units, the state is composed of numerous government functional units (such as ministries and bureaus), which oversee efforts such as education, foreign affairs, and environmental protection. At the center, these functional ministries and commissions comprise the state council, which is officially the executive organ of the National People's Congress (NPC). The functional units at the center are replicated down through each of the lower territorial units. Therefore, a lower-level government such as a county government resembles a miniature central government in terms of structure and functions. It has chief executive (county magistrate), a county people's congress, and a county government with functional agencies similar to these comprising the State council. Distant from the provincial government or prefectural administration that oversees them, counties tend to possess a great deal of autonomy (Zhong, 2003)

Environmental Legislation is developed by the central government and thus implemented by the local governments. Environmental laws and policies formulated by the central government are implemented by local governments through a series of specific measures and programmers. This process is referred to as, "formal document"(quifanxing wenjian). It serves as an important channel in China through which policy information is transmitted downwards from the central to local governments (Ma & Ortalano, 2000).

With regard to environmental protection, the central government agency that oversees implementation and administration of China's environmental laws is the ministry of Environmental Protection (MEP). Akin to the Environmental Protection Agency in the United

States, MEP is among the twenty-seven government agencies that comprises the state Council. MEP performs a number of duties including formulation of national plans for pollution control. Traditionally, MEP has sought to achieve pollution control targets through the establishment of national environmental standards. These include ambient environmental quality standards for geographic jurisdictions, pollution discharge standards for industrial sectors, and technological standards for industrial production (Zhang & Xiang, 2011).

Over the last thirty years, China has made impressive strides in establishing a legal environmental infrastructure. China's environmental protection regime has gradually expanded, so that today it is comprised of approximately twenty laws, forty regulations, five hundred standards, and six-hundred other legal norms setting related to environmental protection and pollution control. In addition, there are roughly one thousand local environmental regulations (Beyer 2006, pg.185-211). China is also party to more than fifty environmental treaties (SEPA 2006). According to Beyer (2006,pg. 185-211), most subjects or activities generally considered to be within purview of environmental law have been covered to some extent in China by one or more legal norm-creating document. However, this begs the question: if China has such a sophisticated set of environmental laws and policies why has the country experienced such extreme environmental degradation?

Contemporary Chinese Market Paradigm

“I would rather cry in the back my BMW than smile on my bike”-Contemporary Chinese Proverb

The philosophical disposition of the Chinese policy maker is favored towards a western ideology of the Market Paradigm. The current Market Paradigm evolved in China during the Economic and Market reforms in the late 1970's. The reason for these reforms evolved due to the economic inefficiency in food distribution which was the leading cause of the famines in the 1960's. Further, Sino-Soviet relations had greatly deteriorated leaving China isolated economically and militarily. A new ally surfaced in 1972 in the form of the United States with Ronald Regan visiting China and offering support in the form of aid and more importantly in ideas leading China down the road of liberalized market reform (Lin et al 1996, pg. 211).

The adoption of foreign ideas in China has seen the country transition from a closed market approach to policy creation to one that has economics as the pivotal and end all be all. Some may argue that the transition to an open market economy has benefited the country as it has relieved China from an economic depression which saved many Chinese from starvation (Chueng 2004, pg. 3) However, it may also be argued that outside foreign elements were also to blame for China's deteriorating economy as many foreign country's had enforced trade sanctions against China for their continued support of the communist Soviet model.

Over the last 40 years China has opened the doors to Direct Foreign Investment and become almost a quasi-capitalistic market economy. In 2001, the inclusion of China in the World Trade Organization solidified the western notion of the Market Paradigm within China's political

culture. Many have welcomed the current restructuring of China's economy although there have been stanch adverse effects that must be immediately addressed or serious ramifications loom.

The adoption of a Market Paradigm in China has been a hindrance in the application of environmental laws and policies, as it is built on a normative foundation that cannot evaluate anything more than the instrumental economic value of the environment. The environment requires more than a mere concern for economic wealth generation; its non-use value needs to be at the core of a policy and law.

China's current priorities are centralized around the ideas of economic growth and prosperity. This dominant ethic of growth, expansion, and private wealth maximization, has caused China to conceptualize the environment as a source of resources and a receptacle for waste as the Chinese economy expands. From the market standpoint, the earth is merely a source of raw material that gives no utility to the consumer in its raw state. This perspective on the environment has develop a notion that the natural environment is devoid of any intrinsic value and possess the sole function of the environment is one of instrumental value (Gillroy et al, 2008 pg. 196).

This interpretation of the environment stems from the individual's detachment and perception that humans have dominated over the natural environment. Within the Market Paradigm the individual is considered nothing more than a self-interested person looking to maximize wealth. What this means is that the policy designer does not want to create a policy that would interfere with the individual's ability to maximize his or her own wealth. The individual character has evolved into one that is primarily concerned material possessions and wealth maximization.

In China, the individual has developed a palate for wealth and is primarily concerned with driving the country into an economic powerhouse, even if that wealth comes at the expense of the environment. This desire for material goods and wealth is displayed in the countries consumption index, which has been on a steady rise for the last 20 years. As a result China today is the world's 5th largest consumer of material goods and second in Asia (Young 2010, pg.23).

The Market Paradigm builds a collective level of organization with no distinct character independent of the individuals of which it is an aggregate. The purpose of collective action is primarily to establish just enough cooperation to satisfy the material interests of the most people possible "without force or fraud connected to trade" (Gillroy et al 2008, pg. 168). The current political structure in China would have an outsider believe that in a communist state, the collective action movement would be united to a common good. The reality that exists is that since the death of Chairman Mao, the collective action standing in China has been clouded and fragmented with the demand for individual wealth preferences. The ultimate goal and demand of the collective is material goods and wealth maximization, anything that deviates from the individual wants and preference is an impediment in the collective action process. The environment again in the collective action role has a secondary importance to the economic development in the country. This centralized communist institutional structure makes the market even more affective as the centralization can demand that it be used at all levels of decision-making.

The role of the state in China's market Paradigm is to create five-year economic and social plans. The recent trend for these plans has placed the onus on economic plans that have been primarily focused on GDP growth and wealth maximization. Population, environmental and

social issues have been part of the plans although have not been adequately implemented. The growth of GDP is the overarching goal and anything that impedes in economic growth becomes secondary or is all together ignored. The social issue and the environment are mentioned in the newly proposed five-year plan and have been stressed although have been forgone in the wake of economic development.

The operating principle which drives the policy maker in a Market Paradigm is Kaldor efficiency which aggregates personal costs and benefits in order maximize collective wealth. It is indifferent to wealth distribution within society (Gillroy et al 2008, pg. 72). In a communist socialist structure it would be assumed that China would be a society that is concerned with the equal distribution of wealth, when in fact the adoption of a market paradigm has seen the contrary evolve. The material condition which is what the policy-maker may manipulate in order to make these principles manifest themselves is wealth. For the market in China the primary material condition is wealth which may be defined in ways including, resources, property, and possessions.

The maxim in The Market Paradigm gives the decision-maker but one priority: maximize wealth. The Chinese government has empowered this ideal through the weak implementation of environmental policies and laws in the face of economic interests. The onus for China and the current administration is to maximize wealth, even if it comes at the expense of the natural environment. The methods that are employed to realize a condition of efficiency is the methodology of Cost-Benefit Analysis (CBA). The methodology is very simple and allows the decision-maker to easily interpret the impacts of a policy. The process of using CBA places instrumental and monetary value on environmental goods. For example, an equation is developed

in order to evaluate the ecological impacts such as cost of a water pollution or deforestation and then places a value or price for such accounts.

In adopting a Market Paradigm has opened China's market allowing them to be included into the WTO and created a very strong economy. However, the transition economy has not come without a cost; the environment has suffered tremendously and continues to deteriorate at a rapid rate due to the growth and development. The current environmental laws and structure are failing to adequately protect China's population and natural environment. The failures in the system must first be determined in order remediate them and implement a new way of developing policy.

Why China has experienced Environmental Degradation?

“Most environmental policies are too complex, long term and deeply enmeshed in competing economic interests to be effective” (Wilson 2012, pg.2)

The purpose of this section is to examine the main reasons for the ineffectiveness of the environmental regulatory regime in The People’s Republic of China. The basis for the ineffectiveness of environmental protection in China stems from the use of the Market Paradigm. The historical disposition of the Chinese legal system has opted to guide social behavior and conventions through using customs rather than by formal laws (Cohen 2003). However, this historical approach has been challenged through China being integrated into a global society with which it has decided to compete. Foreign Direct Investment and multinational cooperation’s have had adverse impact on the Chinese natural environment, in the form of transferring dirty industry to a pollution havens in order to circumvent tough environmental laws at home (Song & Wen 2008, pg. 244).

The development of environmental regulations in China was influenced by the economic reforms of the 1980s and the increased openness to foreign ideas. Many of the policies that have been developed were modeled on those of other western countries. For example, China’s national water quality standard and environmental impact assessment process drew largely from the United States laws, and the systems of pollution discharge fees was based on experiences in France and Germany (Sinkule & Ortolano, pg.10).

China has a sophisticated set of environmental regulation and laws that have been refined and developed over the last 40 years. With that said the formal legislation has hardly been implemented, resulting in less than effective pollution control. One of the growing dialectics is the relationship between the center and the periphery, which has been complicated by

enforcement tensions as states are decentralizing and sense of autonomy is growing. The local government officials in order to entice cooperation's to set up shop in their regions significantly lower environmental standards or all together forgo them. This has obvious adverse impacts on the local environment and the people (Sinkule & Ortolano, pg.10).

The growing dialectic that has evolved from the relationship of enticing Foreign Direct Investment (FDI) into China's different regions' stems from multinational cooperation's looking to do business at the lowest possible price. With China adopting the Market Paradigm, multinational companies are sanctioned to operate using wealth maximization and cost-benefit analysis. This philosophy has driven Chinese local governments to lower environmental standards into order to ensure cheap operating conditions for the companies. To further ensure that local officials are promoting healthy profits, multinational cooperation's make the local official a major shareholders of polluting enterprises creating an inherent conflict of interest when authorizing environmental laws and policies (Ma & Ortolano 2000, pg. 63).

The fact that local governments very often sponsor or own industries themselves and consider environmental regulations to be incompatible with economic growth makes it difficult for environmental protection bureaus to enforce the laws and policies. The common practice for environmental issues to be resolved is through personal relation or arbitrary means. The fees and fines are rarely determined authoritative; instead, they are often negotiated and fall far below the cost of damage that the harmful activity has caused, as well as below expenses for pollution control facilities (Ma & Ortolano 2000, pg.76-78).

The dialectic between reaching the environmental standards and economic gains is a major factor in environmental standards being forgone in China. As Xioaying Ma explains in His book *Environmental Regulation in China*, EPB officials are not willing to impact an industry's

economic gain by imposing the environmental laws and policies. The following section was taken from a local Environmental Protection Bureau official:

“The economic and technical conditions of the industry are very difficult. They use all kinds of treatment equipment...but effluent is still very high...So you can see the situation is very difficult... This is a headache for me because there is no way they can meet the waste water standards.” The EPB staff member felt it would be unreasonable to require enterprises to incur high cost of renovating their production and treatment facilities in order to meet the water quality standards (Ma & Ortalono 2000, pg. 91) .

This interview indicates that China has adopted a Market Paradigm when enforcing environmental laws , as a cost benefit analysis was incorporated in the enforcing standards and the onus was placed on wealth maximization, rather than the protection of the environment and the general population.

Ancient Teachings to offer Contemporary Solutions

Direct transfers of western environmental policy models and laws are unlikely to succeed in contemporary China. Environmental solutions rather ought to focus on Chinas existing institutional framework and pulling from the ancient philosophical teachings of Confucius. The continuing assault on the natural environment in China has awakened many concerned parties that corrective action is needed to halt the degradation and threat of anthropogenic climate change. In order for such actions to be truly effective, a new paradigm and renewed understanding of how policy is created must be developed. The dialectical relationship between economic developments⁴⁵ and environmental protection is imperative to the present discussion. With the current paradigm, for developing law and policy, significantly balanced toward the former, a new or renewed philosophical paradigm must be constructed that rebalances the dialectic toward the ecological processes that sustains all forms of life.

The exploitive nature of the Market Paradigm is something that is very new to the Chinese culture. The philosophical disposition of the general public has been quickly shifting from that of a Confucian basis to a very western market one. Material wealth and possessions have become imperatives in to the individual consumer in China. This vision of reality focusing exclusively on humans as the crowning point of nature and wealth as the imperative to strive for, has had drastic impacts on natural entities. The earth and its plethora of diverse species has become secondary to the importance of human beings, know not only in western culture but also Chinese.

The anthropocentric view that humans are the utmost importance and are to be masters of nature stems from early western biblical scripture. This religious legacy has left humans concerned not with our interactions with nature but rather other humans. This ideology of

suppuration and being above nature makes exploitation of our natural environment very easy. The individual has very little regard for the moral basis for the exploitation of the nature environment and has quickly dispelled any cause for concern when nature is adversely impacted. In the search for economic profit humans have lost sight of the fact that we are disrupting the very sources of life we live in harmony, excessive cultivation, pesticides, air pollution and resource extraction. This aggressive pursuit of progress may very well be undermining the very survival of the human species (Tucker 1991, pg. 55-69).

The solution to the current environmental degradation may lie in the ancient teachings of Confucianism. The teachings of Confucius have largely been the foundation for legal thought and the impetus for social order for the better part of two centuries in China. Confucianism is unique in the sense of establishing order not through rules and regulation, but rather the cultivation of the individual to act towards a moral cohesion. This paves the way for a vastly unique and different breakdown of the decision-makers interpretation of a CPA.

Alternative Approach to Environmental Law

By Confucian Paradigm, I mean a systemized and integrated line of argument for policy design developed from a particular set of principles, assumptions, and methods that focus on the value of a harmony between humans and nature to environmental law (Gillroy et al, pg.202).

I will argue that a return to the indigenous philosophical roots of Confucianism when creating environmental law will alleviate the current environmental degradation that the China is enduring. The current environmental laws and policies which have been adopted from the Market Paradigm fail to adequately protect the intrinsic value of the natural environment. The shift to a Confucian Paradigm will achieve an added protection to the environment as the nature and humans are perceived as equals. The following legal philosophical transition will be accomplished by the development of a Confucian Paradigm for policy design using the formal template of policy design. In this process I will create a new definition of the individual, collective, state, principles, material condition, and maxims. The final procedure will be to apply this new theoretical paradigm and connect the logic to the understanding of our duties to nature as argued by Confucius (Gillroy et al pg. 204).

In order to provide critical argument for the analytic component of Comprehensive Policy Argument (CPA) in terms of how the market approach to environmental law is inadequate, and then move to a synthetic and constructive argument on how the Confucian Paradigm is necessary in order to protect the environment. The following chapter explains the Confucian interpretation of nature, followed by Confucian Paradigm constructive argument, concluding with the fishery case study.

Confucian Interpretation of Nature

The Confucian philosophy is distinguished by its concern for the cultivation of human relations towards a harmonious society rather than one's relations with the supernatural or natural. However, it would be a mistake to regard the civilizational legacy of Confucius as purely humanistic. Confucianism is a philosophy which also contains profound environmental ethics through its inclusiveness of Heaven, earth and the Human order. These form the traditional Chinese trinity which configures the ultimate harmony. This harmony does not understand the individual as an isolated, rational actor. The person is distinguished through their harmony or relations with others and the environment. Relations between people and the natural world are therefore of intrinsic interest to those who profess Confucian ethics because in order to learn how to live as a harmonious individual children must learn through the actions of others (Tang 2008, pg.9).

The Confucian thinker characteristically regards nature itself as holistic, all things in nature depending on each other and forming an organic whole. They also consider human beings as part of nature, an existence within it, emphasizing, that people and nature are closely bound in a harmonious, not built on a conflictual or detached relationship. All things exist together, and they do not do harm to each other; all ways exist together, and they do not come in to conflict. This is the distinguished feature of Confucian ecological ethics: it does not give humans dominion over nature, nor does it sacrifice human development at the altar of pristine nature. Confucians maintain the ones of humankind and nature, the harmony and unity between the two (Tang 2008, pg. 15).

To act according to the requirements of nature in preserving and perpetuating itself, and to economize in the use of natural resources, are essential commitments in Confucian ecological

ethics. Humankind's knowledge of protecting and making rational use of natural resources originated from the agricultural policy of ancient China. According to historical records, Emperor Yu had a clear awareness of the need for ecological protection. He gave the order that: " In Spring, wood choppers could not be used in mountains forests so that bushes and trees can grow; in summer dense fishing nets could not be used in rivers and pools so that fish and tortoises can grow (Berthrong & Tianchen 2003, pg.90)."

Hence Confucians maintain that human beings should control and restrict their desires, so that natural resources can be rationally exploited and utilized, and their production and consumption kept in balance. Confucius himself resolutely opposed the misuse of resources. Confucius thinking asks rulers to control and restrict their material desires, make rational use of resources. Confucius thought understands the importance of other species to human beings. The simple rule is that society's productive activities must benefit the development of the environment, for when the environment develops so does the productivity of humans (Tucker, 1991, pg.65).

The reality in our times has provided that people have greater interest in ruthless exploitation of natural resources which have greatly damaged the natural environment, to the point where human kind is in dire need of environmental morality. The Confucian paradigm and the emphasis on human self-cultivation to act morally provide the values in order for the environment to be properly protected.

Confucian Paradigm

To create a Confucian Paradigm I will utilize the generic paradigm template of policy design organizing the fundamental assumptions, principles, material conditions of choices, maxims, and method of a Confucian Paradigm as was done for the Market Paradigm. However, I will introduce new content to reflect the requirements of taking a Confucian perspective on the natural environment (Gilroy et al 2008, pg224).

1) Template- Stage I: Fundamental Assumptions- Confucius, Individuals and Nature

a) Individual

For the Market paradigm and its foundations in classical economics, the individual is a rational consumer with wealth preferences. Within a Confucian Paradigm, the analyst needs to respond to an individual who is more than a self-interested person concerned only with satisfying wants and needs. The Market Paradigm fails to take into account that the individual acting upon self-interest may have consequences on other's, therefore failing to adequately protect other individuals and nature. This idea of autonomy is one that does not resonate with the Confucian individual, as she or he is operating under the assumption that all humans and nature are connected and each individual action serves a greater common purpose for the betterment of the collective.

The Confucian individual is one that is believed to be created equal among all others who are all search of a moral truth. This search, for moral truth, is a journey that is found or enlightened through self-cultivation. The self-cultivation process is understood through formed relationships and from others acting in a virtuous moral manner. Confucius emphasis the idea

that humans are social beings who are driven to act by what the set of social conventions society has created to follow.

The relationship the individual has with nature means as much an integrative effort to learn to live harmoniously in one's natural environment as a modest attempt to use the environment to sustain basic livelihood. The idea of exploiting nature in a Confucian Paradigm is rejected because it is incompatible with the Confucian concern for moral self-development. The compatibility and interconnectedness of human moral development is one that is balanced with nature. As Chang Tsai's explains (Tianchen 2003, pg. 4):

Heaven is my father and Earth is my mother and even such a small creature as I finds an intimate place in their midst's. Therefore that which extends throughout the universe I regard as my body and that which directs the universe I consider as my nature. All people are my brothers and sisters and all things are my companions.

The purpose of the individual and his/her relationship with the natural environment is to develop a relationship in which they are intertwined. Humans are not manipulators and conquerors of the natural environment but rather companions to it. Confucius views individuals not only as possessing ultimate control over their own choices and behaviors but suggests that individuals conform to rules and conventions to act collectively towards a greater common good (Chan 1997, pg.108).

b) Collective Action

A Market Paradigm presupposes that the individual is a rational economic actor who seeks to take self-interested personal advantage of the environment to the greatest degree possible and who do not influence each other's decisions making in morally significant ways. Thus, a single individual's restraint towards acting in favor of the environment shall be exploited

by others, which makes unilateral restraint not only irrational but will not aid the environment from being overexploited and experience degradation.

The Confucian Paradigm perspective challenges this view. First, and most importantly, the Confucian philosophy does not recognize or understand the individual as an isolated, self-interested actor. Instead, the Confucian self is defined relationally through their interactions built with others. According to Confucianism, we as individuals learn how to act morally and within a community with other's first through our family. Through families children witness and learn how to be generous, virtues and respect one another. Children also learn to understand that they are themselves part of an integral part of a human community, where their actions not only have material consequences, but also symbolic meaning (Hourdequin 2010, pg463-64).

The Confucian paradigm anticipates the collective action to be lead through individual's leading one another through virtuous behavior. Confucius believes that moral models have magnetic power, and virtuous individuals can affect moral reform through their actions by inspiring others to change themselves (Confucius, 1992: pg. 12).

The collective action problem in a Confucian Paradigm is to get the individual to act towards a greater common good. The strategic situation is therefore not a polluter's dilemma, but rather an *influence game* in which each citizen is assumed to be provided with values and conventions in which to act and through these actions poses the ability to influence others to act in moral accordance. The greatest fear of the influence game is that the individuals are not provided with the adequate education or information that may lead them to act towards the common good.

The ordinal preferences of each player are:

Influence Game

- 1- Best Universal cooperation/ Unilateral Cooperation (Best)
- 2- Universal Defection-(lack of education or direction)
- 3- Third Unilateral defection-(lack of education or direction)(Worst)

The Preference and Rational Logic of an Influence Game

The hierarchical structure of the influence game is designed so that the best universal cooperation and unilateral cooperation are the best case scenarios. The actions of the universal cooperation and unilateral cooperation are compared in tandem as Confucian thought believes that “there are ways in which so-called ‘unilateral’ actions by individuals can influence other individuals not to pollute or take advantage of the environment, but to see restraint of others as a model for their own exercise of restraint (Hourdequin 2010, pg.54)”. Universal defection is not the worst scenario as it explains if universal defection occurs it is not the fault of the individual but rather a lack of education or guidance for the collective to act morally. Lastly, the worst case scenario is that of unilateral defection the Confucian Paradigm has placed this as the worst case scenario as it goes against the foundation of the philosophical belief that all humans are connected and that our actions effect society and nature as a whole. This foundation that the individual is connected to all other individuals socially is the basis for them not to support environmental degradation. In acting self-interested and autonomously, like in Market Paradigm, creates an avid detachment from ones surroundings and society at large making degradation a unilateral decision that bears no cost on oneself.

As Marion Hourdequin explains:

The Confucian model is instructive because it asks us to recognize the possibility that persons need not-and many do not- see themselves as rational economic actors, making decisions based only on a preference structure that stands

independent of social consequences or other's values and decisions. If persons are constituted relationally, as Confucians suggest, then one's individual's actions cannot be treated as independent of other's, and one's personal actions cannot be understood in isolation from social meaning (Houderquin 2010, pg.456).

c) The Role of the State

The role of the state in China's market Paradigm is to create five-year economic and social plans. The recent trend for these plans has placed the onus on economic development that have been primarily focused on GDP growth and wealth maximization. Population, environmental and social issues have been part of the plans although have not been adequately implemented. The growth of GDP is the overarching goal and anything that impedes in economic growth becomes secondary or is all together ignored. The social issue and the environment are mentioned in the newly proposed five-year and have been stressed although have been forgone in the wake of economic development. "From the standpoint of the Market Paradigm the state, or any allocation institution, has only two functions: to create five year economic plans and to provide a surrogate exchange system that can step-in when markets fail and allocations cannot be made without the involvement of the state as a collective third party (Gillroy et al, pg.228).

However, for a Confucian Paradigm, the state is not predisposed to only economic matters but rather is existing to regulate ways that solves the influence game and contributes to educating so that there may be harmony between humanity and nature. The state is therefore defined as the body that creates the institutions and regulations providing the moral education of its citizens. This process requires that the state is in support of public interest and encourages cooperation and harmony among humans and nature. This responsibility bestowed upon the state is to empower individual's to act in cooperative moral manner, in failing the state will be responsible for the influence game floundering and runs the risk of destabilizing the society.

It is important to note that the Confucian Paradigm does not recognize the state as merely a conduit for providing coercion for social reform. Although coercion may be successful route for keeping individuals out of trouble, it does not successfully accomplish change in the form of transforming minds and actions to adequately protect the natural environment.

In the Chinese context, the Confucian point bares this; while the government may provide carrots in the form of economic incentives, and sticks, in the form of laws and regulations, to abate the environmental degradation, such top down measures are only a fraction of the solution. If the people do not recognize the need to protect their environment from degradation, the effectiveness of such efforts will be unstable or limited (T.N. Jenkin 2002, pg. 39-52).

2) Template-Stage II: Principle & Material Condition

a) Operating Principle

“Defining a rational or practical policy requires core operating principles to form the basis of the policy imperative for the decision- maker, and the creation of techniques or methods that the policy-maker can easily use to apply these principles to practical decisions (Gillroy et al pg.229).” For the Market Paradigm, the protection and facilitation of each person’s voluntary economic trade is of prime concern. The principle of Kaldor efficiency does this by supporting the maximization of aggregate social welfare (Gillroy et al pg.229). For the Confucian Paradigm, the operating principle is *harmony between humanity and nature*. The fundamental assumption and goal of the decision-maker is to understand that within a society and on Earth all things are created equal. The understanding is fundamental that humanity and nature are dialectically intertwined and that individual rights and the collective interest are balanced with the well-being of the natural environment. The state is also attempting to protect and uphold the balance of this relationship with a moral value to protecting the natural environment.

b) Material Condition

Operating principles require material conditions that the decision-maker can manipulate to make normative value practical in the lives of citizens. In the Market Paradigm, the sole material condition of the principle of Kaldor efficiency is tangible property or wealth. The Confucian Paradigm, emphasizes between harmony of humanity and nature of natural things that are to be protected and empowered by the freedoms, property, and use of natural resources.

The decision maker may manipulate the following material conditions in order to uphold the operating principle of harmonious growth between humans and nature. These conditions include freedoms, property and natural resources used. The operating principle may be empowered and protected through (1) limiting negative *freedoms* such as the self-interested choices of the individuals. For example, the Market Paradigm solely recognizes the choice of the individual to act in a self-interested manner by using fossil fuels at an unregulated rate. The abundant and heavy individual use may be conceived a negative freedom as it may have significant impacts on the health of other individuals, the environment and future generations. (2) *use of public and private property* space in a responsible manner that does not impact the well-being of other individual's and the environment. (3) *Resource use* the idea of the commons is important to be adequately protected so that resource such as water and fossil fuels are properly and resourcefully allocated when used.

3) Template- stage III- Maxims & Methods

a) *Maxims*

The operating principles of harmony, righteousness and all things are equal along with the material conditions it defines, can help the decision maker distinguish which policy alternatives are acceptable to the CPA and which are not acceptable by defining the maxims of decision-making that will inform his choice. The Market Paradigm has but one maxim for the decision-maker: maximize wealth! The Confucian decision-maker will have the maxim: *Protect the harmony of humans and nature so they may flourish as equals using the ideas of sustainability and reciprocity!*

The maxim that most motivates others to action are the notions of sustainability and reciprocity. The idea of sustainability stems from the Confucian teachings of filial piety in which all are expected to treat nature with respect for those that have already passed, which is a different interpretation of the western world in which we define sustainability as a protection of the earth so that future generations may meet their needs . This brings into contention the second operating principle of *reciprocity* “do unto others what you would not have them do unto you”. The philosophy of reciprocity has not only a human moral element but also takes into account for the intrinsic value of the environment. The idea of *sustainability* begins to arise with this notion meaning that in mistreating the natural environment presently may impact future generations and that reciprocity is generational in theory. This meaning those current generations are obligated to act harmoniously and responsibly with the environment for future generations.

b) Methods

In the Market Paradigm, CBA is the decision-making tool necessary for implementing the maxim to maximize wealth, which is derived from the principle of Kaldor efficiency. This involves assigning monetary values to the various cost and benefits associated with an existing or proposed policy, and calculating the difference between the aggregate costs and aggregate benefits so that a law that maximizes the net monetized benefits can be selected or designed. The Confucian paradigm requires but one tool necessary for implementing the maxim of harmony of humans and nature so they may flourish as equals and that is *education*.

The tool of education is imperative on all levels of the present paradigm as education may bring in a policy process which generates long-term fundamental changes. Effective enforcement of environmental policies and regulations relies on the awareness and compliance of the majority of the population. The lack of knowledge of particulate matter released in the environment, deforestation, water pollution or the heavy use of fossil fuels may lead to unknowing damages to the natural environment, thus not allowing the individual, collective or the state to properly react to the environmental issue at hand, which ultimately deteriorated the operating principle of creating harmony between humans and nature.

Chapter 9: The Case of Ancient Chinese Fisheries

The current marine ecosystems in China are in grave trouble, largely due to the failure of fishery resources management. The purpose of the following section is to display how a paradigm shift away from the traditional Market based policies to an ancient Confucian teachings, may help solve the marine ecosystem degradation. The ancient Chinese had been very enthusiastic about the sustainable utilization of fisheries resources and natural balance of fishery development. They developed numerous rigorous policies and regulations to guide people to act on natural laws. The reason for these policies being a success drew largely from the voluntary participation of public at large, in resource management. The willful participation has been attributed to the people's consciousness of ecological conservation which derived from the teachings of Confucius. The Confucian classical teachings have the core principle: *Nature and Man in One and all things are equal*. The present Chinese fishery management may be able to apply and learn from the ancient Confucian thought and practice, by strengthening fishery legislation and fully stimulate public voluntary participation in marine fishery resource conservation (Li Ying 2011, pg.12).

The ancient Chinese philosophy may be argued to be more forward looking than the modern use of market models. The Chinese ancestors caught, gathered and used very few?? natural products. Policies and regulations on restricting use of natural resources and implementing strict, unified management of public properties were formulated by almost every ruler during each dynasty, and the majority was enacted as law. These teachings of Confucius which harmonized man and nature were born in social conventions which had been passed down for thousands of years.

During this period, there were a lot of policies and regulations on fishery resource conservation, including :

- c) Bans on fishing young or pregnant aquatic animals
- d) Bans on unseasonable fishing
- e) Bans on poisoning aquatic animals
- f) Bans on damaging waters
- g) Bans on over fishing.

This ancient law stems from the philosophical teachings of Confucius that have been an integrate part of Chinese fishery law for 5000 years. These laws are a direct outgrowth of a foundational ideology of sustainability and resource management.

What these laws demonstrate is that ancient China was a country that governed with laws that were combined with morality. In ancient times, Chinese ancestors paid great attention to constituting stringent and detailed legal systems to promote fishery management. These leaders were aware of the impacts that unsustainable practices and overexploitation may have on the natural environment. In comparison, current fisheries management is weaker in governments' emphasis and people's voluntary participation. Contemporary China is lacking in a rigorous all-round legal system on fisheries because they are more concerned with continuing to maintain economic growth and development in the market than actual conservation measures.

The need for comprehensive laws and policies that have moral foundation of sustainability and conservation at their root is imperative to protecting China's natural environment. The current status-quo of pushing forth economic gains is a relatively new phenomenon that derives from the foreign philosophical invasion of the Market paradigm. In order to adequately protect China's fisheries, a retreat to the philosophical teachings of Confucianism will best serve nature and man.

Conclusion

China has endured an onslaught of environmental degradation in the wake of the current economic transition. The Market Paradigm adoption by the Chinese central government has seen China's natural environment experience unprecedented exploitation. The current argument is a call for the current Chinese government to reevaluate the legal policy design used in creating and implementing environmental law and return to the indigenous teachings of Confucianism, in order to alleviate the environmental and social hardships endured due environmental degradation. The current need for a new paradigm is evident in China as the environment is in an ever precarious state where humans and nature are becoming detached. To retreat to The Market Paradigm may push China towards complete instability eventually collapsing one the longest lasting societies in modern human history. In order to restore this harmony between Humans and nature a Confucian Paradigm in legal design is required. The future of China and possibly the globe depends on China resolving the environmental problems and may be able to offer the rest of the world a system in which humans and nature may flourish in tandem.

Appendix A

Individual	Collective	State
Principle(s)		
Material Condition		
Maxim		
Methods		

(Gillroy 1996)

Appendix B

The Market Paradigm

Individual Self-interested	Collective Cooperate for material self interest	State Create Economic Plans
Principle(s) Kaldor efficiency		
Material Condition Wealth		
Maxim Maximize Wealth		
Methods Cost Benefit Analysis		

Appendix C

Eco-Confucian Paradigm

Individual	Collective	State
Self-Cultivating Journey To Act Morally	Influence game	Virtuous State -That Leads By Example
Principles Harmony between Humanity and Nature		
Material Conditions (1) Freedoms (2)Property (3)Natural resources		
Maxims Sustainability Reciprocity		
Method Education		

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