

China's New Consumer Class:
Environmental Implications and International Significance

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Abstract

Motivated by a concern for Chinese citizens who have no choice but to live with the consequences of environmental deterioration, this paper provides policy recommendations to reconcile China's promotion of a domestic consumer economy as the basis of future economic growth with its pressing environmental concerns. By analyzing publications and qualitative research in economic development, environmental studies, and consumerism in conjunction with statements released by the Chinese government, this paper examines the implications of a growing domestic consumer economy. Previous research has centered on China's high-end consumption, yet middle and even lower class citizens desire material goods as a means of improving their social status relative to their wealthier peers. Eventually, 1.3 billion Chinese consuming by Western standards will engender disastrous environmental consequences on a domestic and international scale. Furthermore, China's influence in the developing world presents a critical juncture: an alternative paradigm of economic development must be implemented before additional countries follow China's environmentally destructive method of development.

Introduction

Economic growth in China is important for a number of reasons. For the Chinese Communist Party (CCP), legitimacy rests on the ability to create the conditions that have allowed the economy to flourish and the people to prosper (Shue 46). For Chinese citizens, they are entitled to the same standard of living that citizens of industrialized nations have been enjoying. In light of the Great Recession, developed nations such as the United States have come to see China's continued economic growth as a benefit to the entire international system.

The challenge with China's economic growth is that it has come at the expense of the environment.¹ The Chinese government's advocacy of a domestic consumer economy will only further aggravate the myriad of environmental challenges facing the country. Continually prioritizing economic growth regardless of the environmental consequences has the potential to derail the benefits that economic growth has created. Water and air pollution-related illnesses have affected the lives of countless citizens and have caused inefficiencies or delays in agricultural and industrial production (Economy 275-6).

While growing concern over China's long term economic growth has steadily gained momentum, there has been little scholarly analysis of the direct relationship between material consumption of goods and environmental destruction in China. In 1998, Chinese policymakers acknowledged the untapped potential of their domestic market (Croll 1). Since then, advocating for an increase in domestic consumption has steadily gained prominence in statements released by the CCP. In 2006, the 11th Five-Year Plan boldly stated: "we will promote development by relying on the expansion of domestic demand, take the expansion of domestic demand, especially consumption, as a major driving force" ("The 11th Five-Year Plan").

Chinese policymakers have continually called for an increase in domestic consumption because it is seen as the key to sustaining economic growth rates necessary to maintain social stability and the current regime's legitimacy to govern; however, the increase in consumption of material goods and the resulting increase in demand for natural resources such as water will worsen the already-existing environmental problems and scarcity of natural resources such as water.

¹ In the context of this paper, "environment" refers to the physical landscape of the Earth. For more information on the distinction between "environment" and related words such as "nature," see p. 8 in Robert Weller's *Discovering Nature: Globalization and Environmental Culture in China and Taiwan*.

Consumption presents a problem to the environment because it is not just the exploitation of natural resources that harms the environment, but also the process of production that lead to environmental degradation. Society can no longer conceptualize consumption as the mere purchase of goods and materials; rather, “consumption consists of human and human-induced transformations of materials and energy. Consumption is environmentally important to the extent that it makes materials or energy less available for future use, moves a biophysical system toward a different state or, through its effects on those systems, threatens human health, welfare, or other things people value” (Stern 20).

Aside from the act of consumption itself, it is also important to consider related factors. In the United States, consumption is environmentally harmful predominantly because “waste flows are substantial and are dominated by the by-products of the manufacture of commodity materials and energy; post-consumer waste flows are relatively minor in comparison” (Allen 46). It is safe to say that China’s manufacturing facilities also produce waste flows. Moreover, consumption and its effects extend beyond individual consumers. Governments, corporations, military organizations, services, investment, and producers all share part of the responsibility (Stern 18, 21-2).

In theory, the Chinese government is supportive of environmental protection and conservation. In practice, however, “the local environment bureaucracy usually must respect the county government’s need to show economic growth” (Weller 118). This practice has become engrained into China’s civil society, and the lax enforcement of environmental protection has led to a lack of trust and accountability in the regulatory system.

Motivated out of a concern for China’s environment and the citizens who have no choice but to live with the environmental consequences of such policies, this paper seeks to examine

issues of economic development, consumption, social welfare, and the future of the economy in China with the specific intent of developing policy recommendations to address how the Chinese government can balance the promotion of material consumption while slowing the rate of environmental destruction to pursue a more sustainable economic development policy. The Chinese government must simultaneously address two issues: the need for economic growth and addressing environmental concerns. This paper details these two pressing problems and provides policy recommendations to resolve the impending crisis.

The critical issue that must be resolved is the promotion of a robust domestic consumer economy as the basis for future economic growth. This paper seeks to answer the following questions:

- 1). What are the environmental consequences of the Chinese government's policy to promote domestic consumption as a means of economic growth?
- 2). How can the Chinese government balance economic growth and environmental concerns to pursue a more sustainable economic development policy?

The related hypotheses are as follows:

- 1). An increase in domestic consumption will lead to negative consequences for the environment.
- 2). A more sustainable model of economic development will require reordering of priorities: less focus on economic growth and greater attention to environmental concerns.

In this context, I situate myself as a global citizen concerned with the welfare of Chinese citizens and the international state of the environment. I am neither an economist nor an environmental scientist, but I do know that there exists a critical need to study the

aforementioned research questions. This paper is an exploratory attempt to resolve the contradictions between a need for economic growth and the extensive environmental damage that I witnessed while in China and is both a personal exploration as well as an academic study.

The interconnectedness of the physical environment to economic growth and the state of human welfare demands a holistic perspective in analyzing the situation: to discuss China's environment without addressing the economy is pointless. The reverse also holds true because each is constrained by the other. Without exploitation the environment there would be no economic growth, yet the condition of finite natural resources sets a limit on economic development.

Given the complexity of the situation and the necessity to satisfy the needs of multiple actors, I wanted to formulate realistic policy recommendations that can resonate with the Chinese government, Chinese citizens, and the international community. From my current prospective, these policy recommendations appear to be the most viable, though it is fully possible that future events, research and analysis will render this study irrelevant.

Research Methodology

This paper is based on qualitative analysis of scholarly works, articles from periodicals, and professional publications in the fields of economic development, environmental studies, consumerism, and social welfare. In addition, statements from the Chinese government have been sourced from their website and news media that effectively function as mouthpieces of the government.

It is important to note that while statements from the Chinese government were utilized in this paper, research and analysis conducted solely by the Chinese government were not utilized

because of concerns about the objectivity of such documents. A report coauthored by The World Bank and China's State Environmental Protection Administration was cited in this paper; the influence of an internationally reputable organization such as The World Bank served as a legitimizing factor.

Due to various constraints, it was not feasible to conduct a survey or a case study. While a survey or case study provided meaningful insight, the nature of the research questions and this study were designed to work around this obstacle.

Because China's economy is developing at a breakneck pace, it was at times difficult to stay abreast of unfolding events. Periodicals and web resources tended to provide the most recent statistics on China's economy and the environment.

Review of the Literature

This paper is built upon significant analysis of academic works and professional publications on topics in consumerism and consumption, economic growth and development, as well as China's economy and environment.

Any study of consumerism starts with Thorstein Veblen's explanation of the psychological and social factors that encourage a society to consume beyond its material needs, as detailed in his work *The Theory of the Leisure Class*. Veblen defines the term 'conspicuous consumption' as the consumption of material goods with the purpose of demonstrating one's financial wealth and social standing. The prevailing level of consumption of material goods within a particular social grouping is central to determining the level of consumption of each individual; therefore, humans are deeply influenced by the consumption patterns of individuals who belong to groups of comparable social status (83-4, 111). The need to display material

wealth is also characterized by its constant counterpart, conspicuous waste. Veblen views waste as the consumption of goods in excess of basic material needs and it is this conspicuous waste that presents one of the most challenging problems our contemporary society has yet to resolve.

In contrast, Paul C. Stern's "Toward a Working Definition of Consumption for Environmental Research and Policy" sets consumption of material goods in a contemporary context. Stern puts forth the most detailed and comprehensive definition of consumption yet: "Consumption consists of human and human-induced transformations of materials and energy. Consumption is environmentally important to the extent that it makes materials or energy less available for future use, moves a biophysical system toward a different state or, through its effects on those systems, threatens human health, welfare, or other things people value" (20). Stern calls for an expansion of the range of activities that are considered to be consumption. He suggests that a more holistic understanding of consumption, and add that "The most environmentally significant choices are not those that householders make, such as to purchase and then use consumer technologies, but the purchase and use choices of organizations, and organizational choices about how technologies that affect the environment are designed, produced, distributed, and marketed" (18). Stern adds that beyond individual consumer purchases, organizations, military expenditures, public services, and investment can all have significant environmental impacts depending on the nature of such activities (21-22). In spite of the increase in activities that can contribute to environmental destruction, Stern suggests that "green consumerism" can lead to positive environmental consequences (15).

Many contemporary studies of consumerism have pointed to the rise of green consumerism to demonstrate the positive outcomes that an informed citizenry can engender. However, the majority of literature has failed to scrutinize the how and why of consumerism, as

Thomas Princen, Michael Maniates, and Ken Conca suggest in the “Confronting Consumption” (2). Instead, society as a whole has chosen to address the aftereffects of a mass consumer society primary through efforts that reinforce our addiction to consumption: recycling and “responsible shopping” (2). At no point has the middle class consumer culture been reevaluated or questioned, and even multiple fields of academia have failed to address the root causes of consumerism in part because of the overwhelming acceptance of modern economic theory as an infallible social science (9, 11).

In spite of the substantial amount of research that has been done on Chinese consumers, much more detailed analysis remains to be conducted. Scholars such as Xiaohong Zhou, Xun Zhou, and Elisabeth Croll have written about the difficulties in pinpointing the exact number and characteristics of Chinese consumers (Croll 77, Xiaohong Zhou 110-14, Xun Zhou 170-2). While the lack of concrete information is in part due to fast changing nature of Chinese society, the truth remains that more specific insight into consumers across the entire socio-economic spectrum of the nation still remains to be carried out.

Although marketing companies such as McKinsey & Company are not conventional contributors to academic research, their market reports are timely and provide necessary research on topics not typically covered by academia. In particular, two reports entitled “Understanding China’s Growing Love for Luxury” and “Tapping China’s Luxury Goods Market” provided the most comprehensive market research on China’s growing luxury consumption. The results of their 17-city survey of 1,500 luxury consumers demonstrate that China’s luxury class is projected to increase due to changing economic, social, and cultural factors.

Nevertheless, concerned scholars are calling capitalism and the dominant economic structures of major industrialized nations into question. In *Prosperity Without Growth*:

Economics for a Finite Planet author Tim Jackson demands “a robust, ecologically-literate macroeconomics,” that can resolve the shortcomings of capitalism to adequately address the limited generative capacities of the natural world (64-5, 155). Jackson also believes that the economy is not the answer to all of human problems; at each individual’s core is a desire for security, belonging, meaningful social relations, and the ability to fulfill one’s potential, not unlimited economic growth. Murray Bookchin echoes similar sentiments in “Death of a Small Planet,” stating that “unlimited economic growth is assumed to be evidence of human progress” (3).

A number of alternatives to capitalism are suggested. Jackson dissects the components and nature of a sustainable economy in which economic growth still occurs, but neither to the degree nor intensity that modern capitalist economies have been previously built upon. Leslie Sklair describes yet another approach: socialist globalization. According to Sklair, global socialism will arise as a result of a grassroots movement that disputes the global capitalism as the dominant economic framework. Both Jackson and Sklair acknowledge that their models are unprecedented and that implementation of their ideas will require policy experimentation and adjustment (Jackson 129, Sklair 325).

In analyzing China’s economic success, one must also consider the country’s current environmental prospects. The extent of China’s environmental damage has attracted the attention of academics from a variety of studies, each who have used their own perspective to analyze and provide suggestions for alleviating the environmental pressures. Vaclav Smith puts forth a series of suggestions to avert further environmental destruction in China: “price reforms, technical innovations, managerial innovations, and better law enforcement” (193).

Multiple China experts continue to pin their hopes for a less environmentally destructive China on a variety of institutional changes: less energy intensive industries, technology transfers, scientific advancement, legal mechanisms, public participation, and progressive policies (Economy 291; Gallagher 108-9; Peng, Pan, and Yu 340). Despite the CCP's proclaimed interest in environmental protection, officials have done little to convince the international community that they are seriously concerned about the environment

Aside from domestic policies, various scholars have each had their own opinion on the role of the developed nations in alleviating China's environmental challenges. Economy describes the environment as a "natural and nonthreatening vehicle to advance U.S. interests not only in China's environmental protection efforts but also in its basic human rights practices and trade opportunities" (291).

Smith calls on developed nations to recognize their role in exacerbating environmental destruction by limiting overconsumption (9, 201). Furthermore, Smith offers recommendations that all countries should adopt: "controlling population growth; stressing good nutrition, education, and preventive health care while discouraging frivolous consumption; farming without excess; focusing on efficiency and quality in converting energy and consuming raw materials" (203).

It is within the context of this previous literature that this study is situated. Thus far, scholars have not specifically tied the call by the China's central policymakers to stimulate domestic consumption as a means to maintain economic growth with the reality of China's worsening environment. Continuing the traditional prioritization of economic concerns over the environment, policymakers – both Chinese and international -- have issued de-facto approval of the destruction of China's environment.

The Situation Facing China

A. The Mandate of Economic Growth

Since China implemented economic reform policies in the late 1970s, the country has transformed from a nation on the brink of economic despair to the world's second largest economy. Free market reforms have led to unprecedented economic prosperity on a national scale, and as the sole ruling power since 1949, the CCP's legitimacy to govern has been strengthened as a result. Recognizing that average Chinese citizens anticipate an improvement in their material standard of living, China's government has instituted a mandate of economic growth as the paramount policy.

Sustaining economic growth rates of 8-10 percent has been essential, not simply for economic reasons, but because it is tied to China's social stability. Signs of societal unrest are present among a variety of distinct groups in China, yet the change from planned to market economy has decreased the CCP's ability to influence public opinion (Economy 268). As a result, sustained economic growth through free market mechanisms has become one of the means utilized by the CCP to enhance its public image and protect its legitimacy to rule.

Concerns over the long-run feasibility of an export driven economy have led the CCP to search for alternative methods of ensuring economic growth. The recent policy calls for a robust consumer economy. While the domestic consumption has increased domestically, a high percentage of Chinese continue to save large portions of their incomes.

B. The Development of the Consumer Class

Historical Context

While there has been much debate over the existence and nature of China's middle class, it was not until economic reform in 1978 and the continued transition to a market economy that China actually developed a middle class (Xiaohong Zhou 114). Unlike the major industrialized nations, the middle class in China represents a minority of the population: less than twenty percent of all Chinese are considered middle class (Xiaohong Zhou 122). However, this growing class of citizens will give rise to profound impacts.

After decades of limited consumer choice under the dictates of a command economy, Chinese consumers now have an unprecedented variety of goods available to purchase. Particularly among young Chinese, purchasing goods is seen as an important part of developing one's own identity. The consumption of goods and services and the social significance of such goods are the vehicles through which middle class aspirants are able to construct their identity and relationships (Xun Zhou 183, Croll 21). Consumers have even gone so far as to equate their new ability to purchase goods as an expression of self-determination or freedom and are proud to join this new consumer class (Davis 708-9). Purchasing and owning material goods adds significance to life; consumerism serves to inform "the creation of new needs, aspirations and expectations relating to the ways in which people live their lives and what gives meaning to their lives" (Sklair "Consumerism" 281-2). By consuming goods that are perceived to be "modern" or "global," Chinese consumers are able to join the ranks of the global modern middle class (Xun Zhou 183).

Over the past fifty years, consumption in China has been divided into distinct phases. Each phase has been characterized by ‘three big items’ – the three goods most desired and purchased by consumers. No longer are bicycles, wristwatches, color televisions, cell phones or air conditioning units the most desired; instead, in today’s China, individuals are seeking personal computers, cars, and private housing. Chinese are also increasingly participating in travel and leisure activities (Croll 31-2).

One of the government’s most significant policies in recent years was the institutionalization of the 5-day workweek as well as the extended holidays around Spring Festival and National Day (October 1). These holidays are known as “Golden Weeks” due to the increased revenue that businesses receive from the increased travel and holiday spending. Chinese consumers have eagerly responded to this government-sponsored campaign, and are now well versed in consumption.

Ready and Willing: China’s New Consumers

My unexpected foray into China’s growing luxury goods market came in spring of 2010 while studying abroad in Beijing. I attended an informational session on a fellowship opportunity with one of the U.S.’s major luxury handbag and accessory companies. Seeking to develop its company presence in China, the company sought talented young individuals not just to increase its brand recognition, but also to identify with and take on the brand identity and lifestyle. The presenter proudly proclaimed the company’s goods to be ‘affordable luxuries,’ -- essentially that the goods were expensive enough relative to the average Chinese wage to be seen as a luxury good, yet not so expensive as to be out of reach of the growing numbers of young professional urbanites. It was there, in a packed auditorium, that I truly realized just how desirous young

Chinese are of material wealth and social status. Excited at the prospect of joining a world full of “affordable luxuries” these college students seemed worlds away from the beggars who rummaged through garbage cans on campus, seeking to profit from waste.

My personal experience is substantiated by a study conducted by a group of researchers from Credit Suisse First Boston. Their findings demonstrate that companies such as LVMH, Swatch, and Burberry are more likely to benefit from the initial increase in luxury spending because these companies offer luxury goods at more affordable prices (Garner 215). In spite of China’s dramatic economic wealth, not everyone is wealthy. While brand name and imported goods tend to be sold at higher prices, the less expensive, more ‘affordable’ goods are drawing the attention of China’s new consumers.

Not content to live frugally as older generations did, the younger generation of China increasing seeks to enjoy life through material comforts. With consumer choice as the new form of free expression, “self-satisfaction is now the number one motivator in the big cities of Beijing, Guangzhou, and Shanghai; it is the principal objective among the young, edging out ‘work hard and get rich’ among 18-to-24-year-olds. It has also become the predominant aspiration among the most affluent” (Burkholder 71). Now that peoples’ goals have shifted, the philosophy of consumption has also changed. Chinese are now longer content to be “frugality-oriented,” they now seek to be “enjoyment-oriented” (Zhao 64). A survey of eight major cities in China found that households in the 20-29 and 30-39 age brackets spent 8-10 percent of their monthly income on entertainment and dining out (Garner 114). With such a mindset, these new luxury consumers are clearly not purchasing goods and services to meet their basic living needs.

The stereotypical Chinese luxury consumer tends to differ from Western luxury consumers. With 73 percent of the total, Chinese luxury consumers are overwhelmingly under

age 45, unlike in the U.S. Almost half of China's luxury consumers – 45 percent are under age 35, while only 28 percent of Western European consumers fall into that age range (Atsmon et al. 12). Many of these young elites have grown up in single-child households and have seen nothing but a rise in their economic standing as they have grown up. As the only child, these young consumers have had a measurable impact on household purchases even as a child (Zhao 68). While such a parenting tactic is understandable, it only serves to reinforce an ideology of satisfaction through material goods.

Joining the ranks of the wealthy elite and fundamental to the projected increase in luxury consumption are middle class consumers. In spite of their “relatively conservative attitudes towards money,” their share as a proportion of luxury consumers is projected to increase over the next few years (Atsmon et al. 15).

In line with Stern's definition, both goods and services are important when considering the impact of consumption. Both areas are projected to increase, although “spending on luxury services is growing even faster than spending on luxury goods: 20 percent of luxury consumers said they've increased spending on experiences while only 13 percent said they were spending more on goods” (Atsmon et al. 13). Because Stern suggests that services may actually lead to more waste than material goods along, it is important that both categories of items are included in the analysis.

Researchers have pinpointed the items in most demand among the middle and wealthy classes, and many items are desired for the prestige they confer. Designer labels; imported Western name brand goods; exclusive recreation activities such as road trips, amusement parks, and golf; luxury holidays; and private or overseas education for one's children are all highly demanded by China's new elite consumers (Garner 84). As evidenced from these types of goods,

China's wealthy are following a trajectory of conspicuous consumption similar to that of the U.S. (Stein 46). While marketers anticipate a future in which 1.3 billion Chinese eagerly consume luxury goods of the nature listed above, certain of the aforementioned goods have measurable impacts on the natural environment.

As Veblen suggests, conspicuous consumption is a method of displaying one's social standing. In traditional Chinese culture, the idea of maintaining face is of crucial importance. Chinese associate the concept of face with honor, and face extends beyond individual association to one's family, village, or country (Fox). This need to maintain face has played a significant role in affecting Chinese consumer purchasing decisions. Through a vacation overseas or the purchase of a luxury car, consumers are able to demonstrate their growing wealth and cultural sophistication. While the importance of face is diminishing among the younger generation, it is still an important cultural concept that affects consumer rationale for purchasing luxury items.

Projected Growth

In May 2010, China overtook the U.S. to become the world's largest luxury market (Lannes and Han). This new consumer class will swell in numbers over the next few years, and market research suggests that by 2015, the Chinese consumers will pass Japan as the world's biggest luxury market, accounting for more than 20 percent of luxury purchases. Growing at a rate of 15 percent, the number of wealthy households in China will total 5.6 million households by 2015 (Atsmon et al. 7, 11)². Furthermore, while Shanghai and Beijing currently account for 21 percent of China's luxury consumption, less wealthy cities such as Chongqing, Dongguan, Foshan, Guangzhou, Nanjing, Hangzhou, Shenzhen, Tianjin, Wenzhou, Xi'an, and Yantai are

² Atsmon et al. define wealthy households as having an annual income between RMB 300,000-1 million, the equivalent of USD \$45,000-150,000 (11).

projected to increase in both population and wealth, which will lead to a rise in luxury consumption across the country (Atsmon, Dixit, and Wu 4, Atsmon et al. 22-5). It is significant that much of this new growth will take place in China's interior, a phenomenon that demonstrates that standards of living are rising across the country.

This growth in the luxury class is largely attributable to changing attitudes about wealth and consumption – Chinese feel more comfortable spending money on luxury items than at any other point in history (Atsmon, Dixit, and Wu 2). Long gone are the days of rationing and frugality, “conspicuous consumption and a leisure-based consumerist culture are emerging among wealthy Chinese consumers to a degree similar to that of the U.S.” (Stein 46)

In addition to travel for leisure, the number of Chinese who own personal cars is expected to continue its rapid ascent. Cities once full of bicycles are now overwhelmed by the sheer volume of cars that congest city streets each day. Owning a car has become a goal for not just the wealthy elites and government cadres, but also for the middle class (Gerth 40-1). While there are developed forms of public transportation, it is crucial that one does not underestimate the strength of this desire to own a car.

In 2009 China became the world's largest car market and analysts predict that the trend will continue in 2011 (Lewis). Despite the low percentage – in 2005, only 7 or 8 per 1000 Chinese citizens owned a car – the sheer size of the population results in 10 million cars across the country (“Cars in China”). 10 million cars is a small number in comparison to the rest of the world, but in 2009, the increase in personal cars was a whopping 45 percent (“China's Car Market”). The 2005 figure of 10 million cars is already significantly outdated and even projections on car ownership made by Chinese officials have been surpassed. In the 1980s,

officials in Shanghai's Urban Planning Administration Bureau predicted Shanghai would have 2 million cars by 2020; in reality, the city already had 2 million cars in 2005 (French).

While it is true the wealthy in China consume a disproportionate amount of goods relative to China's population as a whole, the rise of this new leisure class is significant because their affluence is the standard to which the lower classes now aspire. As Veblen suggests, humans measure their own wealth relative to individuals wealthier than themselves (84). In China, the growth of the wealthy class and its increase in spending has stimulated aspirations for greater consumption amongst the working class.

Therefore, it is not just the wealthy class that gives cause for concern; as a result of the wealthy's "cultural obsession with luxury consumption", China's working class has also succumbed to the desire and seeks to consume as the affluent do (Gerth 47). While "people in rich areas and high income groups contribute disproportionately to the ecological deficit," the increasing material aspirations of China's working class must not be overlooked (Peng, Pan, and Yu 336). Because the working class is representative of the majority of China, widespread increases in material consumption could have a measurable negative impact on the environment.

Evidence suggests that even migrant workers affected by the desire to emulate their wealthier peers. To cite personal experience in China, I found that young migrant workers often possessed cell phones with technological capabilities and functions far beyond that of my own phone. Surprised, I wondered why migrant workers – often from rural farming communities or economically depressed regions of China – would be willing to spend such a large sum of money on a cell phone.

I later realized that a cell phone was a signal to the greater society; with this purchase of a cell phone, migrant workers are able to mark their arrival as a modern urbanite and signify to the

world that they now belong to China's consumer class. For Chinese, status is extremely important; however, their limited economic resources prohibit the vast majority of Chinese from buying only high-end items. Therefore, status conscious consumers must be selective in choosing the goods for which they are willing to pay large sums of money (Doctoroff 28). A cell phone is a highly visible good that outwardly marks them on a level playing field with wealthier consumers. In short, migrant workers themselves are driven by superficial reasons to consume: "to reduce the disparity between themselves and city dwellers, even if only as a matter of appearance" (Ngai 484).

The desire for cell phones, cars, and other luxury items is that such goods tend to be highly visible – that is, they are goods that can easily be displayed to bystanders and have a value that is easily recognizable. From an evolutionary perspective, "consumption is driven partially by status competition...Social status competition is a zero-sum game, which drives competing individuals or groups toward higher consumption—ending not with 'need satisfaction' but only with exhaustion of an individual's resources" (Kempton and Payne 117). The true value of these status goods then, is not the actual monetary cost, but rather the prestige gained from acquiring and showing such goods to others.

Applied to China, the theory that individuals consume in an effort to compete with one another suggests that Chinese will continue to purchase goods in an effort to improve their social standing. However, an alternative scenario remains. There is evidence to suggest that instead of following Western models of consumption, consumers of non-Western countries tend to imitate behavior of wealthy within their own country (Wilk 111). Were China's elite to decide that conspicuous consumption was contributing to a culture of waste and environmental deterioration, it is likely that other Chinese would follow suit.

International Influence

Beyond stimulating further demand for material goods among fellow domestic consumers, “Chinese consumers are becoming the new vanguards of global consumerism” (Gerth 36). China’s economic success has fascinated millions worldwide. As China continues to gain global prominence, citizens of developing countries will look to China’s consumers as the new prototype for consumers of developing nations. These developing countries may also view China’s model of economic development as a potential trajectory that they too seek to embark upon.

Given the finite natural resources of the environment, it is unrealistic to suggest that all nations will be able to exploit natural resources to the same degree that China has been able to. Studies clearly point to the environment’s limited regenerative capacity. Since the 1970s, the world has existed in a condition of “ecological overshoot” in which renewable resources are utilized at a rate faster than the Earth’s regenerative capacities (World Wildlife Foundation, Zoological Society of London, and the Global Footprint Network 34). Given the severity of the situation, one would expect greater concerns on an international scale, yet the lack of reaction signifies that society has not yet found a way to account for the value of the environment on an internationally recognized basis.

C. International Pressure

The international community – in particular U.S. policymakers – have vocally expressed their desire for increased domestic consumption in China. In June of 2009 at Peking University, U.S. Treasury Secretary Tim Geithner publically called for an increase in domestic demand in

China. He proclaimed that consumption driven growth was a step towards a sustainable growth policy that will ultimately strengthen China's economy ("Full Text").

Throughout his speech, Geithner focuses solely on the economic justifications for recommending such a policy. Were humans to live in a world divorced of the natural environment, such a policy would perhaps be more credible. However, increased consumption of material goods will inevitably engender negative environmental consequences.

For American policymakers such as Geithner, support of the promotion of domestic demand in China is politically convenient. American policymakers will never have to live the environmental consequences that will result from this economic policy and are thus insulated from the repercussions.

D. Consumer Hesitancy

Despite these domestic and international calls to for Chinese consumers to increase purchases of goods, a number of factors have led to a high savings rate and low consumption rate. Prime Sarmiento finds that even as recently as March of 2011, consumption constitutes merely one third of the country's GDP. The economic growth of past years had led to increasing economic disparities, resulting in a decrease in the average propensity to consume (Xu, Dai, and Zhong 344).

Rather than spend their entire income, "the uncertainties in the economy have an important influence on the consumption behavior" of Chinese (Luo 149). Fearful of a costly medical expense or other unforeseen financial burden, consumers rural and urban, rich and poor, all feel the need to save a substantial amount of their income in order to hedge against the possibility of such an expense (Xu, Dai, and Zhong 344-345).

Although many experts have suggested that the household savings will decrease in the near future, research indicates that “the consumption rate has declined from 62.1 percent in 1978 to 48.6 percent in 2008” (Xu, Dai, and Zhong 339). Even more significant, the consumption rates in both rural and urban areas have decreased in recent years. In the past thirty years, the urban household consumption rate rose, but has fallen since 2000. The rural household consumption rate has decreased since 1985 (Xu, Dai, and Zhong 340). These recent statistics reemphasize that regardless of the China’s new wealth, consumers across the nation feel insecure about their future economic prospects.

Specifically, for the average Chinese, the certainty of future economic prospects are challenged by inadequate provision of social services, particularly the cost of educating one’s children and medical care. A need for adequate and affordable medical services exists throughout the country, especially in rural areas (Xu, Dai, and Zhong 350-1).

Even with improvements in medical infrastructure, in rural and urban areas, rural areas are more likely to lack qualified health care professionals. However, with a guaranteed social safety net such as a national health insurance program, precautionary savings will decrease.

As part of the Chinese government’s policy of instituting public health care and pension programs, it is highly probable that Chinese households will not feel the need to save as much as they have in the past (Cárdenas 1-2). As Taiwan demonstrates, provision of healthcare on a national basis led to a decrease in savings and increase in household consumption (Chou, Liu, and Hammit 1892). Beyond healthcare and pension plans, further government expenditures in workers’ compensation, unemployment compensation, public education will lead to a lower precautionary savings motive among Chinese (Lardy 8).

If Chinese had access to the social services mentioned above, constant increases in their economic well-being would not be so crucial. Providing adequate social services, then, will decrease the CCP's need to sustain 8-10 percent GDP growth rates. An abandonment of the pursuit of such high GDP growth rates will make alternative paradigms of economic development more feasible and realistic.

E. More Than a Footprint: China's Environmental Impact

Historical Context

In the context of Chinese history, the state has frequently sponsored widespread economic development at the expense of the environment. Attitudes in China regarding the environment were generally characterized by a demonstrated inattention to the constraints of the environment and the domination of Confucianism and official political ideology overpowered philosophies that called for greater care of the environment (Economy 55-6).

Despite widespread appreciation of nature among ancient Chinese artists and literati, human domination of the natural environment was also present. Multiple ancient Chinese folktales glorify heroic figures that defeated an element of nature in order to preserve the existence of humanity (Economy 29-30). Administratively, care of the environment was a duty assigned to provincial administrators. Only rarely did administrators of this level make environmental concerns a priority. Historical records of protests stimulated by environmental pollution from the Qing Dynasty exist, yet even into the early 1900s, little had changed regarding environmental consciousness (Economy 45-6).

With the establishment of the Chinese Communist Party in 1949 until present day, the Chinese state set economic growth as the ultimate goal to attain. Early attempts at environmental conservation projects were short-lived; Mao quickly propagated the view that “by understanding the laws of nature man could overcome nature” (Economy 46-7). Under the Great Leap Forward and the Cultural Revolution, natural resources were carelessly destroyed and abused, all in the service of economic growth. With Deng Xiaoping’s claim “to get rich is glorious,” millions of Chinese embraced capitalism and the latest state sponsored campaign of environmental exploitation for the purposes of economic development (Economy 59).

Even with the establishment of the Ministry of Environmental Protection, environmental concerns have continued to be overridden by policies to stimulate economic growth (Economy 63).

Contemporary Context

This current economic policy of stimulating a domestic consumer economy is myopic in the context of China’s current environmental situation. China’s economic development at the expense of the natural environment has already resulted and will continue to result in serious environmental consequences for the nation and the international community. Regardless of the method of calculation, pollution does have a measurable impact on the environment and human life. In 2003, a conservative estimate of air and water pollution came to a total of 362 billion yuan, which represented 2.68 of GDP. Using a different model, the value of statistical life model found that for the same year, pollution cost China 781 billion yuan, or 5.78 percent of GDP (The World Bank and the State Environmental Protection Administration of China xvii).

The extent of China's current environmental impacts has had irreversible effects on the natural environment. On a national basis, "Mainland China is using natural resource by 43 percent more than the regenerative capacity of its ecosystem" and the "production footprint of most provinces exceeds their biocapacity" (Peng, Pan, and Yu 334-335).

China's projected environmental impact will surely increase. As the country continues to urbanize and incomes rise, rural citizens will demand the same material standard of living enjoyed by their urban counterparts. As families become wealthier, energy consumption is projected to increase, especially in underdeveloped and remote regions of China (Peng, Pan, and Yu 333). In 2005, China's energy usage was growing more than 4 times the international rate, and there is no doubt that the demand has increased in the past 6 years and will continue to increase. Furthermore, SO₂ emissions, a result of the use of fossil fuels causes acid rain, which costs 30 billion yuan in crop damage and 7 billion in material damage on a yearly basis (The World Bank and the State Environmental Protection Administration of China xvi-xvii). Of the world's largest economies, China is the most reliant on coal, with approximately 75 percent of energy provided by coal in 2002 (Harris and Udagawa 629, APEC 2002 as cited in Harris and Udagawa 630).

Agricultural cultivation and industrial production require significant quantities of water. Because of surface water pollution, groundwater has been used in agriculture and industry. Groundwater is a nonrenewable resource, and the loss of this precious and vital resource is estimated to cost 50 billion yuan annually. Combined with the costs of using polluted water in industry, the total value of water scarcity associated with water pollution represents 1 percent of GDP (The World Bank and State Environmental Protection Administration of China xvi-xvii).

Scarcity of water has resulted in overuse of groundwater and rationing measure implemented by the central government to attempt to maintain adequate supply (The World Bank and the State Environmental Protection Administration of China 9). In Beijing, businesses may not overstep water quotas, measures designed to ensure that the city does not run dry. In an effort to alleviate chronic water shortages in the north, the Chinese government has been designing a system to transfer water from the south of China to the north. The South-North Water Transfer Project is scheduled to be finished in 2014, but Beijing's water supply will feel added pressure in the meantime (Hongtao).

While some may see China's environmental concerns as a strictly domestic concern, pollution, competition for natural resources and its effects have and will continue to be felt on an international scale. In particular, certain consumption of certain luxury goods will have a disproportionately large negative impact on the environment.

Travel, in particular, is well noted for its polluting effects. Travel is thought to be "emerging as the primary leader of growth in carbon emissions in the wealthy, industrialized countries" (Schipper 59). Chinese certainly do not travel to the same extent as citizens of industrialized countries, yet trends forecast a boom in travel, which will have a direct impact on the carbon emissions.

In addition, skiing, a recent leisure activity to enter the Chinese market is aggravating the water scarcity around Beijing. Situated in the China's north, Beijing is already in short supply of water, even without the creation of ski slopes. According to a not yet released report by the NGO Friends of Nature, the city's seventeen ski facilities require "at least 1 million tons of water every year -- the equivalent of 8,300 households" in order to produce artificial snow for skiers (Friends of Nature "2011 Annual Report on Environment Development of China" as cited by

Wencong). Beyond the necessary water, one snowmaker requires 500 kW of electricity per day. According to city officials, the city's water shortage in winter of 2010 was estimated to be 1.8 billion cubic meters. Each ski slope requires the felling of trees, which will lead to soil erosion and dust storms in the spring (Wencong).

The aggregate impact of increased consumption across all socio-economic groups in China cannot be underestimated. From 2000 to 2005, China's total energy consumption rose 70 percent (The World Bank and State Environmental Protection Administration of China xi). To put it simply, if all Chinese consume as we do in the First World, the collective environmental impact will be twice the world's current level (Diamond 373).

Impact on Human Health

Increased consumption and the necessary increase in production in order to meet the demand will have serious consequences for the environment. The diminished state of the natural environment will in turn negatively impact Chinese, particularly those who must rely upon natural resources for survival.

From the period from 2001 to 2005, of the seven largest rivers in China, 54 percent of the water was deemed unsafe for human consumption, an increase from the percentage of unsafe water a decade prior (The World Bank and State Environmental Protection Administration of China xi-xii). A study of drinking water in 118 cities across China revealed that 97 percent have polluted groundwater for human consumption and 64 percent have "serious" pollution (Peng, Pan, and Yu 341). For many Chinese this increased pollution will directly affect their physical health; "about 115 million people in rural China rely primarily on surface water as their main

source of drinking water” (The World Bank and State Environmental Protection Administration of China xiii).

Due to a lack of piped water, rural Chinese are more likely to develop diarrheal diseases or digestive system cancers of the stomach, liver, and bladder. According to calculations by the World Bank and the State Environmental Protection Administration of China, these health conditions cost the country 1.9 percent of GDP. For young children under the age of five, lack of piped water is “significantly associated” with diarrheal disease and even resulting in early death (The World Bank and the State Environmental Protection Administration of China xiv). Contaminated water, whether due to chemical pollutants or biological pollutants, has also been known to cause hepatitis A or E, dysentery, typhoid fever, cholera, diarrhea, acute poisoning, malignant tumors of the skin, liver, lung, bladder, or kidney even spontaneous abortions or birth defects (The World Bank and the State Environmental Protection Administration of China 41, 43).

As China’s water scarcity has intensified, certain regions of the country have turned to using wastewater for agricultural purposes. There are approximately 4 million hectares of land irrigated by wastewater, and produce is thought to be contaminated with heavy metals such as mercury, cadmium, lead, copper, chromium, and arsenic (The World Bank and the State Environmental Protection Administration of China 9).

Air pollution also poses a formidable threat to a healthy existence. In 2009, “one-third of 113 major cities failed the air quality test” (“Vehicle Emissions”). Estimates of the cost of premature death and morbidity due to air pollution range from 1.16 – 3.8 percent of GDP (The World Bank and the State Environmental Protection Administration of China xiii). Research has shown that exposure to air pollution causes a myriad of conditions such as reduced lung function,

chronic bronchitis, cardiovascular and cerebrovascular disease, reduced respiratory capacity, hospitalization, outpatient visits, work and school absenteeism, and even premature death (The World Bank and the State Environmental Protection Administration of China 20).

Additionally, the air pollution will rise as a consequence of a national increase in personal car ownership. The majority of air pollution once came from burning coal, but currently, both coal smog and car exhaust contribute to China's declining air quality (The World Bank and the State Environmental Protection Administration of China 27). In 2010, a report by China's Ministry of Environmental Protection found that the number one source of air pollution in large and medium cities was car emissions.

Disproportionate Impact on Low-Income Individuals

According to a report released by the World Bank and the State Environmental Protection Administration of China, survey data demonstrates that the poor are disproportionately negatively affected by negative environmental consequences (xv). The plight of rural Chinese is further compounded by the increasing social inequality within China. Since the 1990s, the relative wealth of peasants has decreased in comparison to other groups within society (Wright 116). In 1976, the Gini coefficient was .16, but by 2005, it had increased to .45 (China Statistics Almanac 2005, as cited in Deng and Jin 384-5). Pollution has been shown to disproportionately affect low-income provinces such as Ningxia, Xinjiang, and Inner Mongolia on a per capita basis relative to high-income provinces in the southeast of China (The World Bank and the State Environmental Protection Administration of China xv).

For instance, for low-income households with children under age 5, 75 percent do not have access to piped water. In contrast, for higher-income households, only 47 percent do not

have access to piped water. Lower households are approximately 3 times more likely to rely on surface water to drink, which increases the probability that they will develop related health conditions as a result of ingesting contaminated water (The World Bank and the State Environmental Protection Administration of China xv).

It is currently estimated that 300 - 500 million Chinese, largely from rural areas, do not have access to piped water, while 95 percent of urban residents majority of urban residents are able to access piped water (The World Bank and the State Environmental Protection Administration of China 33, *China National Health Survey*, as cited in The World Bank and the State Environmental Protection Administration of China 35). While piped water does not necessarily result that the water is safe to drink, treated water is often disinfected (The World Bank and the State Environmental Protection Administration of China 39, 41). Compared to international averages, the high mortality rates of digestive system cancers suggest that access to safe drinking water is a major concern for rural Chinese. Even within the country, there is a higher prevalence of digestive system cancers among rural residents than city dwellers (The World Bank and the State Environmental Protection Administration of China 7). Outside of major urban areas, drinking water guidelines are routinely disregarded, especially for nonpiped water sources (The World Bank and the State Environmental Protection Administration of China 33). From this evidence one can conclude that rural Chinese – through no fault of their own -- are at a severe disadvantage.

While water pollution has serious consequences, the costs of avoiding polluted water are also substantial. Avoidance measures have entailed the construction of water treatment facilities, the purchase of bottled water, and small-scale water treatment devices (The World Bank and the State Environmental Protection Administration of China 33). While residents of urban areas are

more likely to have the means to purchase bottled water for consumption, income discrepancies preclude many rural families from also purchasing bottled water.

International Impact

While some may see China's environmental concerns as a strictly domestic concern, pollution, competition for natural resources and its effects have and will continue to be felt on an international scale. The effects of pollution do not remain solely within China, "the sources of air pollution in Beijing and Shanghai are, consequently, also sources of climate change in Sao Paulo and Dhaka - and New York and London (Harris and Udagawa 620). For instance, the acid rain caused by air pollution affects not only China, but also South Korea and Japan (Dorian 1995 p. 93 as cited in Harris and Udagawa 630).

Not only has China depleted its own forests to produce paper goods, China now imports timber from other developing countries such as Papua New Guinea and Indonesia. It is suspected that much of the wood from these countries is illegally logged, leading to massive deforestation and diminished ecosystems (Stark and Cheung 4).

The aggregate impact of increased consumption across all socio-economic groups in China cannot be underestimated. From 2000 to 2005, China's total energy consumption rose 70 percent (The World Bank and State Environmental Protection Administration of China xi). Were China to consume paper goods at the same rate as the U.S., "it would necessitate the logging of nearly 1.6 billion cubic meters of timber – the equivalent of the world's entire annual harvest" (Stark and Cheung 2). To put it simply, if all Chinese consume as we do in the First World, the collective environmental impact will be twice the world's current level (Diamond 373).

Restructuring the Future: Policy Recommendations for a More Sustainable Future

In light of the environmental predicament and the strong desire among Chinese to continue and even increase their material standard of living, what measures can the Chinese government implement to reconcile these contradictory situations? Two policy suggestions are as follows:

1. Strengthen the Ministry of Environmental Protection's capacity
2. Develop an economic framework capable of adequately valuing the environmental costs

Both recommendations are based on the need to change the incentive structure in China. Simply telling citizens will to contemplate the environmental consequences of the consumption matters will not be enough; institutional mechanisms must be put in place to create the incentive to change.

However, it will not be enough for China to simply implement the first two policy recommendations. As shown, the U.S. in particular has played a significant part in encouraging the development of a domestic consumer economy in China. Furthermore, the global demand for cheap Chinese goods has allowed consumers of developed nations to profit at the expense of low-income Chinese and the environment. Therefore, there is also a policy recommendation directed towards U.S. policy makers:

3. Encourage and support the transition to sustainable economic growth

A. Strengthen Ministry of Environmental Protection's Capacity

As previously shown, since ancient times, the Chinese have traditionally not seen environmental protection as an issue worthy of the central government's concern. While the

Chinese have successfully used a variety of reforms and political campaigns to stimulate citizen participation in economic development, such measures have failed to substantially protect the environment (Economy 95).

Because local officials are evaluated by the central government on the basis of economic growth, local administrators have no incentive to prioritize environmental protection. When there is a conflict of interest between economic development and environmental protection, the final verdict tends to be in the favor of economic development (Economy 96).

Such systematic abuses continue to occur because the Ministry of Environmental Protection (MEP) cannot sufficiently and promote environmental protection. Despite a promotion from sub-cabinet to ministerial status in 1998, the MEP is comparatively less powerful than other ministries (Gang).

Of course, a separation of economic and environmental management itself will not necessarily lead to improvements. The MEP must be able to enforce environmental protections, and measures protect the environment must be upheld.

The MEP's lack of manpower presents a major challenge to enforcing environmental protection. Nationwide, the number of MEP personnel is estimated to be 2,600. In comparison, the U.S. Environmental Protection Agency employs more than 17,000 employees (Gang).

Presently, there is a critical need for officials to enforce environmental protection. In 2008, China passed the Plastic Bag Restriction Policy, which ended the distribution of free plastic shopping bags. While the total number of plastic shopping bags did decrease, by 2009 it was apparent that the policy had only been haphazardly enforced (Da). Da cites a study of six Chinese cities, which found that less than 90 percent of retailers, mostly small and medium sized enterprises, no longer complied with the plastic bag ban (4). To make matters worse, there was

no single governmental department or office charged with the responsibility of carrying out the plastic bag ban (10).

This example highlights the gap between policy implementation and actuation. The lack of official response necessitates greater power and oversight for the MEP, as well as increased personnel in order to be able to respond to situations.

B. Develop an Economic Framework Capable of Adequately Valuing the Environmental Costs

In addition to economic decentralization, society must develop an ecologically literate macroeconomics (Jackson 121-42). This new ecologically literate macroeconomics will have to adequately assess the economic value of Earth's natural resources, as well as the cost of pollution and other negative externalities that result from the exploitation of natural resources. The current process of measuring GDP does not calculate for the negative externalities of pollution or environmental degradation (Jackson 125). While the assessment of natural resources and development of this new economic framework is beyond the scope of this paper, it is imperative to develop such a framework.

Agenda 21 does call for prices that adequately reflect the true environmental and social cost of natural resources (Harris and Udagawa 624-5). However, Agenda 21 is a "soft law" and does not have the enforcement capability of a binding contract or treaty. It merely represents a series of policy suggestions that individual governments can choose to implement (Harris and Udagawa 622-3).

According to economic theory, consumers respond to higher prices. When the true social and environmental costs have been incorporated into the prices, consumers will have incentive to

adjust their behavior accordingly. For example, in China, the price of coal has been kept artificially low. This discrepancy has led consumers to undervalue the cost of coal and its negative societal and environmental externalities, which has led to the continued use of coal as a means of fuel (Harris and Udagawa 631-2).

While countries have become cemented to industrial processes that undervalue natural resources in order to increase economic growth, this trend cannot continue forever, particularly in China (186, 194). Because of “distancing,” – the separation of individuals engaged in resource extraction from the final consumer – the true social and economic costs of producing goods are hidden from the consumer. Physical distance between the extractors and consumers is positively correlated with misinformation, which exacerbates the negative effects of distancing (Princen 116, 119).

The creation of an economic framework that adjusts for pollution and negative externalities will not solve the problem of distancing. While final consumers may be unable to envision the actual exploitation of natural resources, the higher monetary value is a concept that all consumers can understand.

Beyond changing consumer behavior, a model of economics that recognizes the innate and intrinsic value of the environment will alter the way in which individuals perceive the environment. Instead of seeking limitless economic growth, humanity will be forced to recognize alternative measures of human progress. The perception that boundless economic growth has unlimited benefit has become an unquestioned principle (Bookchin 3). Transforming the economic system and society’s perception of progress will not be easy, but it is necessary.

Of course, there are many uncertainties in restructuring economics to account for environmental and human costs of pollution. The current economic framework is so

overwhelmingly focused on growth and production that in this current point in time, alternatives seem improbable and even infeasible (Jackson 187-8). The strong adherence of industrial nations to capitalism and market principles makes options such as Sklair's proposed socialist globalism even more unlikely.

C. Encourage and Support the Transition to Sustainable Economic Growth

For U.S. policymakers, there is no need to encourage consumer spending in China. The dramatic rise in household income and luxury consumption all point to a trend of increasing consumer purchases. Instead, the U.S. should encourage China to promote sustainable means of economic growth.

Sustainable economic growth is in the U.S.'s national interests. The projected increases in demand for resources such as oil and coal will lead to increased competition for natural resources. China has already extended its political and economic influence into Africa in order to secure oil for its growing energy needs. While China's investments and purchases in Africa has attracted the most international attention, China has signed deals with Nigeria, Ghana, and other African nations, trading loans and infrastructure development initiatives in return for access to raw materials to fuel its own growth (Cutler).

While China argues that its form of unconditional development aid respects the autonomy of recipient nations, China's active engagement in setting development policy sets a precedent for these emerging markets: environmental degradation is permissible if it results in economic growth. Humanity's uninhibited economic growth at the expense of the environment has left us in a precarious situation: "by the end of the century, economic activity will need to be taking carbon out of the atmosphere not adding to it" (Jackson 186).

It will not be enough to simply pay lip service to the idea of environmental protection. China's projected growth alone will cause further environmental damage, to say nothing of the other emerging market economies. Such troubling times call for unprecedented global leadership that is willing to move the political agenda beyond meaningless rhetoric.

Conclusion

While it is impossible to predict the future, the success of the previous policy recommendations rests on changing human behavior in relation to the environment and patterns of consumption.

The most relevant point of comparison to China's present state is Taiwan, the Republic of China. With their cultural homogeneity, rapid economic growth and ensuing pollution, a comparative analysis of China and Taiwan provides a potential roadmap for China's future.

Although both Taiwan and China were once governed by highly centralized authoritarian governments, due to its relatively freer society, Taiwan was influenced by foreign environmentalism in the 1970s, about 10 years prior to the awakening of China's environmental consciousness (Weller 162). Taiwan's recent democratization has engendered a greater public space that encourages participation in the environmental movement; after Taiwan instituted political reforms in 1987, the number of NGOs ballooned. Conversely, China's policies prohibit and discourage the formation of organizations that may counter state power and the situation for Chinese NGOs is suggestive of Taiwan's prior to 1987 (Weller 123, 163).

Nevertheless, there are significant areas of divergence that currently prevent China from following in a similar fashion. China's environmental destruction has resulted not just from internal mismanagement, but also as a result of China's status as exporter to the world.

With China as the world's factory, the country has become "*more* reliant on energy consumption" in order to promote the export of its goods. The demand for cheap manufactured goods from China has further contributed to the suppression of coal prices (Harris and Udagawa 632). Consequently, Americans have profited for too long at the expense of the Chinese and their environment. Producing for the world, China's petrochemical plants, semiconductor factories, strip mining facilities, the paper industry, and the furniture industry have led to massive resource depletion and environmental damage (Economy 63-4).

As the country with the largest demand for Chinese goods, the U.S. has played a significant part in developing an incentive structure that encourages industries to set artificially low prices in order to maintain the supply of exported goods. Over the past decade, U.S. demand for timber products increased "imports of Chinese timber products by more than 8 times in terms of value" while the "the EU increased its imports of Chinese timber products by almost 5 times in terms of value" (Stark and Cheung 2).

As the leader of industrialized nations, the US bears a considerable share of responsibility into developing and legitimizing a system of economics that takes the value of environmental resources, pollution, and externalities into account. Calls for China to improve its environmental record will only appear hypocritical and demeaning unless the U.S. is willing to acknowledge its own disproportionate consumption of natural resources. For instance, the average American consumes eight times the amount of paper that the average Chinese consumes (Stark and Cheung 2). The unrestrained U.S. consumption has only served to further incentivize China's economic growth at the expense of the environment.

The Kyoto Protocol assigns carbon emissions released from the production of goods to the country of production, which further serves to downplay the role of US overconsumption.

From 1990-2008, developed countries have claimed to cut their carbon emissions by almost 2 percent; however, a new report suggests that once the carbon costs of emissions from imported goods are taken into account, the emissions of developed economies have actually risen 12 percent. This new method of accounting for imports suggests that US emissions have increased by 25 percent from 1990-2008 -- a substantial increase from the conventional measure of 17 percent. The discrepancy between these numbers is attributable to China's position as the world's factory. While globalization has brought many benefits, 75 percent of the emissions that developed countries have outsourced are now released in China (Peters et al. 2-4).

Domestically, China has made progress in reforesting its land. From 2000 to 2005, China planted 20 million hectares of trees, a direct response to a logging ban imposed after deforestation along the Yangtze River led to destructive flooding (Mygatt). Unfortunately, China has increased imports of foreign timber – oftentimes illegal -- in order to meet demand for paper products. While China's forest cover has increased, the importation of timber from other countries only serves to reinforce the prioritization of economic growth at the expense of the environment. Instead of confronting the primary instigator – global desire for paper goods – the problem has only been passed onto another country.

While Chinese have every right to enjoy the same standard of living that citizens of developed nations have been able to enjoy, humanity's relentless growth and consumption is pushing up against Earth's environmental limits. As Hu Kanping, co-author of the Friends of Nature's 2011 Annual Report on Environment Development of China, suggests in regard to Beijing's burgeoning ski industry, humans must make compromise on their consumer desires: "The key problem is not how much water is being taken up by the skiing industry, but whether it is suitable for such a water-guzzling industry to thrive in Beijing, a city that is already thirsty"

(as cited in Wencong).

Humanity – from individual consumers to academics -- has fooled itself into believing that recycling or even “green consumption” will allow us to retain our standard of living while reducing our collective impact. Such thinking completely sidesteps the true issue. Humanity should instead be concerned that there is enough demand to foster growth of China’s new ski industry or to elicit widespread deforestation of land given our dire environmental predicament. New reserves of natural resources have not been found and even advances in technology have not yet been able to replicate the environment. The only independent variable left to manipulate then, is our actions and ourselves.

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