

**GOVERNING THROUGH ENVIRONMENT (HUANJING): SUSTAINABILITY, VALUE, AND CITY  
BUILDING IN DALIAN, CHINA**

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**ABSTRACT**

This paper examines how the environment is problematized and targeted for governmental intervention in contemporary China. It argues the environment is made action-able through market logics, through mechanisms that measure and quantify (particularly in monetary terms), and through the localization of environmental strategies. These three modes of governing not only foster the development of sustainable city building practices, but they also affect the way the population is governed, regulated, and valued. This leads both to the construction of new kinds of urban places, such as “green” cities with pedestrian plazas and wide grass lawns, and to the emergence of new types of “desirable” urban citizens, that is, middle class professionals and consumers who exhibit high cultural and quality levels (expressed in the terms *suzhi*, *wenming*, *wenhua*). The paper thus asks how “the environment” is mobilized as a source of value – whether as market value or cultural capital – that is embodied in both people and places in urban China. This discussion draws on over ten years of fieldwork in and research about Dalian, a major port city in Liaoning Province in northeast China.

## INTRODUCTION

*Huanjing*, environment, is a common word in everyday conversations in China. It is used to depict investment environment (*touzi huanjing*), working environment (*gongzuo huanjing*), recreational environment (*yule huanjing*), family environment (*jiating huanjing*) and the natural environment (*ziran huanjing*). The written character “huan” can variably mean ring, link, and surround or encircle, while “jing” may mean condition or situation, border, boundary, or area. The term *huanjing* thus may reference the conditions that make something possible, such as the conditions that allow for good returns on one’s business investment; it also may depict the spaces in which something occurs, such as the space of the city or the family; and it may help demarcate one site from another, such as in the comparison of two city or family environments. An important component of environmental discourses in contemporary China, however, is the way that the environment is mobilized as a source of value, whether as monetary value or cultural capital. Sustainable urban development practices, for instance, help fashion “green” cities that prioritize the ecological and biological well-being of the city and its population, as well as the conditions for financial investment. Yet while sustainable urbanism creates spaces with new forms of social and monetary value, it also specifies particular kinds of citizens to fill these spaces – specifically middle class, well-dressed consumers who embody civilized (*wenming*) behavior and know, for instance, that they should not tread on the expansive green grass lawns (see Hoffman 2003).

This paper examines the forms of reasoning and technical practices that have shaped the emergence of “green” city building in contemporary China, using Dalian, a major port city in Liaoning Province as an example. It asks how the environment has been tagged as a site of governmental action and intervention by state and non-state actors alike, including municipal planners, central government officials, NGOs, international agencies, and foreign specialists. What kinds of rationalities and forms of thought are used to understand the environment, to make it action-able and practicable, that is, to render it “thinkable in such a way that it is amenable to political deliberations” (Rose and Miller 1992: 179)? As the environment is made visible and action-able in new ways – such as through the market mechanism, calculative decision-making, and quantification – new forms and assessments of value also emerge.

Dating from Japanese occupation of the city (1905-1945) and continuing through the Maoist era, governing authorities invested in heavy industry in Dalian, making the city famous for oil refining, chemical production, and ship building enterprises – and for pollution. In the reform era, however, local government officials have been working to remake this industrial landscape and identity. A recent domestic publication about Dalian reads, for instance, “In the evenings, when the sun’s last rays shine through clusters of high-rises onto Victory Square, one can truly get a feel for how far Dalian has come. Breathing in the light, salty air, well-dressed young people mingle in the square, sometimes standing by the public stage, listening to beautiful songs. Small shops surround the square, as well as small cafes and restaurants. The square is harmonious and serene” (Li and Xue 1999: 32). As urban planners help construct city spaces with light, salty air and commercial and leisure facilities in central areas, they also engage in a process of shaping the kinds of citizens who inhabit these spaces. Here this refers to people who stroll across plazas with piped in music and who commute along flower-enhanced boulevards.

Contemporary techniques that target the natural environment for action are significant because, as Helen Dunstan has argued, “there was no word in the late traditional Confucian-trained administrator’s lexicon directly corresponding to the modern word ‘environment’” (1998: 587). Dunstan acknowledges that historical records show some administrators exhibited “environmental thinking” (e.g., concerns about food resources or deforestation), but it was, she argues, “unsystematic” (Ibid.: 600).<sup>4</sup> This is not to argue that imperial officials took no organized action on the environment, what Elvin calls the “collective ‘management of the countryside’ (*jingye*)” (Elvin 1998: 9). Rather, it is to argue that the official focus was on caring for the social and cosmological worlds, central features of Confucian administration, rather than the natural world per se. Scholars of late-imperial times argue there was no systematic focus on the environment that one might find in a naturalist, nor was there a concern with the health of the environment, that one might find in a contemporary environmentalist. Weller and Bol make a similar point about Neo-Confucianism, arguing that scholar officials cared about the integration of “heaven-and-earth” in terms of “the integration and coherence that humans should try to establish in social life” rather than in terms of “the natural order” (1998: 482). They did not, in other words, adhere “to a biocentric view of the world” nor were they “concerned with the ecological state of the environment” (Ibid.: 483, 483).

In addition to the social and anthropocentric understanding of the environment, imperial rituals linked the heavens with imperial politics, seen in a focus on calendars and time-keeping (Ronan and Needham 1981, Weller and Bol 1998), and in the idea that human behavior affected the weather, what Mark Elvin terms “moral meteorology” (2004: 413-436). Scholar officials, McNeill argues, “were taught to see a link between natural events and imperial politics, and to propitiate, placate, manage, and manipulate nature

in the state's interest" (1998: 37, emphasis added). The natural world was not opposed to social, political, or cultural relations, but was linked with them. It was understood through proper administration for the state, maintaining harmony, and imperial cosmological relations, rather than through ideas about the scientific preservation of natural resources that existed in a sphere separate from the cultural world. Construction of scholar gardens in late-imperial times also suggests that a tamed or "artificial nature" was desirable such that nature went "from an adversary to a friend of humankind" (Santagelo 1998: 618). Yet this kind of interaction between the human world and nature, as both the natural world of "what can be seen in the open air" like plants and animals and as a moral world which "resembles the concept of Tian" (heaven), (ibid.: 624, 625), did not target the environment for governmental intervention as we see in contemporary China.

The idea that the physical or natural environment could be a site of governmental intervention not only presupposes that the environment is a legitimate domain of action, but also that practices which treat the environment as an ecological and natural entity will lead to a better, healthier, and more prosperous place to live. These principles are not new in the reform era. In Maoist China, "scientific" ideas about the environment and how to manage it emerged. During the Great Leap Forward, for instance, directives called for increased agricultural production through "scientific" study and experimentation. These practices made the agricultural world a national field of action and site of governmental intervention – a way to build the socialist nation and secure the well-being of the population. In addition, there were campaigns that targeted insects and birds in the name of a healthy population and secure nation. Flies, for one, were identified as the source of disease and public health campaigns urged people to kill them. At the same time, grass became a sign of a bourgeois lifestyle and citizens were exhorted to pull it up in the name of building the socialist nation. Such practices certainly problematized "the environment" in new ways for cadres as well as common citizens, particularly in terms of revolutionary responsibility. They did not, however, produce the same matrix of practices we identify as sustainability today (although building a walking scale city and supporting the use of bicycles could be). How have practices of sustainability problematized "the environment" in contemporary times? What mechanisms and devices of rule have been used to know the condition of the environment, and to act on it, in the name of the health, wealth, and security of the population?

I argue contemporary notions of the environment have been problematized in three ways. First, through market logics, second through mechanisms that measure and quantify, and third through the localization of environmental strategies. In the case of Dalian, this has led to a city that advertises itself to potential investors as a "green" city, literally turning the environment into profit. These three modes of reasoning not only foster the development of sustainable city building practices through new forms and techniques of governing, but they also affect the way the population is governed, regulated, and valued. For example, Dalian has used rules about who may transfer their household registration to the city, e.g., those with four year bachelor's degrees, and for how much money, as a way to manage population growth and quality of life. As sustainable development gains currency, we thus also see that techniques such as quantification (which obviously was an important mechanism during campaigns like the GLF, see also Greenhalgh 2005) create new social and economic values in the city, which are embodied in particular kinds of people and places. I conclude this paper by suggesting that an examination of the interplay of city building and subject formation draws our attention to how sustainable urbanism "concerns not only practices of government but also practices of the self" (Dean 1999: 12).

## **SUSTAINABLE URBAN DEVELOPMENT: ENVIRONMENTALISM AS A DOMAIN OF GOVERNING**

In this section I examine how actors at differing governmental levels, such as the United Nations, the Chinese central government, and Dalian's municipal government – all of whom have had different investments in this domain – have constituted the "environment" and its "well-being" as targets of governmental action and intervention. Following the 1972 Stockholm Conference on the Human Environment, China began enacting national environmental protection laws as the country "became increasingly concerned with the adverse effects of economic development" (Ma and Ortolano 2000:16).<sup>8</sup> The First National Environmental Protection Conference was held in August 1973 after this Stockholm Conference (Jahiel 1997: 82) and China's Environmental Protection Law was first introduced in 1979 and promulgated in 1989.<sup>9</sup> Along with national level laws, cities also began opening Environmental Protection Bureaus (see Jahiel 1997, Ma and Ortolano 2000). And in 1992, the year of Deng Xiaoping's famous southern tour (*nanxun*), "sustainable development was formally adopted by the Communist regime" (Lo and Leung 1998: 502), becoming an "explicit" part of the Ninth Five Year Plan in 1996 (ibid.: 503). At the same time, China's adoption of environmental codes, policies, and responsibilities is a part of wider systems of environmental regulation and forms of transnational authority and knowledge about "nature" and sustainability. Thus, sustainability in China emerges, as Pigg has argued in the case of AIDS programs in Nepal, "out of an already formed template of accepted facts...and wisdom" (2001:

481). The techniques used in the management and development of the environment in China, must be understood within a broader context of environmentalism to appreciate the manner in which value and worth is created in a city like Dalian today.

Yet China also continued to emphasize that it was a developing nation with limited resources and a large population and therefore economic growth remained “a prerequisite for incorporating principles of sustainability...into development” (Nielsen and McElroy 1998: 31, see also Lo and Leung 1998). Even as scholars claimed that “China’s deteriorating environment [was] already a major retarding factor,” China argued it would implement sustainability on its own terms (Smil 1993: 201, emphasis added). For instance, a national report on sustainable development from 1997 reads:

Experience in history has led us to believe that sustainable development cannot be attained when the populace is plagued by backwardness and poverty...Economic development, as the nations’ central task, is essential to raising social productivity, improving the competence level and living standards of the people, and achieving sustainable management of natural resources and protection of the environment...Economic and social development requires strict control of the population growth, improvement of the competence level, as well as protection of the environment and sustainable use of natural resources (NRSD 1997).

The language of this report shows how concerns about environmental resources, population control, and improvement of the people are interconnected in governmental rationalities, essentially wedding environmental protection with population quality and questions of subjectivity.

### **Market Mechanisms**

As with many other fields of action in reform-era China, the environment has been made knowable and action-able through market logics and rationalities. This market orientation appears in the use of market mechanisms as incentives for environmental compliance (e.g., polluter fees) as well as in the extension of profitability to the environment itself. Turning the environment into a form of profit is not only about linking environmental protection with economic development, but it also encompasses the notion that an environmental plan may produce profitability for the city, such as in increased real estate values and business investments. A report titled “Dalian Promotes its Competitiveness through Environmental Revolution” claims that Dalian has been successful in attracting “world famous enterprises” because of “the city’s perfect ‘environment’ ” ([www.dalian-gov.net](http://www.dalian-gov.net)).

Also, as we see in the quantification discussion below, “monetization”, literally expressing one thing in terms of its cash equivalent, creates “a new form of visibility” for the environment and environmental costs, making “new procedures of decision making” about the environment and city building “possible” (Rose and Miller 1992: 200). What these and examples in the following two sections (measurement and localization) illustrate is that there is a new way to think about, manage, and take action in China today – that is, through market mechanisms that are seen as “rationalizing” governmental action (see also Hoffman forthcoming). Maoist forms of governmentality also were concerned with the welfare of the nation, but state planning operated in a different way than marketization does. Under reform era visions of development, national well-being becomes intimately linked with material rewards and market-based success. The pervasiveness of a market idiom to govern the city also valorizes particular kinds of public spaces and citizens to fill them.

### **Quantifiable Measurement**

While market mechanisms were pervasive in the way the environment was made actionable, reviewing material about sustainable development in China also reveals the importance of quantifiable measurement. The environment, in other words, has been actualized as a target of governmental action – by global environmental discourse, academics, and Chinese governmental organizations and officials – through devices that quantify in order to show progress and in order to rank places relative to others. Numbers and quantification also help establish goals and targets that the state apparatus mobilizes to meet (see also Greenhalgh 2005).

Through these mechanisms of quantification, the environment becomes a way to demonstrate status, whether as membership in international environmental communities, as a model for other cities to follow, or as a desirable site for leisure or business activities. Measurements may be in the form of statistics about wastewater, for instance, or it may be hierarchical, as in the number of awards Dalian has received for its environmental urbanization practices. Quantification provides evidence of “progress” and

“accomplishment,” although always in the context of continued “need” for further resources to meet development goals. As scholars have noted in development studies, these processes maintain and naturalize differences between less and more developed places (e.g., Escobar 1995, Ferguson 1990). These measurement systems make the environment knowable and practicable, and a legitimate realm of governmental consideration and concern.

A clear example of the use of statistics and measurement in problematizing the environment for governmental action comes from an academic piece that compares Shenyang, the capital of Liaoning Province, and Dalian. In this case, a political scientist offered statistics and tables to assess the environmental state of these two cities. The material included the number of industrial enterprises, industrial waste water (e.g., 23.2 % of the volume of treated wastewater in Shenyang was at discharge standards, compared to 61.4% in Dalian), as well as the number of environmental protection projects initiated in 2001 (12 in Shenyang, 84 in Dalian) and the number of people employed in the municipal Environmental Protection Bureau (200 in Shenyang and 800 in Dalian) (Shin 2004: 276, 284). My point is not to evaluate the accuracy of such statistics to assess the degree of environmental institution building and policy making in these two cities. Rather, I am interested in the social fact of measurement and quantification in assessing sustainable urban development, and in noting the role of academics in this process. Statistical comparisons make sustainable development knowable and actionable (e.g., Shenyang needs more environmental protection projects).

Similarly, in her study of population policies, Greenhalgh (2005) argues that we must look at the way numbers are used to construct and define a problem. Numbers, she argues, were used to “know” what was wrong with China’s population and to identify the problems of size, quality, age, and rate of increase. Moreover, as purveyors of “truth” and scientific fact, the numbers were a powerful form of authority in the field of population control. They not only framed the problem or “abnormality” but they also helped to create new targets around which the state apparatus could be mobilized. Calculation and comparison became particularly important modes of thinking, as “the masses, guided by newly numerically savvy cadres, were invited to calculate the economic costs of excessive population growth – to the nation, village, and family – and to compare the prosperity of villages and families that had many offspring with those that had few”(Greenhalgh 2005: 366).

The United Nations has numerous projects that “know” the environmental state of countries and cities through the use of numbers and quantifiable measurement. One such project is the Millennium Development Goal project, which published a report assessing China’s accomplishments in 2004. The project began after the Millennium Summit when 189 countries committed to meeting the Development Goals that addressed poverty, maternal health, education, HIV/AIDS, and environmental sustainability. In 2004, the first assessment report published by the China Country Team (UNCTC 2004) gave China fairly good marks on attention to environmental matters. China’s investment in environmental concerns – literally the amount of money funneled into these issues – was presented as evidence of progress. The report reads, “China continues to demonstrate firm resolve in halting deterioration of the environment. Environmental spending has increased from 0.7% of GDP in 1996 to a planned 1.7% in 2010, and the country has enacted a considerable body of environmental laws and regulations” (Ibid.: 30, see also Nielsen and McElroy 1998). “Goal” based projects such as this help establish standards and norms of sustainability on multiple scales by measuring and quantifying achievements. Translating environmental achievement into a cash amount (monetization) makes sustainability knowable to, and assessable by, international agencies, signaling “the crucial work played by numbers” in China’s sustainable governance (Greenhalgh 2005: 370).

Agenda 21, another UN generated project, emerged from the UN Conference on Environment and Development in Rio de Janeiro in 1992.<sup>11</sup> This project is a good example not only of how international organizations play an important role in cataloguing, naming and monitoring the efforts of countries like China, but also how they integrate market rationalities into environmental governmentality. Agenda 21 called on all nations to develop environmental and development strategies, which China did, enacting its own Agenda 21: White Paper on China’s Population, Environment, and Development in the 21st Century in 1994 (see ACCA n.d.). This project has made market-oriented mechanisms, such as “user taxes, tradable permits, elimination of subsidies,...and ‘polluter pays’ doctrine” crucial forms of environmental governance (Fryxell and Lo 2002: 36) and the UN Development Programme is explicit about its desire to use “market forces to make efforts in environmental governance efficient and sustainable” (UNDP n.d., emphasis added).

The World Bank also engaged in quantification and monetization when it calculated the “costs” of pollution problems. One estimate is that China loses “an annual 8-12% of its \$1.4 trillion GDP in direct damage,” ranging from the effects of acid rain to aid distributed after flooding to the medical and time-lost

costs of health problems (Economist 2004: 56). The government has responded to such statistics-based knowledge for instance, by establishing a new category called “green GDP” which aims to reflect the environmental costs to economic growth (Ibid: 55).

A prominent method of pollution control that works through measurement, market mechanisms, and monetization is discharge fees. These fees, based on the idea that economic incentives will help control pollution emissions, are one of what have been called the “three magic weapons” (Sinkule and Ortolano 1995: 2).<sup>12</sup> Early implementation of a fee-based system met with resistance from enterprises who did not want to pay. Banks were enlisted to help municipal Environmental Protection Bureaus by automatically transferring the fees. This led to a long-term acceptance of the polluter fee system, essentially turning this mechanism into a kind of polluter’s tax (Jahiel 1997).

A common form of measuring a city’s achievement – with great stakes for the city itself – is through international and national competitions for environmental awards. These awards encourage cities to enact environmentally friendly development policies by relying on the power of competitive hierarchical rankings. Local authorities, such as Dalian’s municipal government, have much at stake in these quantifications and assessments for they could bring the city recognition and material benefits such as business, leisure, and government investments – or, potentially, embarrassment. One report claimed that after Dalian was honored as a Global 500 environmental city by the UN Environment Programme “the value of the buildings in Dalian [rose] from 70 billion [to] more than 300 billion” (www.dalian-gov.net). In what has been called a uniquely Chinese method of environmental assessment, the Environmental Protection Agency gathers data from 32 major cities, ranking them in terms of their environmental quality. Sinkule and Ortolano report that twenty indices are used “covering the areas of air, water, solid waste, noise, and afforestation [which] are evaluated and weighted to come up with an overall score for each city” (1995: 38).

Dalian has been quite successful in these and international competitions, particularly under the leadership of Bo Xilai, who was mayor from 1993 to 2000. Mayor Bo championed a strategy of “greening” the city with trees and grass, relocating industry out of the city center to the suburbs (see below). His efforts were rewarded well. In 1999, Mayor Bo was awarded the UN Habitat Scroll of Honor Award; in 2000 Dalian’s urban environmental construction project was awarded the Best Practice Award in Dubai International Human Settlements Development of the Year; also in 2000, Dalian was named one of the Ten Best Habitable Cities in China at the National Advanced Forum for Real Estate; in 2001 the city reached the Global 500 in Environment issued by the UN Environmental Programme, and the city was the first recipient of the national Outstanding Tourist Attraction Cities Award. Also, according to the city’s website, Dalian has received a number of “national awards in landscaping, environment improvement, sanitation and dwelling, etc. It was also identified as a ‘leading city in environmental improvement in Asian-Pacific Region’ by the UN.” (www.dalian-gov.net). In fact, Dalian has won so many awards and passed so many national level standards, that “it is now exempt from annual nationwide pollution inspections” (Floracruz 1999) and it is not allowed to participate in national environmental competitions so as to give other cities the chance to win (Alana Boland, personal communication). While awards such as these make an impact because they are granted by international and national organizations, they also recognize actions taken at the local level.

### **Localization of Sustainable Development**

Local governments, including municipalities, have experienced increased autonomy from the central government in the reform era. This pushing out of development and revenue generating responsibilities, what some have called a “downloading” (Skinner et al. 2003), has impacted how sustainability is targeted as an object of governmental action – and by whom (see also Sinkule and Ortolano 1995). Local governments, like Dalian’s municipal government, have proposed sustainable urbanization strategies; municipal Environmental Protection Bureaus found they were responsible both for regulating pollution producers and for generating revenue to support their activities, leading to sideline activities like water treatment plant design and consultation (Sinkule and Ortolano 1995: 10); and in many instances, the health of the local population and pollution control have been shifted from a social and collective responsibility to a private responsibility.

For instance, a study of water pollution management in Zhejiang found the use of “a contractual system of environmental responsibility” along with environmental impact assessments, pollution taxes and fees, and time-based rules for completing water treatment facilities (Skinner et al. 2003: 13). “Contractual” responsibility may be understood in contrast to a “social” responsibility for the environment, indicating that along with a localization of national objectives, one may find forms of privatization. The localization and privatization of water management requires what the Millennium Development Goals report calls “a

new mindset for water management officials, who must begin to see themselves as collaborators with the private sector and civil society in the management of water resources" (UNCTC 2004: 34, emphasis added). This new mindset also has allowed NGO's to mobilize, such as Friends of Nature (*ziran zhi you*), "although the autonomy of these green groups remains doubtful" (Lo and Leung 1998: 515). Nevertheless, the government has turned to devices such as general environmental education for the public,<sup>13</sup> advanced training in environmental studies, institution building, and the use of journalists as "watch-dogs" (Ibid.: 519) in order to control pollution and enact sustainable development. Localization, in other words, also refers to the emergence of new mechanisms for governing, specifically for the objective of sustainable development.

Given the awards Dalian has won and the extent to which it was a model of "green" urbanism for other cities in China, it offers a good site for understanding the dynamics of localization. Dalian has enacted what academics have called Dalian's environmental economy (*Dalian shi huanjing jingji*). In a recent article in the Journal of Dalian University, two scholars describe this as an economic pattern (*jingji xingtai*) that is composed of infrastructure, economic development, and ecological balance (*shengtai pingheng*), reflecting the relationship between ecology and economics (Xiao and Yang 2003: 96). Dalian's environmental economy marks the localization of this strategy and highlights the productive link between economic development and environmental concerns, rather than seeing the two as opposing forces.

Also, as I have argued elsewhere, the central government's designation of Dalian as a Coastal City in 1984, along with the decision to allow Dalian to report directly to the central government on administrative and economic issues (circumventing the provincial authorities) effectively promoted localization and decentralization (Hoffman 2006). Mayor Bo's force of personality and leadership were important factors as well making him a "director of urban change" (Nas 2005). He was instrumental in promoting the city, making him an entrepreneurial asset as well as a government official responsible for enforcing environmental regulations (ibid.; Jahiel 1997: 85). Moreover, as the central government finds it has a diminished capacity "to demand that national macroeconomic imperatives be mirrored perfectly at the local level; the ability of local governments to direct growth and to interpret and mediate social and environmental issues has increased significantly" (Skinner et al. 2003: 5). City governments, like Dalian's, are thus able to take a more "active and direct role in the development process" (Ibid.) enabling a degree of autonomization with the localization.

In the mid-1990s, Mayor Bo enacted a locally developed, but internationally connected, urban planning strategy whose slogan was "strive not to be the largest, but to be the best" (*buqiu zuida, dan qui zuijia*). The strategy drew on Singaporean Prime Minister Lee Guan Yu's "garden city" model that not only included strong social controls, but also helped Singapore stand out in the competition for investments between cities (see Hoffman 2006). Incorporated into this approach were Mayor Bo's Greening Project, factory relocations, recreational site construction, and population control. These are reflected in the city's four-part strategy to incorporate environmental concerns into its urban planning objectives. They are: 1] concentrating political, economic and cultural activities in the city center rather than industrial production; 2] trying to reduce pollution emissions as factories are relocated (so not only about increased land values in the city center); 3] emphasizing environmental innovations; and 4] constructing a multi-centered city structure through squares and transportation hubs (Yang 2003).

These sustainable development practices were advanced and implemented at the municipal level and to a large degree through the efforts of Bo Xilai. Mayor Bo's greening strategy both distinguished Dalian from other cities in China and created a model of sustainability. Sustainability, in other words, was a part of place-making practices that created distinctions between cities. The promotion of Dalian as a model also builds on Maoist era practices that showcased sites of development, such as Dazhai commune and Daqing, the oil city. Maoist era models, however, worked through the production or degree of socialist morality in a particular place, while Dalian's contemporary position as a model is based on how to make it desirable to transnational capital, how to create a certain urban aesthetic, and about the long-term health of production and the population.

Dalian's municipal government's emphasis on its "green" urban image is not without its critics, however. A recent article in the paper serving the real estate industry (*zhongguo fang di chan bao*), for instance, notes that Dalian worked hard on the city's image and environment, building grass lawns, repairing factories, holding major conventions and festivals and promoting the "Hong Kong of the North" slogan, but they argue that in the twenty-first century, the city's position "gradually decreased" (*zhu jian jiang*). Interestingly, the most significant reason, the article attests, is not pollution or environmental degradation, but rather the lack of industry to sustain the image. "People all know about Dalian, but they don't know what famous companies Dalian has," they write, comparing the city to Qingdao, which is just beginning to show off its talents (*zhan lu tou jiao*) (Lou 2003). The contemporary modeling of cities and

differentiation of Dalian from other places foregrounds how the localization of sustainable development models is intimately intertwined with the market. The entrepreneurial nature of city planning and promotion leads to market-based valuations of land and often to class-specific city spaces.

Thinking of the city and its environment in marketized ways certainly conditions the social and spatial effects in the city. Mayor Bo's Greening Project, for instance, did lead to large grass lawns, extensive parks, and flower pots along major arterials in the city,<sup>14</sup> but it also led to displacement of some citizens and the valorization of commercial and retail spaces in the center of town. When the policy was first put into place, residents of the city complained about their own dislocation. Yet as the city received more recognition for its environmentally-friendly practices, positive representations of this strategy drowned out the criticisms that I heard. Company executives as well as government officials credited the Greening Project with helping to make Dalian more attractive to investors and tourists, with some arguing "it both improved living conditions and attracted economic investment" (Li and Xue 1999:31).

The transformation in real estate values is closely tied to Mayor Bo's strategy of relocating industry from the city center to the suburbs (98 pollution-generating factories were moved, UNEP 2001).<sup>15</sup> An often-cited example in the city was the relocation of the Dalian brewery from Qingniwaqiao, directly across from Labor Park. Common lore was that the workers were not happy about the move and people in general were skeptical about this kind of urban transformation, but that after they saw the underground parking garage and the new green and flowering open space at that site, they agreed with Mayor Bo's vision. This indicates that some citizens come to concur and reenact these values and aesthetics. I also met the head of a plastics factory that was located just opposite the entrance to the port area. His state-owned unit had been directed to move the polluting production facility to the suburbs. He managed this process, while also having his unit keep control of the property downtown. The plastics unit opened a hotel and restaurant complex, which was significantly more profitable than their production business. The municipal government's embrace of these policies reinforces representations of the city's strategy as a combination of "functional and environmental improvement of the city, and city management based on market mechanism," which a planning official in Beijing claimed indicated that the "environment itself could produce profit" (Yang ESCAP).

Yet while the municipal government is regularly commended for relocating industry out of the city center, it is unclear if it has in fact reduced pollution output. Factories have moved from the center, but not all have been upgraded in the process. This highlights the contradictions in the way the city is becoming environmentally conscious. Factories, and those who labor in them, face dislocation as new kinds of city spaces are privileged. Maoist era "proletariat" urban spaces – and subjects – face devaluation in such sustainable development practices. Thinking about sustainable urbanization as a source of potential prosperity for the city shifts the source of value from the socialist laboring body to the environment itself.

## **CONCLUSION: SUSTAINABILITY AND BIOPOLITICS**

The multiplicity of sources of authority, techniques of governing, and types of actors in contemporary China reflect an important shift from Maoist era forms of governing that privileged state planning and central government direction. They have created a more diverse field of governmentality that encompasses not only state actions, but also market logics of value, transnational notions of valuable human resources, cultural understandings of prestige and status, and as David Bray has discussed here – the building of urban community (2006). The intermingling of these forms of authority and norms of behavior help to frame the emergence of an urban landscape in Dalian that showcases plazas with grass lawns and colorful floral plantings, pedestrian shopping promenades, and a downtown area that is shedding its industrial production facilities and instead embracing modern offices and entertainment facilities.

Sustainability in China has emerged not only through market mechanisms, quantification, and localization, but also through the very questions of quality and subjectivity. I am suggesting that environmentalism which aims to foster a healthy place to live and a prosperous city space is linked with the domain of subject formation in contemporary biopolitics. Sustainable development is about the quality of life, for the population and nature itself, and yet it also is about the formation of particular kinds of subjects in the reform era. These are subjects whose quality (*suzhi*) and cultural level (*wenhua shuiping*) are "high" – and desirable to investment capital and government officials (Anagnost 2004, Yan 2003a and 2003b).

Dalian city government has in fact used the notion of sustainability to justify rather strict rules about who may transfer their household registration to the city. They argued, in essence, that the quality (e.g., education level) of the person was an important criterion in decisions related to the management of the

city's population growth rate. An examination of recent government documents in China reveals a noteworthy linkage between environmental protection, economic security, and concerns about raising the quality of the population (see also Greenhalgh 2005, Greenhalgh and Winckler 2005). For instance, one of the major guidelines in the Special Plan for the Development of Science, Technology and Education (managed by the administrative office of China's Agenda 21 and part of the 10th Five-Year Plan [2001-2005]) reads:

The population, resources and environment work bears on the economic and social security of the country, on the improvement of the quality of life for Chinese people, and on the survival and development of the Chinese nation (STOSD n.d.).

These considerations are not distinctly post-Mao, but they are different in the way market mechanisms and the pursuit of economic growth and profitability are intertwined with population quality and security concerns (see also Sigley 2004). Together, the environment and the population are taking on new notions of value, as sources of economic profit over the sustainable long-term. Thus, domains that seem disparate at first glance – here sustainable urban development practices and evaluations of human value – are in fact linked. They are linked through the forms of reasoning used to govern these fields of action (e.g., market logics, measurement). Yet they also are linked through new forms of spatial and social valuation.

## ACKNOWLEDGEMENTS

I would like to thank Monica DeHart and Jennifer Hubbert for their comments on drafts of this paper. And I thank Shane Muchow for his insightful research assistant work. I am responsible for the failings of this piece.

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