



# ASIANetworkExchange

*A Journal for Asian Studies in the Liberal Arts*

ISSN 1943-9946

ISSN 1943-9938

Fall 2013 Volume 21 no. 1



# ASIANetwork Exchange:

*A Journal for Asian Studies in the Liberal Arts*

## **EDITORS**

Erin McCarthy, St. Lawrence University

Lisa Trivedi, Hamilton College

## **ADVISORY BOARD**

Donald Clark, Trinity University

Lucien Ellington, University of Tennessee at Chattanooga

Carol Gluck, Columbia University

Rita Kipp, Georgian Court University

Barbara Metcalf, University of California, Davis

Henry Rosemont, Jr., Brown University

Harold Roth, Contemplative Studies Initiative, Brown University

## **EDITORIAL BOARD**

Timothy Cheek, University of British Columbia

Ben Dorman, Nanzan University

Steve Emmanuel, Virginia Wesleyan University

Pat Giersch, Wellesley College

Jih-Un Kim, Webster University

Siti Kusujarti, Warren Wilson College

Darrin Magee, Hobart and William Smith Colleges

Mary Ann Milford, Mills College

Brandon Palmer, Coastal Carolina University

Marjorie Rhine, University of Wisconsin, Whitewater

Laura Ring, University of Chicago

Paul Watt, Waseda University

*ASIANetwork Exchange: A Journal for Asian Studies in the Liberal Arts* gratefully acknowledges the significant support it receives from Hamilton College and St. Lawrence University.

# Contents

## Articles

**NOTES FROM THE EDITORS** 1

**CULTURAL HERITAGE PRESERVATION IN MODERN CHINA: PROBLEMS,  
PERSPECTIVES, AND POTENTIALS** 3

*Lisa Bixenstine Safford*

**“DIVERSIFYING” MASCULINITY: SUPER GIRLS, HAPPY BOYS, CROSS-  
DRESSERS, AND REAL MEN ON CHINESE MEDIA** 16

*Huike Wen*

## Special Section Fall 2013: Asian Environments, Guest Edited by Darrin Magee

**MOBILIZING MOTHERS: THE FUKUSHIMA DAIICHI NUCLEAR  
CATASTROPHE AND ENVIRONMENTAL ACTIVISM IN JAPAN** 27

*Nicole Freiner*

**WATER POWER: THE “HYDROPOWER DISCOURSE” OF CHINA IN AN AGE OF  
ENVIRONMENTAL SUSTAINABILITY** 42

*Yuen-ching Bellette Lee*

**HARMFUL ALGAL BLOOMS IN ASIA: AN INSIDIOUS AND ESCALATING  
WATER POLLUTION PHENOMENON WITH EFFECTS ON ECOLOGICAL AND  
HUMAN HEALTH** 52

*Patricia M. Glibert*

## Book and Media Reviews

**A READER’S COMPANION TO THE CONFUCIAN ANALECTS** 69

**REVIEW OF KAREN STRASSLER’S REFRACTED VISIONS** 71

## Notes from the Editors

We are delighted with the 2013 fall/winter issue of *ASIANetwork Exchange: a Journal of Asian Studies for the Liberal Arts*.

Leading the issue are two articles focused on contemporary China. We begin with Lisa Safford's "Cultural Heritage Preservation in Modern China: Problems, Perspectives, and Potentials." Safford examines a range of issues relating to historic preservation raised by China's preparations for the 2008 Beijing summer Olympics. How, Safford asks, do the Chinese come to understand the relationship between their cultural heritage and their interest in modernizing China? Huike Wen's "Diversifying masculinity: super girls, happy boys, cross-dressers and real men" examines a range of masculinity that can be observed in the Chinese media today. In doing so, Wen asks us to consider the relationship between contemporary media technologies and the formation of modern identity. Her piece draws our attention to the extent to which contemporary Chinese identity depends upon masculinity in its many formations. Together, these articles speak to current concerns and priorities in China and should be relevant for a wide range of courses across the social sciences and humanities.

Also included in this issue are three articles that continue our theme on environment-society relations in East Asia, guest edited by Darrin Magee. The idea for this theme grew out of the 2012 Half the World Symposium Series at Hobart and William Smith Colleges, where the Henry Luce Foundation generously funded a multi-year Asian Environmental Studies Initiative. Two environmental issues that have garnered much popular attention in recent months have been the recurring air pollution that has intermittently blanketed eastern China with particulate-laden smog, and the soul searching the Japanese people and government have done about whether or not to restart the country's nuclear program, which provided nearly one-third of Japan's electricity but was shut down completely following the Fukushima Daiichi disaster of March 2011. Both issues suggest a need to rethink energy paradigms in East Asia (and elsewhere, of course, but that is well beyond the scope of Exchange!).

Nicole Freiner begins this issue's special section with an examination of the role women's groups have played since the Fukushima disaster, contextualizing it against decades of environmental activism in Japan dating back to the textbook cases of industrial poisoning, Minamata and Itai-Itai diseases. Yuen-Ching Bellette Lee then explores the power of language and the language of hydropower in China, home not only to the iconic and controversial Three Gorges Dam, but also to thousands of other large dams as well as the world's greatest hydropower potential. While she finds that the mutually reinforcing ideology and praxis of hydropower discourse is a powerful tool for legitimizing an unprecedented build out of large-scale hydropower in China, she also provides evidence of contestation, arguing that the discourse is not, in the end, unassailable. Finally, Patricia Glibert maintains the focus on water with her study of the Harmful Algal Blooms (HABs) in East Asia, which result from nutrient loading of water bodies due to overuse of fertilizers, increasing reliance on aquaculture, and population pressures. Glibert's study is a sobering reminder of the fundamental challenges that remain in addressing environmental degradation in this important

region of the world.

The issue concludes with two book reviews. James Peterman has contributed a review of *A Reader's Companion to the Confucian Analects* by Henry Rosemont, Jr., and Thomas Williamson has provided one of *Refracted Visions: Popular Photography and National Modernity in Java* by Karen Strassler.

We hope you enjoy this issue as much as we have enjoyed working with all of our contributors. We look forward to the annual ASIANetwork Conference in April, where we are sure to hear more terrific papers by those within the “network.” Please feel free to contact us directly at [editors@asianetworkexchange.org](mailto:editors@asianetworkexchange.org) if you are interested in scheduling a time to speak with us about prospective articles you would like to submit or a special issue you are interested in guest editing. We hope you enjoy the issue as much as we have enjoyed working towards its publication.

*Erin McCarthy and Lisa Trivedi, Editors*

## Cultural Heritage Preservation in Modern China: Problems, Perspectives, and Potentials

Lisa Bixenstine Safford

**Abstract:** Beijing, motivated by the 2008 Olympics, has impressively modernized in the past decade, replacing crumbling infrastructure and architecture, missing street lights, grey dirt, and weeds with wide boulevards crowded with late model cars, ultra-modern bridges, subways, and skyscrapers. Yet, experts say, everything in China is a trade-off. My focus is on one form of trade-off, the degradation of historic China. Traveling in China exactly ten years after my first visit gave me opportunities to meet with representatives from media, education, and government, and ask: how well has China maintained its cultural heritage in the face of rapid modernization? And how important is it for citizens and government to do so? Today's China, where "everything new is better," must be rendered "livable" for growing numbers of citizens who are part of an ongoing mass internal migration involving relocation from rural areas to rapidly burgeoning cities, increasing pressures to repurpose spaces occupied by old structures. This paper presents current problems relating to historic preservation, and some perspectives for the future.

**Keywords** China; Cultural Heritage; Modernization; Preservation

### CHANGING SPACES

If it is possible for a city to remake itself in ten short years, Beijing, motivated by its international coming-of-age event, the 2008 Olympics, has impressively done so.<sup>1</sup> Beijing's old airport, which in 2000 resembled 1940s Casablanca, has now been replaced by a soaring, airy, and immense modern structure (fig. 1), the biggest construction site in the world in 2007, employing 50,000 workers (Heathcote 2007). Where once there was crumbling infrastructure, infrequently-encountered and rundown twenty- or thirty-year old vehicles, drab tumble-down architecture, absent street lights (making a night stroll on crowded urban streets a decade ago eerily dark), and grey dirt and weeds are now wide boulevards swarming with late model cars, ultra-modern bridges and subways, glass and neon-faced skyscrapers, and grassy lawns bounded by neatly trimmed hedges—all at a cost of over 40 billion dollars (Gross 2010). Yet, experts say, everything in China is a trade-off, which is immediately evident when one approaches the airport runway. The city is shrouded by so much smog that little can be seen even a half mile off—no buildings, vistas, or sun. While the environmental impact is of crucial importance, my focus in this paper is upon another form of trade-off: the degradation of historic China.<sup>2</sup> The new China is a marvel to behold, but is the cost of modernization to be the forsaking of China's traditional culture?

Recent travel in China a dozen years after my first visit in 1998 gave me opportunities to meet with representatives from media, education, and government and ask: how well has China maintained its cultural heritage in the face of rapid modernization?<sup>3</sup> And how important is it for citizens and government to do so? These questions additionally raise thornier questions, beyond the scope of this paper, concerning the nature of cultural heritage: how should it be defined, and what should be preserved?<sup>4</sup> Who should decide—govern-

**Lisa Bixenstine Safford** is in her twenty-sixth year of teaching art history and is Art Department chair and Director of the new Center for Global Interaction at Hiram College. While her expertise is in Western art, Renaissance and Modern, she has received numerous grants from NEH, Fulbright-Hays, AACU, and ASIANetwork to travel and learn in Japan, China, Korea, Vietnam, and India, forming the foundation for four courses, including study abroad, on Asian art and culture.

Lobby of Terminal 3, Beijing Capital International Airport, 2008. Photo: Wikipedia



ments, academics, professionals, developers, or local communities? And, ultimately, can rapid modernization be integrated with the past, resulting in an authentic continuation of history, or will it descend into, as Mee-Kam Ng asks, “just a nostalgic twist of an increasingly consumptive orientated society, turning history into a commodity to suit the taste of the affluent classes” (Ng 2009, 269), leading to gentrification or the “Disneyfication” of artifacts? Given the enormous pressure to redevelop city centers and add gross floor area (GFA) in the wake of massive internal immigration, the government has walked a thin line between conservation and modern development in their quest to “construct a harmonious society.”<sup>5</sup> Are these desires mutually exclusive?<sup>6</sup> While all of these issues cannot be addressed within the scope of this paper, I turn attention to the current problems relating to historic preservation, and some perspectives for the future.

Each person I interviewed on my recent trip to China responded similarly to my inquiries: with an awkward, defensive admission that they, their institution or government, driven by pressing needs, had insufficiently considered saving cultural heritage. One scholar defiantly rejoined that the U.S., which seems to preserve and memorialize nearly everything, is but 300 years old, while China has 5,000 years of history to contend with. Wang Yingjie of Beijing Normal University lamented that the prevailing view in China today is that “everything new is better,” and developers currently have the upper hand (Wang Interview 2010). All spoke of the unfortunate reality that cities must be rendered “livable” for China’s 1.4 billion citizens, increasing numbers of whom are relocating to cities and demanding ever more GFA. In a country fond of concise sloganeering (the Communist Party line today is “Constructing a Harmonious Society”), the tag for Chongqing city, for example, is “Green, Livable, Safe, Accessible, and Healthy Chongqing;” nowhere in that slogan is there mention of “historic,” despite the city’s 3,000 year history. Historical preservation, it would seem, is the least of China’s concerns today.

#### PROBLEMS

Among the many problems facing historic preservation efforts are two seemingly intractable ones: the absolute top-down process of decision making, and the absence of knowledge among ordinary Chinese of their long and complex history. When I queried

my 27-year-old home-stay hosts in Chongqing—upscale, educated, and newly wed—about recent history, specifically the impact the Cultural Revolution may have had upon their parents, they were perplexed. King and Walls explain that post-Cultural Revolution leaders opposed any teaching or research about the “ten lost years,” focusing instead on recent economic successes “rather than revisiting a past in which the ruling Communist Party was responsible for chaos and injustice” (King and Walls 2010, 3).<sup>7</sup> Matthew Hu, a young Chinese cultural heritage preservationist, confirmed that, “My generation has been taught history in a very censored, standard way that has been tightly controlled and approved by the government – it’s not very in-depth” (*WildChina Blog* 2010).<sup>8</sup> His own education came from working in the cultural tourism industry. Historical photographer Liu Bowen adds, “Our textbooks cover how the Communist Party came to power in China. That’s the only point,” and offers this explanation for public apathy about the past:

Average people--like those who have less education, such as workers or shopkeepers--they really never think about their cultural heritage. They regard places like the Forbidden City as tourist sites, but they never want to research them or know them deeply. I think most young people are not very interested in their past (Archeology.org 2008b).<sup>9</sup>

Concerning top-down decisions in the demolition of the Gulou *Hutong* in Beijing (fig. 2), a very controversial planned destruction of a large neighborhood around the Drum and Bell Towers just north of the Forbidden City, Hu added, “The government has already begun the project. It’s hard to say what we can do at this point. There is no public petition process, so the public cannot be part of the game. Anyone who cares about the *hutongs* can still go and document these areas, and preserve them in that way” (*WildChina Blog* 2010)—as though photographs of *hutongs* (traditional alleyways) and *siheyuan* (courtyard houses) are an adequate substitute for several-hundred-year-old neighborhoods facing a wrecking ball.<sup>10</sup> Some, including official Chinese media, view the Gulou area as little more than a slum, with ramshackle houses crammed tightly together (Sebag-Montefiore 2013).<sup>11</sup> (The houses, many built since the revolution, average twenty-four square yards and, because the passages are three yards wide—too narrow for fire trucks—they are a fire hazard [Watt 2013].) Others, however, take an historical view, describing the area as “kind of the living museums of China, or Beijing at least” (Watt 2013), and “a special place where the past with its historical monuments combines with the everyday life of the inhabitants who often live in very modest conditions” (Krajewska 2009, 63). Yet even these people acknowledge that a population cannot “live only in one-story buildings which spread endlessly” (Krajewska 2009, 63). Since the building boom that began in the mid-1990s, “Nearly 2,000 *hutongs* have been replaced by high-rise apartment buildings. Of the roughly 1,100 that remain, 600 are in ‘protected’ areas, while 500 are still in jeopardy of being torn down” (Archeology.org 2008e). An estimated 1.25 million Beijing residents have been displaced by *hutong* destruction (Meyer 2008a).

Mr. Hu offers a measured assessment of the challenges faced by native preservationists navigating cautiously between their aims and government censors, entailing a sober recognition of individual limitations and economic imperatives, and leading, at least publically, to a conciliatory search for some educational value in the conflict between the two. He observed,

While many see the demolition as a development that will be unsatisfactory to many parties, which I do not dispute, I am more inclined to look at it as a case study in understanding preservation versus economic impact. In the government’s eyes,



not including the public opinion might save them money, avoiding grassroots campaigns and petitioners to stop the development, which would mean jailings (sic) and other methods of control. In that way, they can coordinate a systematic method of renovation within the government. This system of disregarding public opinion, however, is not right, and so the outcome will not be satisfactory (*WildChina Blog* 2010).<sup>12</sup>

But the reality in China, writes Lily Kong from Singapore, is a “lack of openness of cultural perspective and the insistence on using art as propaganda...; culture is an instrument of the Communist Party” for promoting patriotic education (Kong 2007, 393). Thus, Kong noted, unlike in Singapore, “In Shanghai, there can be no public protest. The [new] monuments simply emerged!” (Kong 2007, 401). Chinese authorities provide few opportunities for public input into planned demolitions and rebuilding of neighborhoods.

The 1983 discovery of the treasures of King of Nanyue’s tomb in the deep southern city of Guangzhou points to additional political conflicts related to preservation. The find valorized a vast, autonomous, non-Han Lingnan culture (begun 203 BCE) that prevailed for over a hundred years after the end of the Qin Dynasty in the Pearl River Delta region extending into Vietnam, and whose splendor contravenes official state doctrine promoting a homogeneous Han identity for past and present China. While regional authorities zealously built a splendid museum to display the riches, their counterparts in Beijing were troubled. As Diana Lary clarified, the post 1949 ideological agenda set out “to prove a historical development that was both Marxist and centralizing,” based on Mao’s “great policy of ‘using the past for the present,’” and the Lingnan cultural find called that agenda into question (Lary 1996, 13).<sup>13</sup> Moreover, it didn’t help that the southern Lingnan region was the “first place to bear the brunt of foreign aggression” and the “birthplace of modern [anti-communist] Chinese nationalism,” producing that movement’s most important leaders, including Sun Yat-sen; both of these facts were unmentionable in China before the revival of scholarship after Mao’s death in 1976 (Lary 1996, 17). Yet, as Lary points out, conducting research today is not without risk for Chinese scholars, as it is still subject to the scrutiny of North China (the Communist Party). It is only when a site has tourism appeal and reinforces official doctrine, like the Forbidden City or Summer Palace, that the government spends vast sums to preserve it (Meyer 2008a).<sup>14</sup> In one striking example, two thousand homes were torn down in 2001 in order to reconstruct a half mile of the city walls that had been razed in the 1960s, largely to impress Olympics visitors with China’s past magnificence. The resulting Beijing Ming Dynasty City Wall Relics Park was officially opened in 2002.

#### PERSPECTIVES

Until now, with one exception, which I’ll note later, the loudest voices of outrage over heritage degradation have come from foreigners or expatriates writing in the popular press.<sup>15</sup> Two authors bemoaned the destruction of Beijing in full length books published in 2008: Jasper Becker’s *City of Heavenly Tranquility: Beijing in the History of China*, and Michael Meyer’s *The Last Days of Old Beijing: Life in the Vanishing Backstreets of a City Transformed*. Others, decrying an “orgy of destruction...driving culture out of the capital” (Mills 2008), wrote media accounts on the eve of the Olympics whose titles make their views clear, such as Jonathan Watts’s “Rush to Modernity ‘Devastating China’s Cultural Heritage’” in *The Guardian*, (June 11, 2007) or Edwin Heathcote’s “Modernism Minus Utopia,” in the *Financial Times* (December 28, 2007), in which the author counted 8,000 new building sites in Beijing alone, most of them designed by foreign architects. Heathcote aptly ques-



*Hutong Roofscapes Viewed from Drum Tower, Beijing, August 2007. Photo: Wikipedia*

tioned the hodgepodge nature of Beijing's urban character, and described how "coolly extruded, identikit modernist towers rise beside bland commercial slabs, green-tiled dragon roofs are applied like false noses to dumb façades only a couple of years old. The city is an architectural cacophony leavened by occasional snippets of harmony. Most striking is the contrast between the old city and the crushing march of the new" (Heathcote 2007). No Beijinger could have advanced such critiques, though many feel similarly.

Two issues dominate these writings: concern for disappearing heritage—both exceptional (as in the Great Wall) and mundane (the *Hutongs*—which undeniably in some cases are slums)—and distress over the generic look of modernist, largely foreign-designed architecture that is replacing it, labeled as "soulless" and "creeping imported scraps of foreign globalized culture" (Borg 2010).<sup>16</sup> Heathcote laments that, "Any of these buildings could have been built anywhere else.... Beijing is becoming a realization of the most superficial aspects of a contemporary design culture obsessed with the gesture and the icon, with the cleverness and complexity of its own structure" (Heathcote 2007). Victor Borg observes a similar soullessness resulting from a concurrent fading of intangible heritage:

Much culture is being eroded in China. Aside from New Year, almost all the other cultural events have almost lost their visibility. All that remains of many traditional festivals is some special dishes that a few people still eat. Even some of the manifestations of lunar New Year are dying out. This is a pitiful loss.... [Society is] becoming more individualistic, devoid of community bondage (sic) or sense of belonging, and the new generations [are] seeking flashier and immediate gratifications in life [Borg 2010].

Of related concern is the indiscriminate spiriting of portable patrimony out of China and into Western collections in recent years through looting and smuggling, denounced by Antoaneta Bezlova in the *Asia Times*, her title pleading, "For the Love of Art, Help China." She identified new measures instigated in 2002, by a ruling party with a dubious record of protecting cultural patrimony, to impose restrictions on imports to the U.S. of objects over 95 years old (previous restrictions only applied to items made before 1795, or the end of the reign of Qianlong (1711-1799), the fifth emperor in the Qing Dynasty). In 2004 alone,

“China had 36 large-scale robberies of museums, tombs and temples resulting in the loss of 223 antiquities, according to the State Cultural Relics Bureau. The rate of successful thefts has increased by 80% compared to the year before, the bureau estimates” (Bezlova 2005).<sup>17</sup> The new restrictions, however, are opposed by dealers and collectors alike, both private and public and on both sides of the Pacific, who believe they will have little impact on looting, and who cite much greater degradation of patrimony by government projects such as the Three Gorges dam.

China also has a lamentable record of destroying antiquities during the Cultural Revolution, considering them “symbols of pernicious old thinking and old customs” (Bezlova 2005), to be sacrificed in favor of Mao’s “forests of factory chimneys [that] should mushroom in Beijing” (Gross 2010, 34). Until ten years ago, the Ministry of Foreign Trade sold antiquities abroad to raise foreign currency to fund modernization. Indeed, Bezlova concludes that “with the ascendance of the Communist Party to power, what was left of China’s vast cultural heritage was either destroyed, or confiscated and exported” (Bezlova 2005).<sup>18</sup> However, what began “the suicide of Chinese culture,” as Olshin calls it, even earlier was the modernization efforts of the “new culture movement” that, flourishing between 1915-23, focused on bringing Western ideas of liberalism and science to China, where “the move to discard many aspects of traditional Chinese culture was promoted by the Chinese themselves” (Olshin 2007, 3-4).

#### POTENTIALS

There are a few encouraging developments in recent years that might presage hopeful future directions for the preservation of Chinese cultural history. Chinese students of architectural historiography observe its youth—only since the 1930s have serious studies of architectural history been advanced in China. According to Li Boqian, an archeologist at Beijing University, under communism and until 1978, “We used to study archeology behind a closed door” (Archeology.org 2008b).<sup>19</sup> Such research is essential now, for “with the development of globalization, finding national identities from . . . traditional heritage has become a more important and meaningful research issue than before,” declares master’s candidate Cao Dapeng at Australia’s University of Adelaide. For his 2005 thesis Dapeng developed computer models to compensate for absent historical records of the 1,100-year-old Foguang Temple on Wutai Mountain, which was facing possible extinction (Cao 2005, 19).<sup>20</sup> Cao’s project addresses two problems mentioned above: lack of knowledge among ordinary Chinese of their architectural heritage, and the soulless modern edifices replacing old buildings. Cao hopes his digital technique will teach the Chinese about their own art history through the formation of a digital database of ancient Chinese architecture, “an efficient tool to store, identify and manage these great quantities of data” (Cao 2005, 120). In the future such a database could be used to fully trace the historic development of Chinese architecture. In turn, by “inheriting architectural wisdom and past experience,” indigenous designers, suffering from deficiencies of training during the upheavals of the 20th century, will apply them “now in the creation of a new architecture” (Cao 2005, 120), with the hope of reversing the “new form of cultural colonialism” that currently prevails (Xuefei 2008, 220).<sup>21</sup>

Technology holds promise in another realm: a website devoted to community outreach, with a focus primarily on saving *Hutongs* and the Great Wall, has been created by a grassroots organization called the Beijing Cultural Heritage Protection Center (BCHPC). Founded as an NGO in 2003 by He Shuzhong, Matthew Hu was managing director in 2008 (Heritage-key.com 2009).<sup>22</sup> Their program is ambitious, and not without risk. Hu contends, “What I have been doing now is approaching some student groups and volunteer groups,

and also we want to approach the media, talk to the journalists. We want them to pass on the relevant message to the public” (Archeology.com 2008e). However, founder He Shuzhong laments that “When the Chinese government wants to restore a building, they want to do it fast. The required methods and principles needed to renovate these buildings, however, aren’t fully used. So this process of restoring a historical site often leads to destruction. The more you fix, the more you destroy” (Heretage-key.com 2009).

Although most of the support for the organization comes from international groups, the BCHPC undoubtedly owes its inception to the publication in 2003 of Xinhua News Agency journalist Jun Wang’s controversial bestseller, now in English as *Beijing Record: A Physical and Political History of Planning Modern Beijing* (recently voted book of the year by China Readers’ Journal *Zhonghua dushu bao*, and considered one of the most influential books since 1949, now in its ninth edition) (Jun 2010). The book recounts the transformative socialist rebranding of the city since the birth of the PRC, and upon its publication “ignited a firestorm of debate and discussion in a country where public interaction over such a sensitive subject rarely surfaces” (Worldscibooks.com 2010).<sup>23</sup> It was followed in 2008 by *Cities in the Reporter’s Notebook*, which generated sorrow for today’s Beijing (Floracruz and Chen 2010). Jun’s books, and the sober aftermath of the 2008 Olympics, induced shock over the stunning alterations made to the city, and led other Beijingers to publicly question the cultural cost of modernization. Prominent historians and archeologists were interviewed by Archeology.org, voicing, as censorship would allow, both concern and optimism. Bo Songnian, an art historian working for the past thirty years at conserving the Forbidden City, held that people are just beginning to pay more attention to preservation, and art history is becoming popular among new college students. He noted that now “there is a regulation in our country: when an artifact is found at a construction site, the construction must be halted immediately and can be resumed only after experts [from the Cultural Protection Administrative Bureau] have examined the place” (Archeology.org 2008a). Additionally, the government has a new 2020 master plan that emphasizes more public involvement and the separation of old and new cities to protect the old (Floracruz and Chen 2010).

In recent years there have also been concerted efforts to create community around reestablished traditional festivals at restored or recreated sites in Beijing and elsewhere. For example, in 2008, the Mid-Autumn Festival (August 15) was officially reinstated as a legal holiday that brings visitors and Chinese to the “Dawn Moon at Marco Polo Bridge” (Lugou Xiaoyue) for feasting on seafood, moon cakes, and green oranges (Wei 2012), and viewing a lantern show, Peking Opera performance, and folk art (Dongya 2012). The bridge, which traverses the Yongding River (although diversion of the river to the city has left it mostly dry) fifteen kilometers southeast of Beijing, was built in 1189, covered in asphalt after 1949, and restored in 1986 upon the creation of the Beijing Municipal Government’s Marco Polo Bridge Historic Conservation Commission. In ancient times it was considered one of the Eight Great Sights of Yanjing (ancient Beijing).

Another example, more political in focus, was a commemorative pageant held in October 2010 to mark the 150th anniversary of the sacking of the Yuanminguan, or Old Summer Palace, built in 1709 and pillaged and burned in 1860 by British and French troops during the Second Opium War (Cheng 2010); of course, the attention here is only upon foreign culpability in heritage degradation. The pageant, staged upon the ruins of the site, was accompanied by a call to restore 1.5 million lost or looted objects, which UNESCO asserts reside, among other places, in at least two hundred museums in forty-seven countries. Among the objects are the contested bronze rat and hare head sculptures (cut from full figures), formerly in the collection of late French designer Yves Saint Laurent, which were

798 Space Gallery, January 2009.  
Old Maoist slogans are visible  
on the ceiling arches. Source:  
Wikipedia



auctioned by Christie's in Paris for 14 million euros each (\$19.55 million) in 2009.<sup>24</sup>

Finally, there have been new attempts since 2000 to repurpose abandoned, sub-aesthetic, military warehouse and factory structures such as those found at the 798 Art Zone (Dashanzi District, originally consisting of six factories of unprecedented scale), housing galleries, shops, cafes, and studios. Arguably, these can be equated to New York's Soho or Greenwich Village, or Pittsburgh's Mattress Factory BoBo ("Bohemian Bourgeois") prototypes, but they exploit the uniquely "Socialist Unification Plan" style of massive, military-industrial structures of the 1950s inspired by Soviet examples (designs were by East German architects, Bauhaus-derived, fig. 3), providing a uniquely post-modernist art venue (Hung 2008,186). While these too have foreign roots, they yet provide a window into China's past and a respite from the urban "identikit" modernism or dull, boxy utilitarianism otherwise flooding the cityscape.

#### CONCLUSION

These recent examples of restorations and communal events speak auspiciously to a gradually changing attitude among Beijingers, and Chinese generally. Li Zhiyan, expert in Tang and Song Dynasty art at Tsinghua University, summarized the prevailing popular view on preservation:

Chinese people in general . . . are happy to see Beijing becoming a modern capital. The image of China used to be poor and weak, and that is the image that's left in people's memory. So now, we are happy to see a modern Beijing. However, during the rapid development of the past few years, not enough attention was paid to the conservation of our historical and cultural heritage. As a result, many sites were destroyed, giving way to fast development.

But Chinese people love their own history and culture. Now that people here are having better material lives, and there is a sense of more stability, they are beginning to feel nostalgia for the past, which is part of the old Chinese tradition because Chinese history is so long and old. People have been feeling this way for about 10

years. Many artists began to voice their concerns over our historical culture. And people began to show interest in the conservation of old buildings, old trees, and old courtyard houses. But I still think the promotion in this area is far from enough. It takes time to raise people's awareness (Archeology.org 2008c).

Chinese national identity is deeply colored by the Century of Humiliation (*Bainian guochi*), an era begun in 1842 with the first Opium War, “whereby the British navy pried open the Chinese empire to Western capitalism” (Callahan 2004, 204), arguably the first true challenge to her sovereignty by an entirely alien civilization in her history, and ending with the 1949 Communist victory. The era was characterized by both “foreign aggression and domestic corruption” (Callahan 2004, 204).<sup>25</sup> Mao Zedong proclaimed to the world in 1949 that the Chinese people had finally shaken loose their shackles: “Ours will no longer be a nation subject to insult and humiliation. We have stood up” (Callahan 2004, 203). Li's observation that “China used to be poor and weak” but now revels in economic prosperity and world recognition is a reflection of how much that past identity drives modernization and nationalism today, giving rise at the same time, however, to much soul-searching and self-critiquing of “Chineseness.”

Tu Wei-ming, Harvard professor of Chinese history and philosophy, has poignantly engaged in national and cultural soul-searching, observing that, “since China's backwardness, fully acknowledged by the Chinese intelligentsia as occasioned by the open-door policy of the reform, had deep roots in the Chinese polity, society, and culture, a total transformation of Chineseness is a precondition for China's modernization,” requiring that “the sacred symbols of the ancestral land stand condemned” (Tu 2005, 148-9). This includes her ideographic language and Confucianism, to be replaced by “science, technology, the free market, democratic institutions, metropolises, and mass communication,” all products of the Western world (Tu 2005, 166). Tu, an ardent neo-Confucianist, asks the most piercing question: “Can the meaning of being Chinese be sought in the limbo between a past they have either deliberately relegated to a fading memory or been coerced into rejecting or forgetting, a present they have angrily denounced, and an uncertain future, since they insist that the promise lies wholly in the alien unknown?” (Tu 2005, 149).<sup>26</sup> Put another way, Ien Ang, looking toward the future, asks how the Chinese can “create a modern world that is truly Chinese and not simply an imitation of the West” (Ang 1998, 230)?<sup>27</sup> These are questions only the Chinese can answer. Given the tragic destructiveness and violence of China's recent past, one can only hope that in rising from poverty, weakness, and humiliation, the Chinese do not destroy so much of their heritage that they lose their soul.

#### NOTES

1. Other “events” expediting change in China include the building of the Three Gorges Dam (fully completed 2009) -- “Of approximately 1,300 known archeological sites in the area to be flooded, archeologists have determined that between 400 and 500 are worth saving” (Chetham 2002, 47)-- and the 2010 Shanghai World Exposition.
2. Degradation, derived from dictionary definitions, in this context refers to both erosion and deterioration (e.g. The Great Wall), and lowering of dignity or estimation (e.g. *Hutongs*). These definitions can equally apply to the looting or selling off of antiquities abroad.
3. I am grateful for both my participation in a Fulbright-Hayes Summers Abroad in 2010, and my first travel/learning experience in China via ASIANetwork's Freeman Foundation sponsored College in Asia Summer Institute in Japan and China, 1998.
4. UNESCO (The United Nations Organization for Education, Science and Culture) offers the following definition of Cultural Heritage: “The cultural heritage may be defined as the entire corpus of material signs--either artistic or symbolic--handed on by the past to each culture and, therefore, to the whole of humankind. As a constituent part of the affirmation and enrichment of cultural identities, as a legacy

- belonging to all humankind, the cultural heritage gives each particular place its recognizable features and is the storehouse of human experience” (Jokilehto, 4-5).
5. The “harmonious society” (*hexie shehu*) slogan was adopted by Hu Jintao (General Secretary of the Communist Party from 2002 to 2012) to address “The social tensions brought on by the socioeconomic transformations that followed China’s reforming and opening up” (Zheng).
  6. The International Scientific Committee on the Analysis and Restoration of Structures of Architectural Heritage (ISCARSAH), a technical committee of the International Council on Monuments and Sites (ICOMOS), offers the following in its 2003 recommendations: “Value and authenticity of architectural heritage cannot be based on fixed criteria because the respect due to all cultures also requires that its physical heritage be considered within the cultural context to which it belongs.... The value of architectural heritage is not only in its appearance, but also in the integrity of all its components as a unique product of the specific building technology of its time. In particular the removal of the inner structures maintaining only the façades does not fit the conservation criteria.”  
Further, in its 2004 statement on Cultural Landscapes, ICOMOS states: “Significance reflects the assessment of total value we ascribe to cultural and natural qualities in cultural landscapes, and thus how we evaluate their overall worth to society, to a nation or to local communities. Significance may relate to one particular quality or to a collection of several particular qualities.” These qualities may include: “Expression of aesthetic ideas/ideals/design skills; association with works of art, literary, pictorial or musical, that enhance appreciation and understanding of the landscape; associations with myth, folklore, historical events or traditions; spiritual and/or religious associations, sometimes connected with remarkable Topography; ...association with individual or group memory or remembrance; association with formative intellectual, philosophical and metaphysical ideas or movements, which impact on the subsequent development of landscape; generation of sensory or heightened emotional responses - awe, wonder, terror, fear or well-being, composure, order, appropriateness to human scale” (Jokilehto, 45-47).
  7. The authors add, “Thus, the history of the Cultural Revolution has largely been told by those writing outside China.” Andrews 27-9, notes: “Political leaders did not confront the Cultural Revolution, choosing instead to use euphemistic labels such as the “ten lost years” and addressing it in the most abstract terms.... The causes, the culprits, and the effects of the Cultural Revolution were all too well understood by those who witnessed it, but this collective experience and memory was left largely unspoken and for the most part has not been passed on to the generations that followed.” Of those who were middle aged when the Cultural Revolution occurred: “They survived, but that was all, and most have been too scarred to let others know what happened to them.” Of those who were young: “The silence of most members of this generation comes from a mixture of disillusionment, shame, and fear” (Andrews 2010, 28, 29).
  8. Blogs and online journal interviews form a sizeable portion of the data for this paper. These offer perspectives that may not be well known in China by those wishing to push the boundaries of official journalism into what is deemed by Haiqing Yu “a kind of special political zone,” offering, like the socialist market economy, a “compromise and tacit negotiation between the state and the society” (2011, 380). Yu informs us that China established the internet in 2002 and had an estimated 298 million users, 162 million of whom were bloggers, in 2009 (2011, 379). Yu offers the perspective that blogging is “a deliberative practice among Chinese professional journalists, who, as gatekeepers of the mainstream news media, nevertheless go beyond gatekeeping by watching the ‘gate,’ poking the ‘gate,’ and mocking the ‘gate’ through blogging. I argue that j-blogging represents an experiment of amateur journalism by professional journalists in the blogosphere. The creativity in gate-watching, gate-poking and gate-mocking is situated in the feedback loop of the blogosphere and mediasphere in general. J-bloggers are essential to the mediated loop that is in itself a liminal zone, where ideas, visions, emotions and beliefs can be tested. J-blogging forms a crucial link in the formation of the mediated loop and transformation of the liminal zone, upon which the viability of the Chinese public sphere depends” (2011, 379).
  9. Liu adds: “in our college entrance examination, the point is *recent* history. Ancient history is just kind of acknowledged. You know--it’s okay if you don’t understand it, as long as you know the date of the Tang Dynasty and who created it, that’s enough. But recent people, you should know more about them.”
  10. “Gulou...contains some of the finest Qing dynasty structures in the city, including temples and official residences, as well as a large number of traditional *hutong* -- the distinctive, one-story lanes of Old Beijing.... The proposed redevelopment of Gulou is being driven by the district’s government, and involves turning a 12.5 hectare area around the Drum and Bell Towers into something called the ‘Beijing Time Cultural City’” (Mills 2010).
  11. The “Beijing Time Cultural City” and underground mall planned for this area did not come to pass due to opposition from civic groups. However, in late 2012 the government posted new notices for residents to vacate by Feb. 24, 2013. “The government’s latest plan is to restore the square to its original appearance, as laid out on 18th-century Qing Dynasty maps” (Sebag-Montefiore 2013).  
According to Watt, “They want to restore the Drum and Bell Tower square to the time of the prosperous Qing Dynasty,” but in doing so they will destroy a “rich accumulation of cultural heritage,” said He Shuzhong, founder of Beijing Cultural Heritage Protection Center, a nongovernmental organization. “We believe that protecting cultural heritage is about inheriting, accumulation. It is a process of history. It shouldn’t look like the prosperous time now,” he said. (Watt 2013).
  12. According to Mills 2010: “At the last minute, police stepped in to cancel a meeting on the Gulou development project organized by a local non-governmental organization.”
  13. King and Walls add, “As early as the 1950s, Mao had advocated the study of history from the perspective of

- ‘making the past serve the present’ (*gu wei jin yong*).... [W]hen Chairman Mao used his famous phrase, he meant that history should be seen and used as a tool to advance the interest of the working class today.”
14. Meyer adds, “Between 2000 and 2003, the capital spent three billion yuan (\$360 million) preserving sites popular with tourists—an amount nearly equal to that spent in the same period on preservation nationwide. Another six hundred million yuan (\$72.6 million) was budgeted for heritage protection from 2003 until 2008. The total investment equaled Beijing’s heritage protection outlay ‘for several decades before 2000,’ according to the state-run newspaper *China Daily*, and went to tourist sites such as the Forbidden City and the Summer Palace.”
  15. This was the standard in the recent past: “For the last four decades the international discourse on cultural China has unquestionably been shaped by...writings in English and in Japanese [which] have had a greater impact on the intellectual discourse on cultural China than those written in Chinese. For example, Chinese newspapers abroad often quote sources from the *New York Times* and Japan’s *Asahi Shinbun* to enhance their credibility” (Tu 2005, 155).
  16. Xuefei (2008, 218) explores the confluence of three players—“the state, the corporate sector and foreign architects”— explaining that: “After the accession to the WTO in 2001, domestic service industries were opened up, and a large number of international architectural firms flocked to China for its lucrative construction market. Private developers and city governments sought after prominent international architects for the design of their mega projects, and as a result, some critics argue that large Chinese cities have become ‘laboratories for foreign architects’ to realize their design dreams. The foreign designed structures have replaced socialist monuments as new signifiers of power and modernity.”
  17. See also: Taylor 2006. The U.S. is the most frequent destination for such objects.
  18. An anonymous U.S. museum official (unnamed because of ongoing sensitive negotiations for exhibition materials) further laments that “99% of their museums are decades behind in terms of even basic conservation. The storage conditions at the Palace Museum archives would make you weep” (Personal Interview).
  19. “Dr. Li is director of the Center for the Study of Chinese Archaeology at Beijing University, and director of the Center for the Study of Ancient Civilizations at Beijing University; he has lead excavations at a Bronze Age site, Jin kingdom tombs [A.D. 265-420], in Shanxi Province since 1979” (Archeology.org 2008b).
  20. Cao has since attended SUNY Buffalo’s Department of Industrial Engineering as a graduate student.
  21. “Architectural education was frequently disrupted by civil unrest in the 20th century and Chinese architects were largely isolated from the outside world. The outdated state-owned design institutes could not meet the demand of the construction boom in the 1990s” (Xuefei 2008, 220).
  22. Today Hu is Head of Development at Prince’s Charities Foundation (China). The web site for the Beijing Cultural Heritage Protection Center is: <http://en.bjchp.org/>.
  23. For example, during the Great Leap Forward, massive amounts of timber were lost when they were pulled from historic temples and traditional residences, and city walls and gates were also destroyed.
  24. The auction was sabotaged by a mystery Chinese winning bidder, later discovered to be Cai Mingchao, a “patriot” and advisor to China’s National Treasures Fund, who has refused to pay after China sought to halt the auction. Cai said, “I believe that any Chinese person would stand up at this time... I am making an effort to fulfill my own responsibilities” (*BBC News* 2009).
  25. Callahan adds: “Chinese nationalism is not just about celebrating the glories of Chinese civilization; it also commemorates China’s weakness.... The discourse of national humiliation shows how China’s insecurities are not just material, a matter of catching up to the West militarily and economically, but symbolic. Indeed, one of the goals of Chinese foreign policy has been to “cleanse National Humiliation...” [T]he narrative of national salvation depends upon national humiliation; the narrative of national security depends upon national insecurity.”  
The events cited as the greatest source for Chinese humiliation are: 1. The beginning of national humiliation and the forfeit of sovereignty: the First Opium War; 2. The new expedition of the descendants of pirates: the Second Opium War; 3. A disgrace beyond redemption: Franco-British forces burn Yuanming Garden palace; 4. Nation conquered, country smashed: the Sino-Japanese War (1894); 5. Ghosts of the Black River: the massacres of Hailanpao and the sixty-four villages of Jiangdong [in Manchuria by the Russians]; 6. Deep humiliation of the Boxer Uprising: allied forces from eight powers invade China; 7. There are no national boundaries here: the Russo-Japanese War (1905) 8. A heavy burden to bear: the humiliation of the missionary courts; 9. Dirge of the Songhua River: the events of September 18 (1931: Japanese invasion); 10. Reign of terror in the golden tomb: the Massacre of Nanjing (1937). Missing is reference to the Taiping Rebellion (1851–1864) which, as a civil war, does not fit the humiliation metanarrative (from the book, *A Record of National Humiliation*, cited in Callahan 2004, 204).
  26. Ien Ang argues against a reductive reading of “Chineseness” and defines the concept as a diasporic paradigm: “Language, culture, civilization, people, nation, polity...that has never ceased to both fascinate and infuriate its dedicated scholar.... The view from the diaspora has shattered the convenient certainty with which Chinese studies has been equated, quite simply, with the study of China. ‘China’ can no longer be limited to the more or less fixed area of its official spatial and cultural boundaries, nor can it be held up as providing the authentic, authoritative, and uncontested standard for all things Chinese.” Citing Tu Wei-Ming in *The Living Tree: The Changing Meaning of Being Chinese Today* (1994), this view disputes an essentialist perspective on Chinese identity, and is a “departure from the mode of demarcating Chineseness through an absolutist oppositioning of authentic and inauthentic, pure and impure, real and fake” (224-5). Ang describes Tu’s position as “explicitly neo-Confucianist and largely anticommunist”(229), guided by “an overwhelming desire—bordering, indeed, on obsession—to somehow maintain, redeem, and revitalize the



notion of Chineseness as a marker of common culture and identity in a rapidly postmodernizing world” (231).

27. Ang, drawing from Tu, claims that inspiration can be drawn from the East—Taiwan, Singapore, and the Chinese communities of Southeast Asia (230).

## REFERENCES

- Andrews, Julia F. 2010. “Artists and the State.” *Art in Turmoil: The Chinese Cultural Revolution 1966-76*. Ed. Richard King, 25-57. University of British Columbia Press: Vancouver.
- Ang, Ien. 1998. “Can One Say No to Chineseness? Pushing the Limits of the Diasporic Paradigm.” *Boundary 2* 24(3, Autumn): 223-242. [http://www.upf.edu/materials/huma/central/historia/lite/bibli/arti/art\\_21.pdf](http://www.upf.edu/materials/huma/central/historia/lite/bibli/arti/art_21.pdf), accessed April 2013.
- Archeology.org, “Interview with Bo Songnian,” June 25, 2008, <http://www.archaeology.org/beijing/songnian.html>, accessed June, 2011.
- Archeology.org, “Interview with Li Boqian,” June 25, 2008, <http://www.archaeology.org/beijing/boqian.html>, accessed June, 2011.
- Archeology.org, “Interview with Li Zhiyan,” July 14, 2008, <http://www.archaeology.org/beijing/zhiyan.html>, accessed June, 2011.
- Archeology.org, “Interview with Liu Bowen,” July 8, 2008, <http://www.archaeology.org/beijing/bowen.html>, accessed June, 2011.
- Archeology.org, “Interview with Matthew Hu Xinyu,” July 2, 2008, <http://www.archaeology.org/beijing/hu.html>, accessed June, 2011.
- BBC News. 2009. “China ‘Patriot’ Sabotages Auction.” March 2. <http://news.bbc.co.uk/2/hi/asia-pacific/7918128.stm>, accessed April 2013.
- Becker, Jasper. 2008. *City of Heavenly Tranquility: Beijing in the History of China*. Oxford University Press.
- Bezlova, Antoaneta. 2005. “For the Love of Art, Help China.” *Asia Times* online. May 6. <http://www.atimes.com/atimes/China/GE06Ad01.html>, accessed June, 2011.
- Borg, Victor Paul. 2010. “National Identity Depends on Culture, too.” *China Daily*, 02-09. [http://www.chinadaily.com.cn/opinion/2010-02/09/content\\_9447317.htm](http://www.chinadaily.com.cn/opinion/2010-02/09/content_9447317.htm), accessed June, 2011.
- Cao, Dapeng. 2005. “A Computer Model for Chinese Traditional Timber Structure: The Foguang Temple.” Unpublished Master’s Thesis, School of Architecture, Landscape Architecture & Urban Design. University of Adelaide.
- Callahan, William A. 2004. “National Insecurities: Humiliation, Salvation, and Chinese Nationalism.” *Alternatives* 29: 199-218.
- Cheng, Yingqi. 2010. “Memorial Proposed to Yuanmingyuan Park.” *People’s Daily Online (rpt. China Daily)*, October 19. <http://english.people.com.cn/90001/90782/90873/7169908.html>, accessed April 2013
- Chetham, Deirdre. 2002. *Before the Deluge: the Vanishing World of the Yangtze’s Three Gorges*. NY: Palgrave MacMillan, 2002.
- Dongya, Zhang. 2012. “Best Destinations During the Moon Festival.” *Beijing Today*, September 9. <http://www.beijingtoday.com.cn/tag/mid-autumn-festival>, accessed April 2013.
- FlorCruz, Jaime and Chen Xiaoni. 2010. “Old Beijing Disappearing Under the Steamroller of Modernization.” *CNN World*, April, 26. [http://articles.cnn.com/2010-04-26/world/china.beijing.old.city\\_1\\_beijing-residents-forbid-den-city-wang?\\_s=PM:WORLD](http://articles.cnn.com/2010-04-26/world/china.beijing.old.city_1_beijing-residents-forbid-den-city-wang?_s=PM:WORLD) accessed June, 2011.
- Gross, Jaime. 2010. “Protect and Conserve.” *Dwell*, June (34).
- Heathcote, Edwin. 2007. “Modernism Minus Utopia.” *Financial Times*, December 28.
- Heretage-key.com. 2009. “Interview: He Shuzhong on the Challenges of Protecting China’s Heritage.” November 25. <http://heritage-key.com/blogs/michael-kan/interview-he-shuzhong-challenges-protecting-chinas-heritage>, accessed June, 2011.
- Hung, Wu. 2008. *Making History: Wu Hung on Contemporary Art*, China: Timezone 8 Ltd.
- Jokilehto, J. ed. 2005. “Definition of Cultural Heritage: References to Documents in History,” ICCROM Working Group ‘Heritage and Society’ (orig. 1990, revised 2005), 4-5, [http://cif.icomos.org/pdf\\_docs/Documents%20on%20line/Heritage%20definitions.pdf](http://cif.icomos.org/pdf_docs/Documents%20on%20line/Heritage%20definitions.pdf), accessed April 2013.
- Jun, Wang. 2003. *Beijing Record: A Physical and Political History of Planning Modern Beijing*. City: SDX joint Publishing Company House. (English edition, World Scientific Books, 2010).
- King, Richard and Jan Walls. 2010. “Introduction: Vibrant Images of a Turbulent Decade.” *Art in Turmoil: The Chinese Cultural Revolution 1966-76*. Ed. Richard King City: UBC Press, 3-26.
- Kong, Lily. 2007. “Cultural Icons and Urban Development in Asia: Economic Imperative, National Identity, and Global City Status.” *Political Geography* 26: 383-404.
- Krajewska, Joanna. 2009. “The Hutongs of Beijing: Between Past and Present.” *Architectus* 1-2:59-65. [http://www.architectus.arch.pwr.wroc.pl/25-26/25-26\\_07.pdf](http://www.architectus.arch.pwr.wroc.pl/25-26/25-26_07.pdf), accessed April 2013.
- Lary, Diana. 1996. “The Tomb of the King of Nanyue--The Contemporary Agenda of History: Scholarship and Identity.” *Modern China* 22: 3-27.
- Meyer, Michael. 2008a. “The Death and Life of Old Beijing: A firsthand account of the Chinese capital’s struggles to preserve its past in the face of rapid development and Olympic glory.” *Architectural Record*, July. <http://archrecord.construction.com/features/beijing/deathandlife/oldbeijing-1.asp>, accessed June, 2011.

Meyer, Michael. 2008b. *The Last Days of Old Beijing: Life in the Vanishing Backstreets of a City Transformed*. New York: Walker and Co.

Mills, Lain. 2010. "Beijing Agonizes over Urban Regeneration." *Asia Times Online*, May 11. <http://www.atimes.com/atimes/China/LE11Ad01.html>, accessed June, 2011.

Ng, Mee-Kam. 2009. "Tales from Two Chinese Cities: The Dragon's Awakening to Conservation in Face of Growth?" *Planning Theory and Practice* 10: 267-71.

Olshin, Benjamin. 2007. "Cultural Heritage and the Curse of History." *Conference on "When Creative Industries Crossover with Cities" [Proceedings]*. ed. Helen Wan, Erin Yeung, and Theresa Yeung. Hong Kong Institute of Planners: 1-10.

Sebag-Montefiore, Clarissa. 2013. "False Historical Consciousness." *International Herald Tribune*, March 19. <http://latitude.blogs.nytimes.com/2013/03/19/beijing-favors-the-fake-over-the-authentic-in-architecture/>, accessed April 2013.

Taylor, Jason M. 2006. "The Rape and Return of China's Cultural Property: How Can Bilateral Agreements Stem the Bleeding of China's Cultural Heritage in a Flawed System." *Loyola University Chicago International Law Review* 3: 233-255.

Tu Wei-ming. 2005. "Cultural China: the Periphery as the Center." *Daedalus* 134: 145-167.

Watt, Louise. 2013. "History vs. history as China plans to rebuild past." *Associated Press*, Jan 17. Beijing Cultural Heritage Protection Center. <http://en.bjchp.org/?p=5098>, accessed April 2013.

Wei, Annie. 2012. "Preparing for a Traditional Mid-Autumn Festival." *Beijing Today*, September 21. <http://www.beijingtoday.com.cn/tag/mid-autumn-festival>, accessed April 2013.

WildChina Blog. 2010. "Interview with Matthew Hu, Chinese cultural heritage preservationist," July 27. <http://www.wildchina.com/blog/2010/07/interview-with-matthew-hu-chinese-cultural-heritage-preservationist/>, accessed June, 2011.

Worldscibooks.com. 2010. <http://www.worldscibooks.com/eastasianstudies/7648.html> accessed June, 2011.

Xuefei Ren. 2008. "Architecture and China's Urban Revolution." *City* 12: 217-25.

Yu, Haiqing. 2011. "Beyond Gatekeeping: J-blogging in China." *Journalism* 12 (May): 379-393. [http://socialsciences.arts.unsw.edu.au/media/File/Journalismfinal\\_publication.pdf](http://socialsciences.arts.unsw.edu.au/media/File/Journalismfinal_publication.pdf), accessed April, 2013.

Zheng Wang. 2013. "The Chinese Dream From Mao to Xi." *The Diplomat*, September 20. <http://thediplomat.com/2013/09/the-chinese-dream-from-mao-to-xi/>, accessed December, 2013.

## “Diversifying” masculinity: super girls, happy boys, cross-dressers, and real men on Chinese media

Huiké Wen

**Abstract:** Because of “commercialization without independence,” representations of many groups still adhere to social norms, despite superficial diversity on Chinese TV today. One of the most compelling examples of such conformity is the representation of different masculinities. Female masculinity, feminized masculinity, male cross-dressers, and hyper masculinity help to create a dazzling landscape on Chinese TV. After examining the containment, co-option, and regulation of “unconventional” masculinities by the mainstream media and authorities, I argue that Chinese media have created a discourse in which marginalized masculinity and hyper masculinity coexist. The former exists only in newer and less serious genres, and the latter has evolved and become more compelling in the older and more traditional genres, resulting in a skillful reinforcement of mainstream cultural norms and values concerning masculinity, while appearing to do the opposite.

**Keywords** Masculinity; Chinese Television; Commercialization of Media; Gender Norms; Patriarchy; Youth

**Huiké Wen** is an assistant professor at Willamette University, Salem, Oregon. She teaches Asian Media and Society and Gender and Mass Media in Asia.

### INTRODUCTION

Although there is rich scholarly work being done on masculinity in Chinese history, literature, magazines, and television dramas, masculinity as depicted in the wider array of genres of TV programming has not yet been fully explored, even though multiple genres play important roles in the media competition complex and contribute to the implicit representation of masculinities. In this paper I focus on masculinity as represented in popular reality TV shows, comic sketches, and TV dramas (Dianshi Ju) in the past 10 years: the 2005 *Super Female Voice* singing competition, the 2007 and 2010 *Happy Male Voice* singing competitions, the comedian dubbed as “dirty” by the Chinese media, and the “true/real” men repeatedly portrayed in the Chinese media.

In its detailed examination of the techniques that contemporary Chinese media have used in the representation of different masculinities, this article applies Stuart Hall’s view on culture studies: “How things are represented and the ‘machineries’ and regimes of representation in a culture do play a *constitutive* and not merely a reflexive, after-the-event role” (Hall 1996, 443). By examining the containment, co-option, and regulation of “unconventional” masculinities by the mainstream media and authorities, I argue that Chinese media have created a discourse in which marginalized masculinity and hyper masculinity coexist. This coexistence is self-consciously constructed through various TV genres by Chinese TV stations. Marginalized masculinity exists only in newer and less serious genres, mainly reality TV and short skits by young comedians, while hyper masculinity has evolved and become more compelling in the older and more traditional genres, mainly TV dramas, resulting in a skillful reinforcement of mainstream cultural norms and values concerning masculinity.

**BACKGROUND: TELEVISION IN CHINA**

Since the 1980s the media industry, like other industries in China, has experienced reform and rapid development. The reform has transformed China's media policy from propaganda to hegemony and from domination to compromise, resulting in more formal and regularized control and censorship, while granting the media "commercialization without independence" (J. Chan 1993; A. Chan 2002; Yu 2009). The commercialization of television stations, along with the rest of the media industry, including television production companies, has brought Chinese audiences round-the-clock television programming. As a result, every genre of program has increased in number.

Currently, the Chinese TV market can be roughly divided into programs labeled as more realistic or serious (mainland Chinese news and education programs); TV dramas aimed at providing education and protecting dominant values (Center of Chinese TV Production of Chinese Central TV); TV dramas for pure entertainment (South Korea, Hong Kong, Taiwan, the United States, and other overseas producers; independent companies in mainland China; and provincial satellite TV stations' production departments); entertainment shows (Hunan Satellite TV, Shanghai TV, other provincial TV stations, and some Chinese Central TV/ CCTV<sup>1</sup> programs); lifestyle programs (such as cooking shows); and other programs (either produced by mainland media producers or imported knowledge and education programs, such as travel shows from the United States or Europe). This expansion has brought about cultural pluralism. The array of people shown on television has become much more diverse. Media culture, as part of post-socialism, shares and reflects the characteristics of Chinese society as a whole, which is full of "self-innovation and ideological hybridization" (Yu 2009, 7).

However, because of "commercialization without independence," many representations still adhere to social norms, despite this superficial diversity. TV stations strategically balance the needs of attracting audiences and dodging controversies. One of the most compelling examples is the representation of different masculinities. Representations of female masculinity, feminized masculinity, male cross-dressers, and hyper masculinity help to create a dazzling landscape on Chinese TV. "Indeed, the diversity of the contemporary sexed body [in popular Chinese media] questions many dominant assumptions about naturalized gender difference. However, this questioning is more implicit than explicit" (Evans 2008, 374). Because so far there have only been implicit representations, the dazzling landscape has not yet led to a revolutionary or liberal view on marginalized masculinities in contemporary Chinese mainstream media. As Harriet Evans (2008) argues, "Sex and its representations can work both to reaffirm and subvert the legitimacy of normative gender practices and expectations" (363). In China's case, the representation of alternative masculinities has been one of reaffirmation.

**THE SCHOLARLY EXAMINATION OF MASCULINITY IN POST-REVOLUTIONARY CHINA**

According to many scholarly studies, masculinity in China has been highly influenced, if not primarily determined, by men's political position in society. Kam Louie (2002) classified Chinese masculinity in the traditional culture into a dyad—*wen* (literary) masculinity and *wu* (martial) masculinity. In general, traditional Chinese masculinity is defined according to the capabilities or talents that people can gain from training and education, or as Geng Song (2010) argued, it is power-based rather than sex-based (405). Because of the influences of western culture and local economic and political situations, the representation of Chinese masculinity varies in different cultural contexts, such as in Hong Kong media. In

mainland China, masculinity has been influenced by the drastic political changes of the early socialist system. Lu Tonglin (1993) and Zhong Xueping (2000) have argued, based on their study of 1980s Chinese literature, that political suppression symbolically castrated Chinese male intellectuals. In the process of regaining what they had lost, Chinese intellectuals (mainly writers) started to connect masculinity with sexual desires and femininity, expressing their anxiety about impotence and manliness. This was probably the first time that intellectuals in socialist China boldly emphasized masculinity and sexual desires and the dependence of masculinity on femininity as a contrast and support. The most representative example of this type of literature is Zhang Xianliang's "Half of Man is Woman" (Zhong 2000; Song 2010).

Since the 1990s, scholars have paid increasing attention to masculinity in the mass media, especially in TV dramas. The study of TV dramas is also based on the tradition of literature studies. Sheldon Lu (2000), in his examination of the representation of masculinity in some popular 1990s Chinese TV dramas, argued that in a story about an international marriage, Chinese masculinity was represented by and celebrated through the depiction of the love of American and Russian women, the former representing the current superpower and the latter the former communist "big brother." These TV shows not only continued the sexualized portrayal of masculinity in literature from the 1980s but also connected masculinity with exotic femininity, and with a high consciousness of nationalism. The relationship between masculinity and femininity was firmly established, while the relationship between masculinity and nationalism was reinforced: a Chinese man who can win the heart of a foreign woman, these shows imply, is especially manly.

In the first decade of the 21st century, the representation of masculinity on TV has become more diverse. Agreeing with Chris Berry and Mary Farquhar's (2006) view on Chinese cinema, that the three male codes of "filiality, brotherhood, and loyalty" "have mythic status within modern and contemporary Chinese cultures," Geng Song (2010) pointed out that these codes are also conspicuous in recent TV productions. At the same time, the images of men in TV dramas "are a product of social changes that have challenged socialist norms and are tied in with new formations of power" (426). These new formations constantly cooperate, negotiate, and conflict with each other and with the "older" formations of power, such as the "newer" representations of masculinity and the commercialization rationale of the media industry, traditional gender norms, and the masculinity defined in the discourse created by hegemony and ideology, which both emphasize the spirit of nationalism. Meanwhile, men's lifestyle magazines, born in "the commercialization of culture in contemporary China" during the past 10 years, "attempt to equate the consumption of luxury items and women with the embodiment of cultural capital" (Song). "In so doing, they promote forms of masculinity that are distinguishable from both the Confucian and Maoist masculinities of earlier eras and the 'new man' (sensitive, narcissistic and highly invested in his physical appearance) and 'new lad' (hedonistic, concerned with beer, football and 'shagging' women) masculinity of the West" (Song & Lee 2010, 177).

#### **FEMALE MASCULINITY AND FEMINIZED MASCULINITY: LI YUCHUN AND HAPPY BOYS**

Both the *Super Female Voice* and the *Happy Male Voice* singing competitions are hosted by Hunan Satellite TV (HSTV). Prior to these shows, in 2003, HSTV premiered a singing competition called *Prince of Love Songs*, but the show received almost no audience attention. In 2004, having learned from the experience, HSTV hosted the *Super Female Voice* singing competition, which gained great success. But it was the 2005 *Super Female Voice*

season that made the show a national phenomenon and produced or incited a hot discussion. Fans followed their idols and traveled to different cities to show their support. More than 200 million audience members watched the show (Cai & Xie 2006), which created a new Chinese star: Li Yuchun. This tall and lean tomboyish girl, with a voice lower than that of most Chinese women, has become a hero to many. A small town in Chongqing even used her image on a nonprofit public advertisement to promote the one-child policy. “There is no difference between having a boy and having a girl,” the advertisement said (“Li Yuchun” 2009). With a biologically female body that is too slim to show many female characteristics, a low voice, boyish movements, and a boyish appearance, Li Yuchun ushered in a new era in Chinese media. What Li Yuchun represented was an example of tomboyism, which “generally describes an extended childhood period of female masculinity” (Halberstam 1998, 5). Female masculinity, as defined by Halberstam (1998), means masculinity that is displayed by women but is not simply an imitation of dominant masculinity. This female masculinity is also different from masculinized femininity because the former does not intentionally include any sexualized feminine characteristics, such as those exhibited in many mainstream TV dramas by tough and muscular female police officers dressed in clothes showing their curved bodies and cleavage. After becoming famous in the competition, Li Yuchun always dressed in boyish clothes and did not try to attract audiences with any kind of feminine characteristics recognized by the dominant culture.

With her impressive female masculinity, Li Yuchun has become a voice declaring that girls and young women (she was already twenty-one when she came on the scene) can be strong, competitive, and independent. The message is exciting and encouraging; however, the female masculinity Li Yuchun represents is not the same as the female masculinity celebrated by American scholars such as Judith Halberstam (1998), which could truly be a revolutionary force in gender identity politics.

Judith Halberstam (1998) argues that female masculinity is not merely a perverse supplement to dominant configurations of gender, and that masculinity itself cannot be fully understood unless female masculinity is taken into account. According to Halberstam, the labels given to masculine women, such as androgyne, tommy, female husband, lesbian, butch, and drag king, challenge two of the most common perceptions about masculinity: 1) masculinity is authentic; and 2) masculinity is bound to maleness. While Li Yuchun displays female masculinity and to a certain extent questions the relationship between masculinity and maleness, her representation in Chinese media does not really challenge the two perceptions that Halberstam points out. Li Yuchun represents a *mediated* female masculinity, which still emphasizes authenticity and the bond between masculinity and a body that is naturally less feminine and more boyish. At the same time, she has been asexualized in Chinese media, meaning her female masculinity is different from that performed by butch lesbians, a category that is one of the most important examples in Halberstam’s examination of female masculinity. The complex of media, hegemony, and individual success has provided a rich discourse, useful in understanding the negotiation of masculinity, femininity, and the powers that have shaped hegemony within the commercializing media context of modern China. This complex is revealed by the fact that reality TV was the forum in which Li Yuchun became famous and that the media built up the intertextuality of her performance and life in the process of shaping her fame.

Li Yuchun’s female masculinity is represented through three main interrelated texts: her appearance and behavior; her relationship with another competitor, He Jie, who has been her closest friend and classmate for years; and her parents. On TV, Li’s masculinity is a performance that does not challenge the stereotypical female body, given that she is thinner

and taller than most Chinese women and, as hinted by her childhood pictures shown on media, has always been this way. This naturalness makes her female masculinity acceptable and healthy, even as the unconventional gender norms that she displays thrill the audience. On the other hand, being thin and tall is also one of the scripts (to borrow the term used by Jane Ussher 1997) that media and society have written for femininity. Li's image simultaneously satisfies the female gaze on masculinity as well as the male gaze on femininity. As a female viewer in her 50s said in an interview: "I like *ta* (her/him). *Ta* (She/he) is like a girl because *ta* (she/he) is elegant, and like a man because *ta* (she/he) is handsome."<sup>22</sup> Li Yuchun's female masculinity is more than an image; her attitudes and mannerisms display feminine masculinity as well. She does not talk much, never displays overwhelming excitement as the other (girl) competitors do, always talks in a calm and low voice when answering questions from the show's host and fans, and sits with a relaxed posture during interviews with media.

Meanwhile, her friendship with He Jie, a short, cute, and pleasant girl, has contributed to Li Yuchun's female masculinity. During a TV appearance, Li Yuchun told the audience that it was He Jie who suggested that they go on the show together. During the long competition, they danced with each other, looking like a heterosexual couple because of the contrast between Li Yuchun's manly clothing and body and He Jie's extremely feminine dress and image, as well as the hugs they exchanged and the sweetness they showed towards each other whenever they won and when He Jie was voted out of the final. Their friendship was touching, and although ambiguous in its visual representation, romantic. The media representation of the relationship created a contrast between the masculinity of Li Yuchun and the femininity of He Jie, thereby protecting the dyad of the gender roles and "invariably reproduc(ing) the familiar terms of the gender binary" (Evans 2008 374).

The media also interviewed Li Yuchun's parents, who expressed their support for and pride in their daughter. Li Yuchun's mother was frequently in the audience during the competition. Thus, the media, while showing excitement at the newness and difference that Li Yuchun represented, made sure the audience knew that she grew up in a normal and loving family and, therefore, is "natural." Because she has her family's support, Li Yuchun's difference from the other female contestants does not "make specific reference to the broader implications of social power and hierarchy that the critical language of gender facilitates" (Evans 2008, 374).

While Li Yuchun was making a stir in the media and among young people, a group of well-dressed and polished boys appeared on Hunan Satellite TV's *Happy Male Voice* competition. After *Super Female Voice*'s success, HSTV gained fame for having good (currently the best) entertainment programs. The excitement and "revolutionary" message that *Super Female Voice* brought to audiences earned for HSTV a huge group of loyal fans. Unlike 2003's *Prince of Love Songs*, the 2007 and 2010 competitions on *Happy Male Voice*, a men-only show, were very successful. Although the theme of the show was "happy" voices, most of the competitors who made it onto the top-12 sang melancholy love songs. The well-coiffed hair and skinny pants of many of the singers in the 2010 competition echoed the images of feminized young men already popular in East Asian media. Androgynous male celebrities, from boyish ones appealing to high-school girls to adult young men who wear long hair and makeup, have been popular in Japan for a long time (Darling-Wolf 2004, 287). These "new men" (Darling-Wolf 2004, 287) have affected the cultures of other East Asian countries, such as Korea, Taiwan, and China, and Korean popular culture reinforces the image of androgynous young men in the region. The evolution of the new men in East Asian popular culture can be explained by Koichi Iwabuchi's (2002) concept of "cultural proximity"—cultures with similarities tend to more easily influence and affect each other.

Therefore, it was not a surprise when feminized young men appeared in Chinese media, but it did provide the opportunity to expose feminized masculinity as a cultural phenomenon in contemporary China.

Initially, the 2010 *Happy Male Voice* competition embraced participants' diversity. However, the competition gained international attention when one contestant, Liu Zhu, was banned from the show. Liu Zhu started wearing girls' clothes when he was in high school. His voice and appearance was almost the same as that of most girls, which surprised the show's judges. Because Liu Zhu was represented as a different type of man/boy in the show, he became a controversial figure (Tian 2010). He gained many fans during the competition; however, the media represented him ambiguously. When he was interviewed along with another participant, Shi Yang (who could barely sing but was not afraid to do bizarre things to get attention), the media categorized them as the same type, and Liu Zhu and Shi Yang themselves seemed happy to be paired up. The media also interviewed Liu Zhu's mother, who said that she was happy her son was doing what he liked and that she wanted him to enjoy the competition. As with Li Yuchun, Liu Zhu's unconventional appearance and voice were established as "normal" by the disclosure of his mother's support and understanding. However, Liu Zhu was eventually voted off the show because of the oddness of his feminine voice and image in a show of boys' voices.

In addition to being the forum for Liu Zhu's dramatic debut and exit, the 2010 *Happy Male Voice* competition also showed an interesting pattern: the contestants who displayed more conventional gender norms, such as being physically stronger and more mature, and who seemed to have more performing experience, were gradually voted out of the competition, while the sensitive, cute, younger participants were allowed to stay and became more masculine towards the end of the season. In the music video promoting the final 12 competitors, the participants were shown singing hip-hop, playing basketball, and exercising in a gym; even the contestant who was regarded as extremely elegant because of his sensitivity was shown sweating in his sports gear. In the end, Li Wei, who matched the mainstream culture's expectation of a healthy young man with a pleasant, generic male singing voice, emerged as champion. All the differences that had stirred up discussion, attracted media attention, and challenged gender norms were either eliminated or resolved by the end of the season.

Chinese sociologist Li Yinhe said the "2005 *Super Female's Voice* singing competition is a success of transgenderism" (Zhang 2005). However, considering the strategies used by the media in the process, this was more a success of the media industry than of marginalized gender norms. As a case in point, media producers declared that they "built" the competitors' images, understandably for the benefit of the industry. The competition and the emphasis on the uniqueness and naturalness of the atypical gender roles illustrate that, as Evans (2008) has argued, "the diverse forms which the sexualized body takes in contemporary China discursively function as emblems of the individualist ideology of market opportunity and competition" (378). The *Super Female Voice* and *Happy Male Voice* contestants who challenge dominant gender norms are represented as courageous individuals who dare to chase their dreams. This emphasis on individuals is apparent not only in the reality TV shows but also in the competitors' media images in their careers since then. Li Yuchun is not the only one that appeared in the show in a tomboyish look, but she is the only star who has sustained her gender-neutral image and remained independent and successful after being on the show. The other girls, who were constructed with a more masculine image, have had to switch to a sexy and feminine image to remain popular. Liu Zhu, despite having recorded some music videos and songs immediately after his exposure on the show, is fad-



ing from the media spotlight. To capture audiences' attention, some of the young men have cross-dressed and presented themselves with beautiful female appearances, but also always with a clear message: "I like girls, and I will marry a girl in the future." The point here is that the media use different rhetoric to represent female androgyny and male transvestites. The former is celebrated because female androgyny continues socialist China's promotion of masculinized femininity; the latter is modified with a clear declaration of the men's sexuality to clarify the ambiguity of the performance that questions the dyad relationship between masculinity and heterosexuality.

The linkage between masculinity and sexuality has been prevalent in literature and media since the 1980s. The media's indifference to Li Yuchun's personal life after she became a well-known celebrity suggests that an asexualized, androgynous female who performs masculinity, although challenging to a certain degree to binary gender norms, ultimately conforms to the mainstream culture's values for women, and can be held up as a role model to young girls in that she is chaste and independent. Indeed, the media co-opted and contained Li Yuchun's unconventional identity because it was more concerned about audience attention than the meanings that the performers' behaviors could carry, thus precluding the possibility of bringing real, diversified masculinity into society.

#### **DIRTY COMEDIAN AND MASCULINITY RIDICULED**

Xiao Shenyang, a comedian who, like most of the singers in HSTV's singing competitions, was born in post-1980s China, suddenly became famous after he appeared on CCTV's *New Year's Eve Gala*.<sup>3</sup> Xiao Shenyang often performs wearing women's clothes and speaks in a high voice, but he keeps his hair short. While Chinese comedians often imitate women to be funny, and Xiao Shenyang's original career as a performer of *Er Ren Zhuan* often required him to mimic a woman, his quick rise to fame and repeated appearances in ridiculous clothes soon made him a controversial figure. Thus, like Liu Zhu, Xiao Shenyang also gained international recognition. The U.S. magazine *Newsweek* published a long report calling Xiao Shenyang "the dirtiest man in China" (Liu & Fish 2010). Xiao Shenyang's television show is actually no dirtier than those of other popular comedians, although his live shows in bars and other venues often include sexual jokes. His success on Chinese television is due not to the dirty jokes but to his modest background. As a young man who did not have any formal education and grew up in a poor, single-parent family, Xiao Shenyang won over Chinese audiences with his "ordinariness" and "authentic talent," which are also celebrated in reality TV shows.

And yet, despite the individual-talent narrative, Xiao Shenyang's popularity is nonetheless a product of media commercialization. His main "talent" is to ridicule masculine images by wearing women's clothing and exaggerated makeup and singing, with skill matching that of professional performers, in the high voice with which he was born. Although his cross-dressing performance is satire, the media nevertheless must emphasize that he is a normal man. His experience shows, once again, how the media must balance the needs of its commercialized industry with the preservation of a "normal" and less confusing gender representation. The media's emphasis on Xiao Shenyang's role as a loving husband and father and his modest background "safeguard the stability of the family as a social and economic unit, the success of which derives from individual effort and competition" (Evans 2008, 378).

Uneasiness about feminized masculinity, mockery of cross-dressed comedians, and satirical comments about female masculinity are often expressed on the Internet and on TV. In fact, the very few media figures who have challenged gender norms have been normal-

ized by the media, including Xiao Shenyang. Although exposed, these alternative masculinities are always represented as individual choices and never tend to be critical of the gender norms in mainstream Chinese culture. As a result, “detached from a critical language of articulation with which to address hierarchical relations between men and women, sex and sexuality become components of individual exploration, dissociated from the broader issues of power and injustice” (Evans 2008, 378). Despite these eye-catching images of non-traditional masculinity, images of excessive masculinity have also been flooding Chinese media, especially television dramas, since the 1990s, when television production companies began to increase in number and freedom.

#### **REAL MEN: MASCULINITY DEFINED BY NATIONALISM BUT CREATED BY THE MEDIA INDUSTRY**

At the same time that many people complain that young Chinese men, especially popular media stars, have become less masculine, Chinese television dramas contain more macho, masculine images than ever before. Spies, martial artists, war heroes, experienced detectives, tough businessmen, flawed yet brave soldiers, gangsters, undercover police officers, smart politicians, generals, and emperors repeatedly appear on Chinese television and the Internet. The media spends much time and energy constructing and representing a masculinity that reaffirms the toughness, rationality, and patriotism of the conventional patriarchal masculinity. Li Yinhe, the first woman scholar to study sexuality in China, claimed that “Chinese TV has entered the era of real/true men” after many war stories had become big hits on Chinese TV and in Chinese films (“Dianshi Ju” 2009). Li Yinhe’s discussion implies that this phenomenon is new; however, the war stories are actually a continuation of the style of the *Xishuo* (playfully told) emperor dramas that have been shown on Chinese TV since the 1990s. Zhong Xueping (2010) argued that some of the *Xishuo* emperor dramas make the powerful men seem like the “many temporarily misguided father figures in typical Hollywood productions” (55). These dramas turn the emperor, a negative historical symbol, into a modern-day superhero as they portray good-hearted young people helping the old and moody emperors become more human (Zhong 2010, 54-57). These *Xishuo* emperor dramas started to appear on Chinese TV in the 1990s, especially after Hong Kong and Taiwan media producers began to explore the mainland market. Many independent media producers from the mainland, such as Zhang Guoli, followed in their footsteps and created playful stories about officials and emperors that became very popular.

In the 1990s, wanting to correct the misrepresentations in those stories, CCTV acted like the dominant media responding to the popular media, producing something different than the TV shows created by other independent companies and imported from Hong Kong and Taiwan. This pattern lasted for a while, until this playful and cool style was used to tell the stories of the war heroes and underground party members who had contributed to the establishment of the People’s Republic of China. CCTV started to embrace these heroes in the 21st century. One of the great examples is *Liang Jian (Unsheathing the Sword 2005)*. In this story, the hero, Li Yunlong, a (fictional) high-ranking general in the PLA during the anti-Japanese War and the Civil War, displays a masculinity that is “a far cry from that exemplified by Maoist heroes. Instead, it reflects a revival of the outlaw and tough guy (*haohan*) culture in premodern China” (Song 2010, 423). At the same time, Li Yunlong’s will to acquire weapons during the war shows “the ubiquitous mercantile spirit” of modern-day China (423). I agree with this argument and would add to it that Li Yunlong is like a child who treats weapons like toys and war like a game, a portrayal to bring out the image of a cool and playful hero. *Liang Jian* was the most popular TV drama in 2005 and was

welcomed by both CCTV and provincial TV stations.

*Liang Jian* covers Li Yunlong's transformation from an inarticulate but genius peasant general into a thinker who can both theorize and express his military strategy. His talent, boldness, and personal loyalty refer to *Wu* masculinity in traditional China of the past; his peasant family background, near illiteracy, and bad temper refer to the proletariat masculinity in the communist China of the 20th century; and his attitude toward competing with his comrades, winning battles, and capturing weapons for his army embody the mercantile-spirited masculinity in current China. The portrayal of Li Yunlong reflects a reconciliation between masculinity in China's past and masculinity in contemporary (21st century) China.

The success of *Liang Jian* reflects that, faced with pressure from independent and imported media, the authoritative media, such as CCTV and its affiliates, have had to find a hybrid role between their status as protectors of the dominant ideology and as competitors in the media industry. The success of *Liang Jian* inspired a new sphere of war stories and heroes in the post-socialist Chinese media. From this also evolved the genre of war and communist heroes, a genre in which mainland-China media producers have always dominated in the domestic media market. With the explosion of this evolved genre, many excessively masculine figures have been created in the last five or six years. TV stations have launched several dramas similar to *Liang Jian*, which have reinforced the dominant status of macho masculinity on the Chinese screen. The popularity of the actors cast in these hyper-masculine roles illustrates the influence of the dramas.<sup>4</sup> Actors Li Youbin, Sun Honglei, Wang Zhiwen, Zhang Guoqiang, Zhang Hanyu and Wang Baoqiang, among others, have all been depicted as "real/true men" on the Chinese screen. Jiang Wen, who has always represented the macho and northern Chinese since his first appearance in the Chinese media in the 1980s, and who gained popularity through the TV drama *Beijing Ren zai Niuyue* ( *Beijingers in New York City*) in the 1990s, reached the peak of success by directing the movie *Rang Zidan Fei* (*Let the Bullets Fly*, 2010).

Unlike most of the "ordinary" people on reality TV, who have been transient figures on Chinese television, the actors who depict macho masculinity can always find new roles in the prosperous TV drama industry. TV dramas make up the biggest category of the Chinese TV market. According to statistics, TV dramas produce 50 percent of the income for most TV stations ("Zhongguo Dianshiju Wushi Nian" 2009). Although it may seem as though different masculinities are often seen on the screen, their scarcity in TV dramas and the dominant position of TV dramas among other genres in the Chinese TV industry makes clear that the dominant Chinese media is working to protect conventional masculinity.

#### CONCLUSION

With super girls, happy and beautiful boys, dirty comedians, and real/true men, Chinese TV has to some degree diversified its representations of masculinity to create newness and to appeal to different audiences, with the goal of expanding market share in a newly competitive media industry. However, the economic concern of the media industry alone cannot bring real change to established cultural ideology, and this diversity is just an illusion. Due to the media's strategic combination of genre, content, and representation, the exposure of unconventional masculinity in Chinese television carries neither any revolutionary meaning nor encourages true openness to unconventional masculinities in Chinese mainstream culture.

The diversified masculinity on Chinese television only shows that, faced with far more complex and rapidly-changing norms than before, the media industry—including both independent and state sponsored stations—has had to constantly negotiate and compromise

between the economic imperative to create excitement and the need to protect conventional views on masculinity. Unconventional masculinity is exposed either through boys and girls whose identities are still flexible and not yet fully shaped or through comedians in the form of satire. The media also constantly reminds viewers of the normalcy of the performers' personalities by referring to traditional values, especially ones relating to family.

Meanwhile, the middle-aged "real/true" men who have experienced fame in the entertainment field are reestablishing conventional masculinity. Every one of the actors crowned as a real/true man has performed in at least one war- or army-themed show that has become a big hit. The characters they portray, despite having some shortcomings, are tough, determined, responsible, and talented. The TV dramas or films in which they often appear do not have any important female characters and thus are purely male dramas. Almost all the actors are in their 40s or 50s, and some of them, such as Jiang Wen and Hu Jun, have gained international fame. These actors' families are rarely presented in the media unless the wife is a foreigner (such as Jiang Wen's ex-wife, who is French) or a public figure (such as Chen Baoguo's wife, who is also an actress).

The current Chinese media is strategic about entertainment for economic value while, at the same time, protecting conventional gender norms. Without a strong voice from the academic and political fields to challenge the dominant values on gender and sexuality, the conservative and highly censored Chinese media will not truly provoke a real change in the culture.

#### NOTES

1. Chinese Central Television Station was created on May 1, 1958. It originally was named "Beijing TV" and adopted its current name on May 1, 1978. Its English abbreviation is "CCTV." Currently, CCTV owns 45 channels. CCTV is the most important official media in China and is responsible for promoting values that confirm the Chinese government's ideology.
2. In Chinese language, "he" and "she" share the same pronunciation, "ta." As a result, when the interviewer said "ta," the pronoun could mean both.
3. Although Xiao Shenyang has been criticized by many in the older generation of artists, who mainly perform on CCTV, his instantaneous fame and success paradoxically confirm CCTV's role in the Chinese media to serve the majority population, including different age groups and social classes. His fame was ushered in by the Chinese *New Year's Eve Gala*, a show that, since its debut in 1983, has always achieved the largest audience share during its time slot. This "traditional" show has been the "king" of all programs in the nation. Xiao Shenyang's quick rise to fame reflects CCTV's power and is a response to competitive threats from HSTV and STV, which are located in southern China and are more ratings oriented. Xiao Shenyang's career illustrates that CCTV, like its competitors, can be entertaining, and that it has become a platform for ordinary people to live out their dreams of fame and success. More important, the success achieved via CCTV is even faster and bigger because an ordinary person like Xiao Shenyang need not go through a tedious competition such as those on HSTV, and can become famous literally in one night. Including Xiao Shenyang in CCTV's 2009 *New Year's Eve Gala* was CCTV's response to HSTV's and other provincial satellite stations' challenge—creating opportunities for ordinary people, bringing newness, and providing pure-entertainment performances.
4. Since *Liang Jian*, many dramas about soldiers and the army have gained popularity. These include *Wo Shi Tezhong Bing* (*We are Special Troops*, 2011); *Qian Fu* (*The Undercover Man*, 2008); *Wo de Tuanzhang*, *Wo de Tuan* (*My Regiment Commander*, *My Regiment*, 2009); *DA Shi* (*DA Division*, 2006); *Zhongguo Xiongdian Lian* (*Chinese Brother Band*, 2008); *Wo de Xiongdian Jiao Shunliu* (*My Brother's Name is Smooth*, 2009); and *Renjian Zhengdao Shi Cangsang* (*Man's World is Mutable, Seas become Mulberry Fields*, 2009).

#### REFERENCES

- Berry, C. & Farquhar, M. 2006. *China on Screen: Cinema and Nation*. New York: Columbia University Press.
- Cai, Q., & Xie, X. L. 2006. "Zhongxing shishang: Dianshi shifang de meiti shenhua." [The Androgynous Fashion: A Media Myth Set by the Television]. Chuanmei Xueshuwang [Media Academic Net]. Retrieved from <http://media.people.com.cn/GB/40628/4392330.html>.
- Chan, A. 2002. "From Propaganda to Hegemony: Jiaodian Fangtan and China's Media Policy." *Journal of Contemporary China* 11(30): 35–51.
- Chan, J. 1993. "Commercialization Without Independence: Trends and Tensions of Media Development in China." M. Brosseau & H.C. Kuan Eds. *China Review*. Hong Kong: Chinese University of Hong Kong.

- Cui, L. & Lee, F. L.F. 2010. "Becoming Extra-ordinary: Negotiation of Media Power in the Case of *Super Girls*' Voice in China." *Popular Communication* 8: 256–272. Chinese University of Hong Kong.
- Darling-Wolf, F. 2004. "Women and New Men: Negotiating Masculinity in the Japanese Media." *The Communication Review* 7: 285-303.
- "Dianshiju Jinru Chun Yemen'er Shidai." [Chinese TV Dramas Enters the Real Man Era]. Zhongguo Wang [Chinese Net]. July 2, 2009. Retrieved from [http://www.china.com.cn/culture/weekend/2009-07/02/content\\_18057461.htm](http://www.china.com.cn/culture/weekend/2009-07/02/content_18057461.htm).
- Evans, H. 2008. "Sexed Bodies, Sexualized Identities, and the Limits of Gender." *China Information* XXII(2): 361–386.
- Halberstam, J. 1998. *Female Masculinity*. Durham and London: Duke University Press.
- Hall, S. 1996. "New Ethnicities." D. Morley & K. Chen Eds. *Stuart Hall: Critical Dialogues in Cultural Studies*: 441–449. New York: Routledge.
- Iwabuchi, K. 2002. *Recentering Globalization: Popular Culture and Japanese Transnationalism*. Durham and London: Duke University Press.
- "Li Yuchun Shang Jisheng Xuanchuan Hua" [Lin Yuchuan Became an Icon on the Poster Promoting One-Child Policy]. 2009. *Chongqing Shangbao* [Chongqing Business Newspaper] June 22: 8.
- Liu, M. & Fish, I. 2010. "The Dirtiest Man in China." *Newsweek*, July 23. Retrieved from <http://www.thedailybeast.com/newsweek/2010/07/23/the-dirtiest-man-in-china.html>.
- Louie, K. 2002. *Theorizing Chinese Masculinity: Society and Gender in China*. New York: Cambridge University Press.
- Lu, S. 2000. "Soap Opera in China: The Transnational Politics of Visuality, Sexuality, and Masculinity." *Cinema Journal* 40(1)Fall: 25–47.
- Lu, T. 1993. *Gender and Sexuality in Twentieth-Century Chinese Literature and Society*. State University of New York Press.
- Song, G. 2010. "Chinese Masculinities Revisited: Male Images in Contemporary Television Drama Serials." *Modern China*, 36(4): 404–434.
- Song, G. 2010. "Consumption, Class Formation and Sexuality: Reading Men's Lifestyle Magazines in China." *The China Journal* 64: 159–177.
- Tian, G. 2010. "Cross-dresser on TV Sparks Controversy." *China Daily*, May 22. Retrieved from [http://www.chinadaily.com.cn/china/2010-05/22/content\\_9880686.htm](http://www.chinadaily.com.cn/china/2010-05/22/content_9880686.htm).
- Ussher, J. M. 1997. *Fantasies of Femininity: Reframing the Boundaries of Sex*. New Jersey: Rutgers University Press.
- Yu, H. 2009. *Media and Cultural Transformation in China*. New York: Routledge.
- Zhang, J. 2005. "Ban Qi Lian Lai Shuo 'Chao Nu'" [Talking about "Super Girl's Singing" Competition Seriously]. *Nanfang Zhoumo* [South Weekend], August 25. Retrieved from <http://www.southcn.com/weekend/culture/200508250028.htm>.
- Zhong, X. 2000. *Masculinity Besieged?: Issues of Modernity and Male Subjectivity in Chinese Literature of the Late Twentieth Century*. Durham and London: Duke University Press.
- Zhong, X. 2010. *Mainstream Culture Refocused: Television Drama, Society, and the Production of Meaning in Reform-era China*. Honolulu: University of Hawaii Press.
- "Zhongguo Dianshiju Wushi Nian." [Fifty years of Chinese TV Dramas]. 2009. Episode 2, Chinese Education TV Station.

## Mobilizing Mothers: The Fukushima Daiichi Nuclear Catastrophe and Environmental Activism in Japan

Nicole Freiner

**Abstract:** The citizens' and environmental movements of the 1960s and 70s had great political success in Japan, culminating in the Special Session of the Diet in 1970 that enacted 14 anti-pollution laws. These activist groups fought denials of responsibility on the part of industry and unresponsiveness on the part of local governments. Women were at the forefront of this type of activism during the 1960s and 70s, and led many of the citizens' environmental movements during this time. More recently, during the environmental catastrophe caused by the meltdown of the Fukushima Daiichi nuclear plant, women and mothers have been vocal protesters. Environmental movements have particular political salience because of the success women have achieved in this area both in policy change and also roles in formal politics. Women have consistently achieved these successes at the same time as they performed their roles as mothers and home managers; these roles have been used strategically to mobilize women with great effect, and also were central to the values with which the citizens' movements defined themselves politically.

**Keywords** Asia; Japan; Environment; Women; Nationalism; Confucianism photography; pictorial style

The citizens' and environmental movements of the 1960s and 70s had great political success in Japan, culminating in the Special Session of the Diet in 1970 that enacted 14 anti-pollution laws. These activist groups fought denials of responsibility on the part of industry and unresponsiveness on the part of local governments. Women were at the forefront of this type of activism during the 1960s and 70s, and led many of the citizens' environmental movements during this time. More recently, during the environmental catastrophe caused by the meltdown of the Fukushima Daiichi nuclear plant, women and mothers have been vocal protesters. Environmental movements have particular political salience because of the success women have achieved in this area both in policy change and also roles in formal politics. Women have consistently achieved these successes at the same time as they performed their roles as mothers and home managers; these roles have been used strategically to mobilize women with great effect, and also were central to the values with which the citizens' movements defined themselves politically.

This paper examines recent political activism by women during the Fukushima Daiichi nuclear disaster against the backdrop of environmental activism by women in Japan and the political opportunities for social protest in Japan. To begin, an analysis of the Japanese state from the perspective of political access is examined. Furthermore, the background of citizens' environmental movements from the 1960s and 70s are presented for comparison with the mothers' groups protesting the government response to the Fukushima Daiichi Nuclear Catastrophe. Interviews were conducted in Japan with blog authors and social activists who have created an online community to network with citizens who have been affected by the nuclear catastrophe and are critical of the government's response. Themes of these

**Nicole L. Freiner** is an assistant professor of Political Science specializing in the politics and culture of Japan at Bryant University in Rhode Island, where she teaches courses on Asian Politics, Comparative Politics, and Global Politics. She received her PhD from Colorado State University. Her research interests include Confucianism, gender, nationalism, and the role of democratic institutions for citizen participation.

interviews are presented to illustrate the way in which the new blog movement reflects the re-negotiation of the mother role in Japan. The recent protest activity and online critique directly address the government's lack of response, while acknowledging a weak citizenship dynamic that prevents political movements from being able to alter policy.

#### **SOCIAL MOVEMENTS AND POLITICAL OPPORTUNITIES**

Any discussion of social movements and the political implications of their activity must include the nature of the state that citizens seek to influence. Nordlinger (1987) argues that there are strong states and weak states:

(A) strong state – an autonomous one – is able to negate societal demands; the greater the private resources standing behind the demands and the greater the resistance the state is able to overcome, the greater its autonomy (364).

The key to this thesis is the issue of societal support and the degree to which the state enjoys or overcomes pressures from society, whatever its preferences might be; in other words, the ability of the state to engage in autonomous action is at issue.

Strong states are those that enjoy high autonomy and support. They are doubly strong in that they regularly act on their preferences and have societal support, for doing so (1987, 369).

Weak states have relatively low autonomy and weak societal support, while independent states enjoy high autonomy but low societal support and responsive states are characterized by low autonomy and high societal support. Within the framework outlined by Nordlinger, the absence of societal cohesion necessarily contributes to a weaker state. Supposedly, fragmented societies are unable to provide the coherent societal support that characterizes a strong state. In accordance with these variables, given the homogenous nature of the population and the construction of citizenship, Japan can be characterized as a strong state.

Related to the strength or weakness of the state, there is also a question of what kinds of states present the best opportunities for social movements to form and sustain themselves. The literature on social movements dubs this “political opportunity structure.” Political opportunity structure can be analyzed across four dimensions, as explained by Doug McAdam (1996). These are:

1. The relative openness or closure of the institutionalized political system;
2. The stability or instability of that broad set of elite alignments that typically under-gird a polity;
3. The presence or absence of elite allies;
4. The state's capacity and propensity for repression.

Social movements are more likely to form in a political system that is open or where there is the opportunity for political access. Division among the elite power structure and the support of influential allies under a state whose propensity for repression is low are also useful for social movements. Japan is characterized as a closed political system because it is unitary and parliamentary. Moreover, the strength of the Liberal Democratic Party and bureaucracy, which are explained in more detail later in the paper, are very stable elite alignments. Japan is also state that has a low propensity for repression toward its citizens. However, the dominance of social pressure to conform makes overt repression unnecessary.

Accordingly, given these dimensions, there is little opportunity for social movements to gain traction in altering the political process in Japan unless they are able to form alignments with elites. McAdam's four dimensions focus on formal politics whereas Sidney Tarrow fills in the notion of political opportunity by referencing informal politics as well. His definition views political opportunity structure as

consistent—but not necessarily formal, permanent or national – signals to social or political actors which either encourage or discourage them to use their internal resources to form social movements. My concept of political opportunity emphasizes not only formal structures like state institutions, but the conflict and alliances structures which provide resources and oppose constraints external to the group (1998, 54).

Tarrow's recognition of relationships across both formal and informal politics would include interactions between movements and government officials or agencies and linkages to international actors and movements, as well as formal spaces for networking and informal spaces for people to organize. Once social movements form and pressure the state, they are also able to change the political opportunity structure of the system and provide subsequent movements with greater possibilities for success. Tarrow emphasizes this aspect when he notes, "(M)ovements arise as the result of newly expanded opportunities; they signal the vulnerability of the state to collective action, thereby opening up opportunities for others; the process leads to state responses which, in one way or another, produce a new opportunity structure" (1998, 61).

These ideas concerning the opportunities for social movements (and women's groups as a category of such movements) in the political system are related to and supportive of Nordlinger's presentation of the properties of strong states and weak states. In the framework of political opportunity structure, a state receptive to societal pressure, which is also unable to free itself from societal opposition, would be most conducive to social movements. In other words, a weak state which does not exhibit a great degree of autonomy from society, and which does not have societal support, would allow the greatest opportunity for social movements. The strong state/weak state typology and the literature on political opportunity structure point to similar institutional barriers that may explain the success or failure of political action by social groups.

Given the concepts of strong/weak states and political opportunity structure, Japan is a state that would present fewer opportunities for social movements except in cases where the movements have strong societal support, relationships with government elites, or government agencies. In addition, linkages to international actors and institutions may assist groups in putting pressure on the government to act. These variables help one to understand the force of the Japanese government in structuring its relationships with a variety of civil society actors, including women's groups. The history of the Japanese government's interactions with women's groups demonstrates that it is a state with a high ability to intervene in social protest and rights movements. These interventions may benefit women's groups as they allow the groups political access. The role of the state in managing and directing the women's movement is thoroughly presented by authors such as Garon, Tokuzo, and LeBlanc.

The Japanese state is usually characterized as strong because of its centralism and focus on policy directives at the national government level. In July 1999, the Law Concerning the Provision of Related Laws amended the Local Autonomy Law for the Promotion of the Decentralization of Power (Omnibus Decentralization Act). This law altered and clarified



the relationship between central and local levels of government. Where previously Japan had an agency delegation system, which used local authorities as agents of the central government, the functions of local government under the new law were reorganized into statutory entrusted functions. Statutory entrusted functions are those functions legally delegated to local authorities that were originally the responsibility of the central government. These functions are stipulated in the Local Autonomy Law and include such things as the issuance of passports, management of national roads, and compilation of statistics for the central government or prefectures (CLAIR 2002). These changes give more power to the prefectures to perform certain tasks, although the relative real gains in terms of self-governance are debatable. As the Local Autonomy Law illustrates, lower levels of government in Japan are policy-implementing bodies rather than policy initiators. This is in contrast to many industrial democracies where lower levels of government do have the power to initiate policy.

Despite their seeming powerlessness, local governments have played an important role in Japanese democracy. Ishida (1989) notes that local governments “provide a buffer against bureaucratic arbitrariness, creating additional points of access and influence for groups poorly represented nationally, and serving as an arena for more fully realizing certain rights such as healthful and cultured living...” (165). Innovation at the local level in Japan initiated the creation of social programs, which have in turn pressured the national government to develop similar systems and national policies, thereby creating a channel of advocacy for citizens.

Along with arguments concerning the impact which decentralization or federalism may have in achieving a more open political system, the nature of political parties and responsiveness of cabinet ministries may also influence the ability of social protest movements, to affect policy. While this understanding of what constitutes politics illustrates the narrow avenues for political access, making the Japanese state more closed than open to political engagement with social groups, some authors argue that this very structure has led to protest groups playing a significant role in politics. In some ways, the nature of the Japanese bureaucracy has forced citizens to develop other means of impacting their government. For example, Ishida argues that

Japan’s peculiar combination of strong protection of civil liberties, an election system which seriously distorts legislative accountability, and a powerful professional government bureaucracy, greatly increases the probability that citizens will engage in extra-institutional protest (176).

A number of groups have used protest activity as a way of having their interests represented formally, including the environmental movement, the antiwar group *Beheiren* (ベヘイレン), student movements and feminist groups (Ishida 1989). The changes taking place in Japanese politics as a result of the 2005 election will also likely affect the way citizens, including women, attempt to impact government. As the Liberal Democratic Party’s dominance returns once again, Japan may be characterized as a single-party-dominant system in which reform and leftist parties are marginalized and “the problems for the revolutionary left in Japan are to take up the possibilities of growing mass opposition ... and to facilitate the process of re-groupment of the fragmented left group” (Hirai 2004).

As we have already pointed out, given its history of interactions with citizens’ groups, the nature of political parties and bureaucracy, as well as the division of power between national and lower levels of government, the Japanese state can be characterized as strong. Because of this, there is limited opportunity for social movements to form, sustain themselves, and

alter future avenues for political access. Applying the literature on political opportunity structure highlights that in the case of Japan societal pressure, the existence of relationships between social movements and elite allies will enhance the success of social movements. In the case of environmental movements, as the following section illustrates, the government has responded to social pressure by acting as a mediator between environmental groups and the corporations responsible for the pollution being protested. This mediating function has allowed the Japanese government to maintain stability and the political power of its elite alignments, and to broker resources and political justice for citizens seeking compensation.

#### ENVIRONMENTAL ACTIVISM AND CITIZEN PROTEST

During the post-WWII period, an infusion of American aid allowed Japan to pursue industrialization with substantial vigor. In the 1960s, Japan experienced extreme economic growth as the gross national product increased eightfold (Hayes 1992). Despite the devastating damage to Japan's infrastructure at the end of World War II, the country achieved amazing economic growth during the postwar period. Although economists cite many reasons for Japan's success, the industrial policy formulated and implemented by the Ministry of International Trade and Industry (MITI) and the Ministry of Finance was integral for much of Japan's economic development from 1955 to 1975, when economic growth was at its top speed.

Despite its promise, however, the process of accelerated industrialization also had devastating environmental consequences. These consequences included major pollution events such as the *Itai* (1972) outbreak, the Minamata (1960-1974) outbreak, and asthma outbreak in Yokkaichi city from 1970-1974 (Murota 1985). Each of the diseases associated with these events resulted from toxic substances traced to industries. The *Itai* ("it hurts") outbreak was caused by ingestion of cadmium traced to a metal refining company; Minamata disease was caused by poisoning from methyl mercury waste produced by a fertilizer company; and citizens in Yokkaichi city suffered from asthma induced by air pollution generated by the city's industrial complex (Patrick 1976).

Many small, locally focused citizens' groups began to protest industrial pollution because of the severe health problems caused by such pollution in the 1960s. These groups fought denials of responsibility on the part of industry and unresponsiveness on the part of local governments. Although Schreurs (2002) notes the presence of advocates within the bureaucracy, the majority party generally prevented environmental progress.

An early example was in 1953 when the Ministry of Health and Welfare (MoHW) conducted a national survey of pollution that found that many Japanese were suffering from air, water, and noise pollution. On the basis of this survey and similar debates that were going on in the US, the UK and Germany, the MoHW formulated a bill to prevent contamination of the living environment. Other ministries, industry, and the LDP, however, opposed the bill (38).

The presence of diverse, sometimes opposed interests and the LDP's strength to oppose the MOHW illustrate the difficulty that citizens faced in achieving change. In detailing the Minamata pollution case, George points to the importance of fishing cooperatives that pressured the company responsible for the pollution for damages. They garnered publicity by staging sometimes violent demonstrations against the factory and eventually brought their grievances directly to the government through formal channels. When the formal channels were unsuccessful, each of the groups involved (the Minamata Fishing Cooperative, Kumamoto Prefectural Alliance of Fishing Cooperatives and the Minamata disease

Patients Mutual Aid Society) resorted to extra-institutional methods, including violence and sit-ins. With dispute resolution in the Minamata case being informally controlled by the government and business, the key characteristic (according to Upham) was the use of a solatium agreement, instead of the more formal legal damage compensation payment. As Upham notes, “The agreement re-established social harmony in the Minamata area and bought several years of acquiescence for Chisso and its government supporters” (Upham, 27). A decade later, however, the victims brought their battle to the central government in Tokyo and, George argues, “changed the rules of the game and more permanently than Upham suggests. If citizenship is defined by behavior and consciousness, not just by results, then many of the Minamata victims were already acting and thinking much like democratic citizens in 1959 well before the explosion of local citizens’ groups in the 1960s” (George, 121). The extent to which the rules of the political game involving citizens’ retribution actually work is arguable in the Minamata case; the lawsuits filed were finally settled out of court in 1995, with Chisso corporation obliged to pay compensation to victims in the form of *mimaikin*<sup>1</sup> (also called solatium) without admitting that they were legally culpable. The use of solatium payments underscores the role played by the central government in negotiating a settlement for citizens that, while granting compensation, did not improve the future abilities of citizens’ groups to seek redress from corporate polluters.

The unresponsiveness of both industry and government forced citizens to consider litigation, a political move that had been largely unused previously and was uncharacteristic of Japanese culture. The citizens’ movement’s use of the court system illustrates the seriousness of the government’s unwillingness to protect its population from polluting industries.<sup>2</sup> At the same time the tension between industrialization and environmental protection was being played out in the bureaucracy as the two ministries responsible for these areas (the MoHW and MITI) vied with each other to protect their interests. Four large pollution cases brought to court by victims forced major changes in a political system that had been closed: mercury poisoning in Kumamoto and Niigata prefectures, *itai-itai* disease in Toyama prefecture, and asthma in Yokkaichi city. These court cases focused media attention on environmental problems, and it is widely acknowledged that the media helped turn national attention to the plight of victims of pollution diseases in the 1960s and 1970s (Schreurs 2002, 42).

Japanese women played a vital role in these citizens’ movements, which attacked the problem of increasingly destructive practices toward the environment. So called “housewives’ movements,” organized and led by women, developed as a type of citizens’ movement during this time period. Many housewives’ movements became part of larger citizens’ movements, but the housewives’ activism is also distinct from the larger set of more formal, politically minded citizens’ groups that were led by men. Housewives participated in movements to correct pollution problems that affected the home and family locally, whereas citizens’ movements tended to fight for large-scale change at the national level and for legislation to reform polluting industries.

(I)n the late 1960’s and early 70’s, public resentment about worsening pollution burst into a full-fledged environmental movement. Women’s groups, including affiliates of the Housewives Association and the National Federation of Regional Women’s Organizations, furnished much of the dynamism behind these citizens’ movements. Anti-pollution protests meshed well with the organized women’s long-standing identification with daily life. (Women’s groups) and other associations attacked the government and business community for having pursued high-growth

economic strategies with little commitment to conserving and recycling resources (Garon 1997, 194).

The logic of development was pervasive in Japan immediately following World War II, and its effects upon the home and family motivated women's political action. The effect of pollution on the home and family hastened women's involvement in environmental activism. The linkage between women and political participation on environmental issues is very strong in Japan, where women are more likely to be involved in citizens' movements that have environmental issues as their primary concern. Women's groups became a symbol of the sectors of Japanese life most affected by pollution, and in that capacity served as an important counterpart and legitimization for the environmental movement and its efforts to urge the government to change their lenient environmental policies. The citizens' movements during this time period (unlike the Minimata case) were able to articulate their demands to the Japanese government. Because of coinciding high media attention from the late 1960s through the early 1970s, public sympathy was at a high point and the government response was dramatic, resulting in some of the strongest environmental protection laws in the world and changing the political opportunity structure and rules of the political game.

The Japanese government responded to high societal pressure, as shown by the manner in which the environmental/citizens' movements of the 1960s and 70s achieved their success. The Environmental Diet of 1970 resulted from these movements, which had the broad support of Japanese society. The movement also created relationships with government officials, who attempted to mediate between corporations responsible for pollution and social protest groups before they used the court system to pressure government agencies to act. These outcomes confirm that the concepts of political opportunity structure apply to the environmental movement in Japan.

The explanations for women's participation in these movements are embedded in notions of Japanese citizenship and the perceived responsibilities of mothers. Hasegawa offers a convincing argument based on the traditional notions of mother and parent in Japanese culture (2004). These roles have been used strategically and with great effect to mobilize women, and were also central values to the way in which the citizens' movements defined themselves politically. The usefulness in employing this strategy is especially important in the context of Japanese politics,

where the normative value of 'citizen' and 'civil society' is rather weak, the iconic 'mother/parent' can signify the universality and solidarity of the movement. It has come to symbolize a 'post-political' responsibility for others beyond the particular parent/child relationship, and can thereby position a social movement as above or outside of ideology, political parties and self-interests (Hasegawa 2004, 141).

Broadbent echoes this argument, noting that, "because women are defined as outside the realm of politics and power, they are freed from a degree of social control, giving them greater freedom to mobilize" (1998, 163). In a culture where the norm is to undervalue women's knowledge, the role of mother stands out as a position from which women's knowledge is socially valued. The "mother's word" represents a "devoted, self-sacrificing, and altruistic position" which is highly valued (Hasegawa 2004, 141).

In Japan, women's groups started by housewives and mothers have provided most of the focus for the emergent consumer interest in activism. Kirkpatrick (1975) notes that this activism reflected the "special responsibility for the home and home management and family well-being associated with the women's role in Japanese society" (236). Women in

consumer movements used informal methods of organizing such as protests, boycotts and publicity campaigns. In the postwar period, Japanese society changed as women moved into the workforce and access to education offered them admittance to public roles closed to them prior to the war. By the late 1960s and early 1970s, new forms of political protest appeared; coupled with an increase in leisure time, this trend contributed to women's participation in grassroots movements to counter the effects of environmental degradation, long work days, and the need for child care facilities (Nuita et al 1994). By the late 1960s, a growing consumer movement had expanded into a national campaign dominated by housewives. "They tackled homemaking problems that had immediate relevance to them, such as the high cost of living, food additives, and false advertising. Their activities directly contributed to democratization at the community level" and raised awareness about public issues. However, this awareness and organizational skill were not used in a broad-based campaign to advance the status of women (Nuita et al 1994, 402).

The lack of broad-based campaigning can be understood from Robin Leblanc's perspective (1999). Leblanc argues that the traditional methods of political science inquiry, including mass studies of voting behavior or party membership, neglect participation by housewives because our theoretical categories are male-driven. Japanese women do not participate in the same way Japanese men do. "(W)omen are less likely than men to report supporting a particular political party, participating in a campaign, joining a political support group, or meeting an elected official or powerful political activist" (Leblanc 1999, 67). When conducting interviews with housewives, Leblanc found that women who described apathetic feelings toward politics did so because of their dissatisfaction about the choices available to them in political society (1999). Steel (2004) also notes that norms for Japanese women still emphasize their "primary role within the household as wife and mother. Women are concerned with public policy issues that affect their household, but they do not see them as 'political'..." (228).

The idea that women's social role may empower or disempower their ability to politically act is a cultural variable which is not included in the literature on social movements. However, the role of cultural norms and the perceived responsibilities of citizens and government may influence women's likelihood to participate and the degree to which movements are able to garner societal support. In the case of the environmental movements presented above, women utilized their role as mothers to draw public attention in striking ways, sometimes even underlining their own vulnerability as a tool for public shaming.

#### **THE FUKUSHIMA DAIICHI PROTEST MOVEMENT**

The protest movement by mothers against the Japanese government's response to the Fukushima Daiichi Nuclear Catastrophe is similar to earlier environmental activism by women during the 1960s and 70s. The grassroots political activity led by mothers in response to the Fukushima Daiichi Nuclear Crisis has been noted by the international press in several prominent outlets and is beginning to be researched by academics as well. A *Guardian* article highlights activities of the women's movement, noting that "(I)ndeed, groups of women braving a cold winter, have been setting up tents since last week preparing for a new sit-in campaign in front of the Ministry of Economic Affairs affairs (Kakuchi 2011, 2)". Motivated by their role as caretakers of the home, the women that comprise these movements are pressuring the government to end the use of nuclear power and evacuate children and families living in areas with high radioactive contamination.

The protest demonstrations against nuclear radiation have been based in Tokyo, utilizing a network of women activists "who have provided the digital framework for organiza-

tion that has brought together an older generation of anti-nuclear activists, young families, hip urbanites, office workers and union protesters” (Slater, 1). The women’s movement has utilized a wide array of new media sources to garner support including websites, YouTube videos, Twitter, personal blogs, Facebook groups, and Yahoo user groups. The use of new media has allowed the women’s groups to make connections with mothers’ groups across the world, garnering support and gathering information for their cause. For example, the Connecting Mother’s Blog (お母さんたちをつなぐブログ), presented in Figure 1.1, offers women a space for information sharing and networking.



Figure 1.1: Connecting Mother’s Blog

Source: National Network of Parents to Protect Children from Radiation (子どもたちを放射能から守る全国ネットワーク). 2013. papamama-zenkokusawakai.blogspot.com

This blog is one of many started in response to the Fukushima Daiichi nuclear meltdown and ensuing catastrophe. The text in this picture explains the reasons for the creation of the blog:

It’s difficult to talk to people about radioactivity, even though there’s worry and anxiety especially regarding children and work. There isn’t any time to follow detailed explanations. We set up this blog for these kinds of mothers.

All over the country, mothers and everyone in these organizations are doing tea conversations and events offering to give radioactivity information. There were 1000 meetings held of tea conversation to open people’s eyes.

From 3.11 mothers who have lifted their voices are making connections and sharing information that they find with each other. From now on, this is the kind of blog we are doing, bridging people who want to make connections, those whose children are gone and people from various positions and various places.

We encourage this one-time opportunity for broad consciousness-raising on the radioactivity problem; this is the most important thing for children nation-wide (National Network of Parents to Protect Children from Radiation (子どもたちを放射能から守る全国ネットワーク). 2013. papamama-zenkokusawakai.blogspot.com, my translation and emphasis).

The mission statement above establishes the concern for home and family as the primary dominion of mothers, and that the focus for these efforts is on children. The words above also convey the idea that though these are individual concerns for moms, they impact a more abstract and universal concern for children nationwide. The position of mothers to impact broad consciousness raising is mentioned as well, showing that the concerns and special responsibilities of mothers are uniquely positioned to elevate and impact the national discussion on radioactivity and Fukushima-Daiichi. The Connecting Mother’s blog focuses on providing information and opportunities for networking among mothers and organizations assisting in the recovery efforts. It is also linked to a magazine publication for mothers called “Mother’s Revolution” ママレボ.

The use of new media has distinguished the new mothers' protest activity from earlier protests, allowing for the dispersion of information and mobilizing a broader base of women and mothers. Other examples include the use of Facebook and Yahoo user groups such as the Fukushima Network for Saving Children from Radiation (子供たちを放射能から守る福島ネットワーク). The use of these online communities is widespread and continuing. The table below notes the most prominent blog groups responding to the concerns of mothers, families, and local survivors of the tsunami and nuclear meltdown.

Table 1.1: List of Blogs

BLOG NAME	AUTHOR/ADMIN.	PURPOSE	URL
<b>Connecting Mother's</b> お母さんたちをつなぐブログ	National Network of Parents to Protect Children from Radiation	Provides online space for families to share knowledge and take action to protect the children. The blog is connected to the Fukushima Network that is active on the ground.	papamama-zenkoku-sawakai.blogspot.jp
Save Child	info@savechild.net	Information site for mothers to prevent radiation sickness	savechild.net
Carrying my iPhone and books to town	Ikasumi0	Share thoughts regarding the earthquake and radiation	d.hatena.ne.jp/ikasumi0
Misato Yugi's blog	Misaki Yugi	Information regarding causes and effects of radiation sickness with drawings for children	mikanblog.com
Helping (たすけあい) Japan	Nao Sato	Host of local projects in Fukushima, includes updates on missing people and blog about local people and their lives. Updates news on government activities in Fukushima area.	tasukeaijapan.jp

Two of the most prominent leaders of the grassroots mothers' initiative are Sachiko Sato and Aileen Miyoko Smith. Smith is the head of Green Action Japan, an NGO that advocates for renewable energy. Sato created the National Network to Protect Children from Radiation. Together, Smith and Sato organized a protest to occupy the Ministry of Economy, Trade and Industry (METI) in Tokyo, to call for a permanent shutdown of Japan's nuclear industry. The idea for the protest came out of a delegation that discussed the plight of Fukushima children with the UN High Commission on Human Rights, to bring attention to the plight of children and to protect them from contamination. The three-day sit-in began on October 27th and included over 700 people, including 100 women from Fukushima. The women pledged to continue their demonstrations for 10 months and 10 days, the span of a full term of pregnancy according to traditional Japanese culture, in order to achieve a rebirth in Japanese society. While this particular protest ended, other protests are ongoing as the radiation effects spread outward from Japan, increasingly affecting ocean environments as well.

The issue of radioactive contamination continues to be strongly protested by Japanese mothers in the blogging community. Activists, environmental groups, scientists and doctors argue that the government is not doing enough to protect children who may still be exposed to radioactivity in and around Fukushima. Some of these activists and mothers have taken it upon themselves to do radioactive testing. For example, one woman living in the Saitama

Prefecture arranged to have her daughter's urine tested; the test indicated that there was .4Bq of Cesium 137 present per kilogram of urine<sup>3</sup>. In order to protect her daughter, this mother took strong measures, including tracking down fresh produce from Kyushu (Japan's southernmost island – the furthest from Fukushima), using bottled water exclusively and buying eggs from a mail order company. (Penny 2011) Stories like this are common and fill the blog pages as mothers relate their stories and seek advice. These blogs and online networks are part of a vast and deep relationship emerging among mothers in web space. As Penny notes, "After announcing her daughter's test results on Twitter, the mothers' number of followers jumped from a number of close acquaintances to 700 people asking for details and advice about how to have their own children tested" (2011, 1). Many of these women are simply trying to keep their children safe; they are united in their status as mothers. In Sachiko Sato's appeal to activists in the USA, she says

My own children evacuated to Yamagata on the 13th of March, but in Fukushima, 300,000 children were left behind. I wanted to help every one of those children and hence, started measuring radiation levels in schools. The results showed that 75% of schools in Fukushima Prefecture were in radiation-controlled areas. I submitted the report to the prefecture, hoping that the children would be evacuated immediately. But on the day that I submitted the report, the country set the safety standard for children's exposure to radiation at 20 mili-sievert<sup>4</sup> of radiation per year. This standard was set so that Fukushima city and Koriyama city would not be compulsory evacuation zones (Sato 2011, 1).

Sato's appeal is indicative of the calls being made by other mothers who are members of the new protest groups. Their focus is on the children, utilizing their special responsibility as housewives and mothers to advocate for protection of the home and family, which have been accorded special status by the Japanese government. Women's positions in the home at the center of Japanese society have such political power because of their link with the construction of national identity in Japan. This role is made even stronger because of the low birthrate problem, which has helped to idealize the role of housewife and mother as she who can save the population from a social security crisis. As Slater notes, "(M)others protesting nuclear contamination (and thus the nuclear power industry) critique politics from within, at the core of public perceptions of Japanese society and culture, and indeed, from the perspective of the 'natural' obligation of reproduction and nurturing another generation" (2012, 2).

The interviews I conducted with mothers, blog authors and environmental activists show that women acknowledge their position in the family and larger Japanese society as one that is special; however, the use of this role to articulate political concerns is characterized as being weak by social movement literature. Unlike statements made by women participants in the 1960s and 70s environment movement, the criticism of the Japanese government in the case of Fukushima Daiichi is direct and emerges from the notion that the government is responsible for protecting citizens, especially those that are defenseless. While the use of a call to this state role is not new, the direct language used by activists is, and it acknowledges the citizenship dynamic in Japan in an outright manner.

#### **THE SPECIAL ROLE OF MOTHERS**

Japanese women acknowledge that their position brings with it a special responsibility for protecting the home, and that when the home is threatened their voice carries particular importance and meaning.



Women have a special role because of their concerns as mothers. Women's position in the home is weak, however, especially if living with extended family, so it is difficult for them to express their voice.

My first impression in regards to the incident was that the male population seems to be more negligent about radiation and its consequences. It is said that people who believe strongly in reason or logos tend to be more resistant to facing the radiation issue.

Mothers tend to be more careful and sensitive to the effect of radiation for their child and themselves, while fathers are more worried about their job and occupations (Interviews 2013).

There were also statements of outright criticism against the central government, implying that authorities are lying to people and that the state is failing in its duty to protect the most vulnerable citizens because they are less likely to raise their voices in protest. Moreover, the media is not supporting the current movement and government critique, unlike the protests of the 60s and 70s. In fact, some even noted that the media is doing the government's work by failing to report on the radioactivity.

The children who are living in Fukushima as of now have no particular physical disorders that are present, but we must avoid them getting cancer ten and twenty years from now on. At least that is the most we could do for them.

I think the radiation issue is hard to discuss in politics because the government can only act in terms of political policies, besides they have not officially acknowledged radioactive contamination on the soil of Fukushima and that is the biggest reason why they are yet unable to tackle the problem. They want to enact projects to resolve the contamination, but if they were to admit its existence, it would also have to admit the fact that Japan has become the second Chernobyl.

The people of Fukushima will have to protect themselves by their own hands. The radiation problem is very difficult to solve. I believe there are three ways in which people are exposed to radiation and its impact: radiation from food, radiation from the air and exposure from the explosion. One cannot recover from the radiation from the explosion no matter what, some people think if you are careful with food selection you will be fine. Another person may say radiation from the air is more harmful than that of food, opinions vary depending on the sort of information you get from different sources. It is inevitable [that there is no consensus or official statement regarding the danger] since the government is not acting at all to protect people; the country is almost anarchical. On top of that, the government had stopped accepting refugees to the public housing [near Fukushima] so really people are left with few choices.

Two years has passed since the incident and the Japanese government remains status quo, there is a lot that can be done as a volunteer to spread the word about the danger that we exist in.

The local media is focused on promoting reconciliation so they also refuse to have an advertisement about alerting danger to the community. (Interviews 2013)

Some of those interviewed also referenced the citizenship dynamic in Japan, the limitations of which imply that citizens' voices are limited and weak when compared to the strength of the central government and the social relationships that condition both. The focus on community in Japan may hamper movements fighting for what are perceived as individual rights that are currently being heavily criticized by the leadership of the ruling Liberal Democratic Party and Prime Minister Abe.

I believe the new government will be focused more on external problems with China and Korea, and will leave the internal problems aside because those problems are more 'urgent' than what is going on inside. To follow the nature of the Japanese culture, if anyone started to raise their objection to their policy, those people will be labeled as a traitor or un-patriotic person.

This is partially because of Japan being one of the prominent developed countries in the world; the lifestyle standard is too high for any of us to start a completely new life in a new location without a stable job. If something similar were to happen in a place like Egypt, where there is little trust in government, people would run from the situation no matter what the government said. In comparison, Japanese people have high trust in their government and low media literacy, which has led to two years of virtually no change or improvement here.

The individual separation from the community is critical in a culture such as Japan where collectivism is virtually enforced by the society.

I personally never thought that such a huge nuclear plant accident would happen in a safe place like Japan, but was even more surprised about the fact that nothing had really changed after the accident. The people of this country are paralyzed to the point that no one remembers an explosion that happened only two years ago. (Interviews 2013)

The above statements imply that the women of Japan recognize the strength of collectivism in their society, which may hamper people's willingness to criticize in order to be accepted or supported by the larger society. This support is critical in Japan, where the social movements of the past were able to make changes because of vocal media criticism, which moved Japanese society to support victim's rights in the large pollution cases outlined earlier in the paper. Moreover, several of these women note the inaction by government and paralysis of the larger population. Within this perceived context, it is unlikely for actors in social movements to be taken seriously.

The environmental movements of the past were successful in achieving legislative change (despite Japan's closed political system) because of their alliances with government elites, broad societal support and media coverage that supported the movements' goals and criticized the government. In contrast, current women's groups have not been able to draw the same kind of media attention. The online groups and new media outlets have a powerful ability to connect women and provide a space to share information, but as yet these online communities have not been directed toward formal political change. Women understand the potential weight their voices can have because of their role as women and mothers;

however, this author was unable to establish that the online mothers' groups and other protesters had links to elite allies that would strengthen their ability to make political changes.

The citizenship dynamic between women, women's groups and the Japanese government has directed political activism by women. The special roles accorded to women in the home means that women have a primary duty to protect the home and family. This role motivated women to act on matters affecting the home in both the citizens' environmental movements of the 1960s and 70s and the continuing protest and online critique directed against the government regarding the recent Fukushima-Daiichi Nuclear catastrophe. While these two social movements share similarities, the citizens' movements were ultimately successful at pressuring the government to enact laws to protect citizens. It is too early to establish the long-term effects of the current mothers' movement, but the theory of political opportunity suggests that there is a low potential for the current groups to impact formal politics. More research is necessary in order to understand the role of new media in maintaining political activism by women and encouraging continued protests. As the interactions between women's groups and the government continue to play out, it will be necessary to investigate the effects on Japanese environmental policy and the protection of citizens from radioactivity and the toxic effects on health related to the nuclear meltdown and fallout.

#### NOTES

1. Mimaikin or solatium payments are considered sympathy or blood money payments given as an expression of sympathy for another's misfortune, and does not imply responsibility. A hoshokin 帆資金 or compensation payment is given when responsibility for causation is legally established or admitted to in writing.
2. The use of the court system in Japan is outstanding because Japan is not a litigious society.
3. "The acceptable amount of radioactive cesium in human urine is zero." Cesium 134 and 137 are substances that do not exist in nature, moreover they cause damage to the human body at any level.(fukuleaks.org, accessed 12/23/13)
4. 20 milisieverts is equivalent to 2000 millirems. The average annual radiation dose per person in the United States is 620 millirems (CDC 2003).

#### REFERENCES

- Almeida, Paul. 1998. "Political Opportunities and Local Grassroots Environmental Movements: The Case of Minamata." *Social Problems*. 45(1):37-60.
- Ames, Roger T. and Henry Rosemont. 1999. *The Analects of Confucius: A Philosophical Translation*. New York: Ballantine Books.
- Anderson, Benedict. 1991. *Imagined Communities: Reflections on the Origins and Spread of Nationalism*. London, UK:Verso.
- Aoki, Yayoi. 1994. *Kyosei Jidai no Feminizumu: Hirakareta Mirai o Motomete*. Tokyo: Oriijin Shuppan Senta.
- Broadbent, Jeffrey. 1998. *Environmental Politics in Japan: Networks of Power and Protest*. Cambridge: Cambridge Univ. Press.
- CLAIR (Council of Local authorities for International Relations). 2002. *Local Government in Japan*. Tokyo: CLAIR.
- Danahar, Mike. 2003. "On the Forest Fringes?: Environmentalism, Left Politics and Feminism in Japan." *Transformations*, No. 6 (February 2003):1-9.
- Garcia-Gorena, Velma. 1999. *Mothers and the Mexican anti-nuclear power movement*. Tucson, AZ: University of Arizona Press.
- Garon, Sheldon. 1997. *Molding Japanese Minds: The State and Politics in Everyday Life*. Princeton: Princeton Univ. Press.
- Garon, Sheldon. 2010. "State and Family in modern Japan: a historical perspective." *Economy and Society* 39(3): 317-336.
- George, Timothy S. 2001. *Minamata: Pollution and the Struggle for Democracy in Postwar Japan*. Cambridge, UK: Harvard University Asia Center.
- Hasegawa, Koichi. 2004. *Constructing Civil Society in Japan: voices of environmental movements*. Melbourne, Australia: Trans Pacific Press.
- Hayes, Louis D. 1992. *Introduction to Japanese Politics*. New York: Paragon House.
- Hellman, Donald C. 1976. *China and Japan: A New Balance of Power*. Lexington, Massachusetts: Lexington Books.
- Heng, Geraldine. 1997. "'Great way to fly': nationalism, the state and the varieties of Third-world feminism." in Alexander, Jacquie M. and Chandra Talpade Mohanty ed., *Feminist Geneologies, Colonial Legacies, Democratic*

*Futures*, 30-46. New York: Routledge.

Hikita, Mitsuko. 1996. "Women and Alternatives to Agricultural Decline." AMPO. Japan Asia Quarterly Review AMPO ed. *Voices from the Japanese Women's Movement*, 144-149. New York: ME Sharpe.

Hirai, Jun'ichi. 2004. "After the elections." *International Viewpoint Online magazine*, 356 (February). <http://www.internationalviewpoint.org/spip.php?article 108>, accessed March 8, 2004.

Imamura, Anne E. 1987. "The Urban Japanese Housewife: traditional and modern social participation." *Social Science Journal*. 24:139-56.

Interviews with blog authors, environmental activists and journalists. 2013. Interviews were conducted in Osaka, Tokyo, and Kyoto. All interviewee names are confidential and anonymous in alignment with informed consent and the Human Subjects Review Board at Bryant University.

Impoco, Jim. 1992. "Japan's late greening: Will the world's self-ordained eco-cop keep trashing its own backyard?" *US News and World Report*. 110 no. 12 (March 16): 61-63.

Ishida, Takeshi and Ellis S. Krauss ed. 1989. "Democracy in Japan: Issues and Questions." Ishida and Krauss eds. *Democracy in Japan* 3-16. Pittsburgh: University of Pittsburgh Press.

Ishida, Takeshi and Ellis S. Krauss. 1989. *Democracy in Japan*. Pittsburgh: University of Pittsburgh Press.

Kakuchi, Suwendrini. 2011. "Japanese mothers rise up against nuclear power." *The Guardian*. Dec. 22. <http://www.guardian.co.uk>

Kirkpatrick, Marine A. 1975. "Consumerism and Japan's New Citizen Politics." *Asian Survey*. 15, no. 3: 234-246.

Leblanc, Robin M. 1999. *Bicycle Citizens: the Political World of the Japanese Housewife*. Berkeley: Univ. of California Press.

Maruyama, Masatsugu. 2003. "Deconstructive Ecofeminism: A Japanese Critical Interpretation." Eaton, Heather and Lois Ann Lorentzen ed. *EcoFeminism and globalization: exploring culture, context, and religion*. 177-200. Lanham, MD: Rowman & Littlefield Publishers.

McAdam, Doug. 1996. "Conceptual Origins, Current Problems, Future Directions." McAdam, Doug, John D. McCarthy and Mayer N. Zald eds. *Comparative Perspectives on Social Movements*. 23-40. Cambridge: Cambridge Univ. Press.

Miyake, Yoshiko. 1991. "Doubling Expectations: Motherhood and Women's Factory Work Under State Management in Japan in the 1930s and 1940s." Bernstein, Gail Lee, ed. *Re-creating Japanese Women, 1600-1945*. Berkeley: Univ. of California Press (pp. 267-295).

Murota, Yasuhiro. 1985. "Culture and Environment in Japan." *Environmental Management*. 9 no. 2.

National Network of Parents to Protect Children from Radiation (子どもたちを放射能から守る全国ネットワーク). 2013. <http://papamama-zenkokusawakai.blogspot.com/>.

Last Accessed 6/7/13.

Noguchi, Mary Goebel. 1992. "The Rise of the Activist Housewife." *Japan Quarterly*. 39 no. 3 (July):339-52.

Nolte, Sharon H and Sally Ann Hastings. 1991. "The Meiji State's Policy Toward Women, 1890-1910." Gail Lee Bernstein ed. *Recreating Japanese Women, 1600-1945*. Berkeley, CA: Univ. of California Press.

Nuita, Yoko et. al. 1994. "The UN CEDAW and the Status of Women in Japan" Nelson, Barbara and Najma Chowdhury eds. *Women and Politics Worldwide*. New Haven, CT: Yale Univ. Press.

Patrick, Hugh. 1976. *Japanese Industrialization and its Social Consequences*. Berkeley, CA: University of California Press.

Penny, Matthew. 2011. "Contamination Outside Fukushima." *Asia-Pacific Journal: Japan Focus*. Sep. 4. <http://www.japanfocus.org>.

Sato, Sachiko. 2011. "Appeal to the USA." Sep. 19-14. [nonuke-h.greenwebs.net/english.html](http://nonuke-h.greenwebs.net/english.html).

Schreurs, Miranda A. 2001. "Women in Politics: Protecting the Environment in East Asia." *Journal of East Asian Studies*. 1(August): 63-92.

Schreurs, Miranda. A. 2002. *Environmental Politics in Japan, Germany, and the United States*. Cambridge, UK: Cambridge University Press.

SimplyInfo.org. 2013. "Cesium Found in Children's Urine Shows Ongoing Widespread Problems in Japan." <http://www.fukuleaks.org> (Accessed 12/23/13).

Slater, David. H. 2011. "Fukushima Women Against Nuclear Power: Finding a Voice from Tohoku." *The Asia-Pacific Journal: Japan Focus*. Nov. 9. <http://www.japanfocus.org>.

Steel, Gill. 2004. "Gender and Political Behavior in Japan." *Social Science Japan Journal*. 7(2):223-244.

Sidney Tarrow. 1998. *Power in Movement: Collective Action, Social Movements and Politics. Second Edition*. Cambridge: Cambridge University Press

Tokuza, Akiko. 1988. *Oku Mumeo and the Movements to Alter the Status of Women in Japan from the Taisho Period to the Present*. Ann Arbor, MI: University Microfilms Incorporated.

Ueno, Chizuko. 2004. *Nationalism and Gender*. Melbourne: Trans Pacific Press.

Ueno, Chizuko. 2009. *The Modern Family in Japan: Its Rise and Fall*. Melbourne: Trans Pacific Press.

Uno, Kathleen. 1998. "Death of 'Good wife, Wise Mother?'" Beauchamp, Edward R. ed. *Women and women's issues in post World War II Japan*, 227-258. New York: Garland.

Upham, Frank K. 1987. *Law and Social Change in Postwar Japan*. Cambridge: Harvard University Press.

## Water Power: The “Hydropower Discourse” of China in an Age of Environmental Sustainability

Yuen-ching Bellette Lee

**Abstract:** As the world searches for renewable energy in the face of climate change and China attempts to expand its power supply to further its economic development, hydroelectricity has moved to the top of the country’s energy agenda. This has given rise to a new form of “hydropower discourse” in China. The discourse is underpinned by the ideas of environmental protection and sustainable development, which are widely perceived as unobjectionable in view of the current availability of resources. This article argues that the apparent ethical pursuit of renewable energy by building dams to generate electricity masks relations of dominance and helps to enable large energy companies, political leaders, and regional decision makers to pursue their interests against those who have limited or no access to the knowledge and capital employed in the development process. It will examine the ideological assumptions and institutional rootedness of hydropower discourse, and the power relations embedded in it.

**Keywords** China; Environment; Sustainable Development; Dams; Discourse

**Yuen-ching Bellette Lee** is a Postdoctoral Scholar in the Department of Political Science at the University of California, Los Angeles.

### INTRODUCTION

As China has entered the 21st century with an increasing need for energy and in a position of leadership in hydropower technology following its success in building the Three Gorges Dam, a new form of “hydropower discourse” has begun to take shape. Unlike the global polemics over the Three Gorges Dam, which entailed a largely dichotomous opposition between the developmentalism embraced by Chinese technocrats on one side and the environmentalism advocated by transnational activist groups on the other (Lee 2013, 102-126), the new hydropower discourse in China has broken down the boundary between the two sets of ideology and practice and crossed over to the environmental field to appropriate some of its concepts.

Discourse here encompasses articulations, both spoken and textual, which enact, legitimate, and reproduce social relations that enable certain people or groups to exercise power over others by naturalizing the discourse’s constituent ideology. In the case of hydropower discourse, the harnessing of rivers is conceptualized, debated, and discussed in such a way that a certain approach of hydraulic development appears to be natural and unobjectionable. The technocratic language of river development, expressed in the ethical terms of environmental protection in pursuit of renewable energy, eliminates the political content and socioeconomic implications from the practice of dam building. Removed in this depoliticizing act are, *inter alia*, people’s rights, social justice, impacts on the natural environment, and economic distribution between citizens, geographical regions, and groups with disparate interests. The apparent apolitical character of hydropower discourse, in other words, conceals relations of dominance, in which people or objects in the lower end of the power hierarchy – be it nature, groups that have little or no share in the economic benefits, or rural villagers who are excluded from the decision-making system – are deprived of

their voices in the development process by those who claim exclusive knowledge to set the energy agenda and formulate water policies.

But hydropower discourse in China involves not only verbal articulations of hydraulic engineering. It is bound up with practices of dam building, oftentimes on a massive scale, the transfiguration of the natural landscape, and the transformation of people's ways of life. Such practices are made possible by the employment of resources such as technological knowledge, information, capital, and concepts that are prevailing in the global development structure. These practices instantiate the ideological propositions embedded in enunciations of river harnessing and are at the same time rationalized by the ideals of environmental sustainability in hydro development. Practice and ideology, in other words, support and reproduce each other, and both are wrapped up in the discursive formation of what I call hydropower discourse in China.

Hydraulic engineering is not a uniquely 21st century phenomenon in China. Harnessing waters for human use has been the task of ancient emperors and modern political leaders alike. From Dujiangyan, built in Sichuan Province around 250 BC, to the Gezhouba Dam on the Yangtze constructed under Mao, controlling floods and diverting rivers for productive use has been an important politico-economic agenda. Mao considered mastering nature as a means to express the communist might (Shapiro 2001, 1-19). Karl Wittfogel goes as far as arguing that hydro development in China has historically given rise to oriental despotism, a form of total power that extends from water projects to the centralized organization of society in the social, economic, religious, and politico-military spheres (Wittfogel 1957).

The hydropower discourse this article addresses represents a part of the continuum of water conservancy history in China. But it differs from the Maoist and dynastic manifestations of hydraulic development in that it is coextensive with the neo-liberal structure of globalization and the emergent articulations of environmental sustainability. Unlike the agro-bureaucrats who, according to Wittfogel, had full control over resources and societal organization under the single-centered state, technocrats in reformist China do not have equivalent power. They work for the power companies, which are state enterprises operating under the market mechanism with high autonomy in management and decision making. These energy companies, and the technocrats who staff them, control the mobilization of resources, including water and capital, and have access to the political leadership. But they do not hold centralized power, nor do they have absolute control of resources, and less so of society. Much of the hydraulic development is contingent on their negotiations with local authorities for a river to be exploited. Moreover, operating in the global arena of capital circulation, mechanical equipment transactions, and information exchange, the power companies and technocrats are subject to constraints in the global market and, most of all, scrutiny by transnational civil society and its challenge to the testability of their claim to environmental sustainability. In short, the Chinese hydropower discourse, despite its continuity, is marked with significant modifications in the 21st century. In this paper I examine the ideological propositions of this discourse, and the power relations that run through it.

#### **HYDROPOWER DISCOURSE IN MODIFICATION**

In June 2003, the Three Gorges Project Company successfully installed world-grade hydropower generators with the help of Western companies. The river was completely blocked and the dam entered its first phase of electricity production. Two years later, the corporation developed its own generators with the knowledge they had obtained through technological transfer. With initial generation of electricity having begun in 2003, China

claimed success in conquering the world's third-largest river and building the biggest dam ever. A new form of hydropower discourse came into shape.

That discourse was – and remains – distinct from the Maoist mode of development based upon the ideology of communist supremacy and from the Dengist version of material progress embodied by the Three Gorges Dam. The 21st century hydropower discourse was primarily subordinated to global development discourse, but it also crossed over to the environmental field to incorporate some of the latter's concepts. It appropriated for its ideological authority the idea of “sustainable development” first proposed by the United Nations in 1987 and later entrenched by the 1992 Earth Summit with the endorsement of Agenda 21, which is a blueprint for achieving sustainable development, and the establishment of the Commission on Sustainable Development to oversee its implementation.

The discourse also operated within a set of institutions that presumed economic growth as a *natural* pursuit of the human world. In the single year of 2004, various world-level meetings ranging from the International Conference of Hydropower and the International Symposium on River Sedimentation to the World Conference of Engineers were held at the Three Gorges and in Shanghai, celebrating the “exemplary” role of the dam and trumpeting the significance of harnessing hydropower as a way to alleviate the global energy crisis for continuous economic progress (CTGPN 2004a, 2004d, 2004g). Among these meetings, the most influential in precipitating China's emerging discourse was the United Nations Symposium on Hydropower and Sustainable Development, held in December 2004. In its Beijing Declaration on Hydropower and Sustainable Development, the more than five hundred participants from more than forty countries concluded that “access to energy is essential for achieving sustainable development. ... Noting with concern that two billion people do not have access to electricity, we call upon all stakeholders to work in concert to deliver energy services to all in a reliable, affordable and economically viable, socially acceptable and environmentally sound manner” (United Nations 2006). Hydroelectricity, under this premise, was highlighted as a valuable renewable energy source that could “contribute to sustainable development, ... to mitigating greenhouse gas emissions, ... [and] to poverty reduction and economic growth through regional development and expansion of industry” in developing countries.

To the extent that the living conditions in certain parts of the world are in need of improvement, energy supply is considered a resource that enables local people to participate in economic development. But put in the light of the argument's sociopolitical implications and the effects it produces, the subjects – river, water, two billion people, and developing countries – are rendered what Michel Foucault calls “objects” of a “discursive field” (Foucault 1991, 54). They are examined under an “objectivist and empiricist” lens (Escobar 1995, 8), an operation that bears out the conclusion that for the “two billion people” to be pulled out of poverty and embark on sustainable development, hydroelectricity is the necessary and ultimate prescription. This argument resonates with the one put forward by the Three Gorges technocrats, who emphasized the connection of poverty alleviation, sustainable development, and hydropower generation while sidestepping the ramifications of human rights, social disruption, and ecological destruction. Without an exploration of the conceptual presumptions and implementation of river exploitation, and without a more refined analysis of locally situated hydroelectricity production capacity, a well-intended resolution can be rendered a socioeconomic instrument of parties defending or pursuing specific power and interests.

In the context of the UN's Beijing Declaration, hydropower was brought to the top of the energy agenda in China as a “clean, renewable, and environmentally sound” resource

compatible with the principles of sustainable development. At the UN conference in 2004, the deputy director of China's State Development and Reform Commission, Zhang Guobao, announced that hydroelectricity would be given priority in his country's energy policy. Pinpointing existing opposition to any form of hydropower development, Zhang said an overemphasis on protection rather than exploitation was a "violation of the human community's fundamental well-being" (CTGPN 2004e). Thereafter, the call for hydroelectricity production became increasingly audible in the Chinese media. The next fifteen to twenty years, it was noted in one article published in 2005, would be a golden period for China's hydropower development (CTGPN 2005). The success of the Three Gorges Dam, said one official, had pushed China's capability for hydraulic exploitation to the forefront of the world. "Right now," he asserted, "is the best time for China to embark upon hydroelectricity development and construction" (CTGPN 2004f). Having built nearly half of the world's dams, China announced a plan to double its hydropower generating capacity by 2020 by erecting more dams.

The appeals came at a time when a convergence of circumstances pointed to an urgent need to tap into energy source alternatives to fossil fuels. The world was wrestling with possible methods for curbing the climatic change caused by excessive greenhouse gas emissions. Moreover, China was faced with the problem of an energy shortage in powering its expanding industries and sustaining its economic growth. These problems coincided with a worldwide shortfall in the supply of oil. With environmental protection as a supporting postulate, hydropower advocates in China circumvented assertions of social disruption and human rights violations typically used in the anti-Three Gorges campaign and turned the tables on dam opponents with the proposition of environmental sustainability.

Under the premises of cutting carbon emissions and exploring clean energy, the hydropower sector consolidated under the lead of the Three Gorges Corporation. In August 2002, the company collaborated with five other major state-owned energy corporations to establish the China Yangtze Power Company (hereafter referred to as Yangtze Power). The Three Gorges Corporation was the biggest shareholder, controlling 89.5 percent. Three other enterprises—Huaneng International Power, China Nuclear Industry Group, and China Petroleum and Natural Gas Group—each held 3 percent, while China Gezhouba Water Resources and Hydropower Project Group took 1 percent, and the Yangtze Surveying and Design Institute had 0.5 percent (*Hong Kong Wen Wei Po* 2002). Later in 2003, Yangtze Power was listed in the mainland stock markets as a blue-chip company with a high profile—it was selected as one of the "ten best" listed enterprises in China, and Li Yongan, the president of Yangtze Power and general manager of the Three Gorges Corporation, was selected one of the "ten best" enterprise leaders.

With its collective capital and knowledge, Yangtze Power made plans to build a cascade of four dams on the Jinsha River, a part of the Yangtze River system, upstream from the Three Gorges in southwestern China, which, nicknamed Double Three Gorges, would combine to generate twice as much power as the predecessor project. Construction on the first of the four projects, the Xiluodu Dam, began in 2005. Second in scale to the Three Gorges Dam, it would be 610 meters high, more than three times the height of the earlier dam, though, at 700 meters, less than one-third as wide. The planned capacity was 12,600 megawatts—compared to Three Gorges' 18,200 megawatts. It would produce 57.1 to 64 billion kilowatt hours per annum—compared to 84.7 billion kilowatt hours at the Three Gorges. Xiluodu, with its upstream position, claimed to be able to supply water for Three Gorges' power generation in the dry season, reduce water flow in the rainy period, and hold back a substantial amount of silt that would otherwise make its way to the Three Gorges Dam's



reservoir (*CTGPN Special: Jinshajiang Baodao* 2005). Construction of the dam is scheduled to be completed and production of electricity to begin in 2013.

Water itself is undoubtedly a renewable source of energy with minimal environmental impacts. But when it comes to damming a river, especially on a mega scale, the results go far beyond what simple, flowing water brings to the human world. At the Three Gorges, floating garbage amounts to 100,000 to 200,000 cubic meters per year and has been a problem particularly in the rainy season. It was recorded during a Yangtze flood in 2004 that the waste accumulated to a height of 4 meters behind the dam, exceeding the capacity of any garbage-clearing barge available at the time (*CTGPN* 2004c). Besides water pollution, people in the reservoir area are also confronted with geological hazards such as landslides and riverbank slumps. In a report entitled “Three Gorges Follow-Up Project,” the government revealed plans to relocate another three hundred thousand people—on top of the 1.2 million villagers already displaced—to make way for an “eco-screen” or “buffer belt” along the reservoir (*Guardian* 2010; *China Daily* 2010). The environmental and ecological defects caused by the damming of a river are not addressed in the advocacy of hydropower as green energy.

The neutrality of water as a clean, renewable resource also masks a complex web of social transactions in the politico-economic realm. Behind the facade of sustainability lie the political interests of decision makers, commercial strivings of power companies, and developmentalist visions of a state that is emerging as a world power. The four-dam cascade on the Jinsha, including the Xiluodu Dam, is a part of the grander scheme of the Great Western Development (*xibu da kaifa*), which China is actively pursuing as part of its national modernization drive. The campaign covers mainly Sichuan and Yunnan Provinces in the southwest, which are among the most impoverished areas in China. It promises to achieve resource exploitation, energy production, and poverty alleviation. But its goal of development is not confined to the western terrain: it also aims to generate electricity for the power-deficient east coast, in particular Guangdong, to sustain its industrialization and enriched urban population (Magee 2006, 24-27). Conceived to promote the development of the west, the hydraulic engineering projects are also meant to power the further reforms of the east; together the projects contribute to the overall modernization of China as a rising power.

The western hinterland carries the richest unharnessed hydropower resources in China. It represents a good opportunity for hydraulic exploitation, but it is also a potential focus of controversy because of its richness in natural diversity and minority cultures. In the region lies an area known as the Three Parallel Rivers, where the Jinsha (the upper Yangtze), Lancang (Mekong), and Nu (Salween) run almost parallel with one another before the latter two flow into Southeast Asia. It has been designated by the United Nations Educational, Scientific and Cultural Organization (UNESCO) as a World Heritage Site for being home to some of the richest biodiversity among temperate regions in the world: it is believed that over six thousand plant species and more than 50 percent of China’s animal species live there. Chinese environmentalists fought to prevent developmentalists from encroaching upon this ecological system and ethnic minorities, but many local officials support the damming of rivers because they believe that hydropower generation will bring economic development, a supply of electricity, and capital investment to the area’s communities.

The interests of local officials overlap with those of the power companies, which see the rivers as renewable sources of profit. In an example of a process Darrin Magee calls “corporatizing the electric power industry” (2006, 35), in 2002 the state’s energy sector was divided into five big power companies. Each of them went about claiming hydro territories

under the banner of the sustainable development of nonpolluting energy. Rivers in the southwest, the last frontier of the country's unexploited water resources, became a major target of competition. Among the corporate competitors were China Huaneng Group and China Huadian Corporation, which together generate about a fifth of China's electricity. The former established a hydro base on the Lancang River—known as the Mekong in Southeast Asia, while the latter gained development rights on the Nu River, known as the Salween, downstream. In 2003, Huadian came to an agreement with the Yunnan provincial government on proposals to build thirteen dams along the Nu near the UNESCO-designated World Heritage Site. The projects were suspended by former Premier Wen Jiabao in 2004 upon vigorous opposition from Chinese environmental groups, and were scaled back to four dams (Mertha 2008, 110–149). But Huaneng and Huadian also carved out hydraulic territories on the Yangtze. In 2009, the two companies were planning on a US\$30 billion project to cascade eight dams on the middle reaches of the Jinsha, which together, it was claimed, would generate as much hydroelectricity as the Three Gorges Dam.

The commercial interests of the energy companies were entangled in power relations that interpenetrated China's political structure. Huaneng, for example, has been controlled by the family of former Premier Li Peng, a water conservancy engineer who took an interest in hydropower generation. He was a steadfast supporter of the Three Gorges project throughout his political career. His son, Li Xiaopeng, also a trained engineer, headed Huaneng until June 2008, when he was appointed deputy governor of Shanxi Province. Li Peng's daughter, Li Xiaolin, is the CEO of Huaneng's most important subsidiary, China Power International Development, in Hong Kong (Pomeranz 2009). Huaneng is a multinational corporation producing different kinds of energy. Its subsidiaries are listed on the Hong Kong, Shanghai, and New York stock exchanges. One of the other most powerful energy companies, Huadian, which attempted to build the thirteen-dam cascade along the Nu, was established in 2002 as part of the power sector reform. Its first general manager, He Gong, was formerly a top leader of the Three Gorges Corporation. He had worked in Yunnan for fourteen years and had been the deputy chief of the province's Electric Power Bureau. Under him, the Manwan Dam on the Lancang River was built (Cao and Zhang 2004). It was one of the major water projects in the province, but the resettlement was poorly managed and left displaced villagers scavenging to this day. Almost immediately after He took office in Huadian, he approached the leading cadres of Yunnan with the proposal of exploiting the Nu. The thirteen-dam blueprint, conceived to generate 21,320 megawatts of electricity, surpassing the Three Gorges, emerged from those negotiations.

The hydropower discourse suffered an apparent setback in mid-2009 when the Ministry of Environmental Protection suspended the construction of two dams on the Jinsha (by Huaneng and Huadian) and another project on the Nu (one of the four by Huadian) on the grounds that they lacked prior environmental protection designs (*Telegraph* 2009). But the hydro-developmental force resumed its stride within a year, as the government announced its determination to pursue a green energy policy. This entailed an increase in the proportion of non-fossil fuels in overall energy consumption to 15 percent by 2020 and a simultaneous reduction of carbon intensity—the amount of carbon dioxide per unit of gross domestic product—by 40 to 45 percent (Reuters 2010a). Hydropower, now prized for its lower costs compared to wind and solar energy because of technological innovation and the scale of production, was trumpeted as a prioritized green power in the 12th Five Year Plan (2011–2015) (*Caixin* 2010). The current 200 Gigawatts (GW) of national installed hydropower capacity, it was projected, would be raised to 380 GW by 2020. This means that for the Yangtze alone, the existing 36 percent exploitation rate of the river's hydraulic resources

(including the Three Gorges) would have to increase to 60 percent by 2030. The policy initiative came at a time when dam builders had already been invigorated by the government's US\$586 billion economic stimulus package in late 2008, which allowed many localities, including Yunnan and Sichuan, to speed up their hydraulic projects.

The renewed momentum of dam building entailed a series of accelerated official endorsements from the middle of 2010. Over five months of that year—from July to November—the National Development and Reform Commission approved six large hydropower works. They included the 2.4-GW Jinanqiao Dam, which had been shelved by the environmental protection authority the year before. Other endorsed proposals were the 8.7-GW Wudongde and 14-GW Baihetan projects, to be developed by the Three Gorges Corporation on the Jinsha, and the 2.6-GW Changheba, 2.4-GW Guandi, and 600-Megawatt Tongzilin hydropower stations, all located in Sichuan Province (Reuters 2010a, 2010b). More dams were being planned or constructed on the upper reaches of the Yangtze's tributaries, including the Yalong, Dadu, and Wujiang (Breakbulk 2011). The Ministry of Environmental Protection, moreover, reversed its aforementioned suspension of the water projects undertaken by Huaneng and Huadian on the Jinsha. But the strongest signal of the hydropower discourse's advancement came from the State Council's announcement in January 2013 that the impasse on the Nu River projects would be broken. Five of the thirteen suspended schemes were revived. Among them, the Songta dam in Tibet was identified as a "key construction project" of the 12th Five Year Plan, while Liuku, Maji, Yabiluo, and Saige in Yunnan Province would be "surveyed and kicked off in an orderly manner" (State Council 2013). Premier Wen's order to halt all the construction along the Nu in 2004 had been considered a victory for the green lobby; the reversal of that decision represents the ascendancy of nature exploitation through the use of water, which is considered a nonpolluting resource, under the banner of sustainability.

In tandem with the overarching development discourse, China's hydropower discourse reached out to other parts of the world, enabling the dam-constructing sector to establish a dominant position as a global builder and financier. In 2007, the Chinese government signed an agreement with Myanmar to construct a dam at Hutgyi on the Salween (Nu). The project would be partly financed by Chinese funds and was to be built by Sinohydro, a major Chinese hydropower company, to provide electricity for Thailand (90 percent) and Myanmar (10 percent) (Osborn, 2007). Chinese dam builders were also involved in another eleven dams proposed for the mainstream Mekong (Lancang)—seven in Laos, two between Laos and Thailand, and two in Cambodia (Osborne 2010). It was estimated that Chinese investment would comprise up to 40 percent of upcoming projects on the Mekong and its tributaries. These included four of the eleven proposed works—Pak Beng, Pak Lay, and Xanakham in Laos, and Sambor in Cambodia (Hirsch 2011). The Southeast Asian countries had been critical of China's efforts to dam the Chinese side of the Mekong (Lancang) for fear of impacts on the river's ecology and fisheries. Substantial concerns of this type lingered, but the cooperation deals indicated a more receptive attitude toward river exploitation.

Outside Asia, the Chinese hydropower discourse extended to the developing countries of other continents: in June 2004, the Three Gorges Corporation struck a pact with Brazil's Itaipu Dam, the largest river development scheme in the world before the Three Gorges. The two sides agreed to exchange experiences in personnel training, operations management, and reservoir tourism (CTGPN 2004b). In Africa, as of May 2007, China was supporting at least ten dam projects in countries such as Sudan, Ethiopia, Zambia, Ghana, Nigeria, the Republic of the Congo, and Mozambique. Almost all of these schemes were financed

through the China Exim Bank as part of bigger agreements in areas such as energy production and minerals extraction (*IPS News Agency* 2007; Brautigam 2009, 299-303). In February 2011, China Yangtze International, a subsidiary of Yangtze Power, the mother company of the Three Gorges Corporation, established a joint venture with the Russian electricity firm EuroSibEnergo to develop hydro and thermal power in eastern Siberia. The new enterprise, named YES Energo Ltd., is registered in Hong Kong with a capital of US\$6 million. The cooperation deal firmed up further in June with an investment framework agreement on the construction of two hydropower stations and a natural gas-fired plant with a total capacity of 3 GW aiming to upgrade to 10 GW of new capacity. Apart from producing electricity for the Russian market, the energy generated will also be exported to northern and northeastern China (*EuroSinenergo* 2011; *Bloomberg* 2011; *HydroWorld* 2011).

## CONCLUSION

The 21st century hydropower discourse in China has developed at a time when the world has been at a critical juncture of energy crisis and climate change. The rarely challenged principles of environmental protection, sustainable development, and energy renewability lend much ideological strength to the rhetoric of dam proponents who seek to harness rivers on a massive scale. The apparently apolitical terms of developing hydropower for ecological sustainability mask a web of power relations, which enable those with knowledge and capital to assume an overriding position in the sociopolitical hierarchy over those who have little or no access to the intellectual and financial resources. Such power is exercised by agents ranging from large energy companies to political leaders, and from regional decision makers to humans in general (over nature).

Removed from the naturalized discourse are also the social disruption of local communities and the human rights of rural villagers, who are at the forefront, next to ecological communities, of bearing the impacts of hydropower development. Limitations of space prevent this paper from covering those topics.

But hydropower discourse is not a seamless structure, despite the mutual reproduction of ideology and practice as manifested in dam building. Extensive and expanding as it may be, hydropower discourse in China is interrupted by challenges from environmental protection agencies, central leaders, and nongovernmental organizations. The resistance of displaced people throws into question the propositions of poverty alleviation and material development as part of the modernization project, while events in nature – landslides, drought, and arguably earthquakes – reveal contradictions in the argument of environmental sustainability. Hydropower discourse, gathering momentum as an effect of China's latest energy policy, has a strong theoretical-ideological foundation. But questions about social injustice, ecological disruption, and unequal economic distribution undermine its ethical claim to be the solution for contemporary environmental problems.

\*This paper is based on an extract of the author's article published in the *Journal of Contemporary Asia*, Vol. 43, Issue 1, 2013, and was presented in the Half the World Symposium 2012 at Hobart and William Smith Colleges. The author would like to thank the *Journal of Contemporary Asia* for its permission of publication, Hobart and William Smith Colleges' Asian Environmental Studies Initiative, the Henry Luce Foundation, and the comments of the anonymous readers.

## REFERENCES

- Bloomberg*. 2011. "EuroSibEnergo, Yangtze Power Sign Investment Framework Pact." 17 June. <http://www.bloomberg.com/news/2011-06-17/eurosibenergo-yangtze-power-sign-investment-framework-pact-1-.html>.
- Brautigam, D. 2009. *The Dragon's Gift: The Real Story of China in Africa*. Oxford: Oxford University Press.
- Breakbulk. 2011. "Massive Chinese Hydro Project Moves Ahead." 27 January. <http://damsandalternatives>.

blogspot.com/2011/01/massive-chinese-hydro-project-moves.html.

Caixin. 2010. "Hydropower Slowly Rows Upstream in China." 10 December. <http://english.caixin.com/2010-12-10/100206366.html>.

Cao, H. and P. Zhang. 2004. "Nujiang daba turan gezhi muhou de minjian lilian" [Non-governmental Strength behind the Suspension of the Nu River Dam Proposal]. *Jingji*, 20 May <http://finance.sina.com.cn>.

China Daily. 2010. "Three Gorges Reservoir Plagued by Hazards." 6 March. [http://www.chinadaily.com.cn/china/2010-03/06/content\\_9548662.htm](http://www.chinadaily.com.cn/china/2010-03/06/content_9548662.htm).

CTGPN. 2004a. "Erlinglingsi nian shuili fadian guoji yantaohui zai sanxia zhaokai" [The International Conference of Hydropower 2004 Held at the Three Gorges]. 28 May.

CTGPN. 2004b. "Sanxia, Itaipu liangda shuidianzhan xieshou" [Cooperation of Two Biggest Hydropower Stations—Three Gorges and Itaipu]. 4 June.

CTGPN. 2004c. "Zuji ershiwan fang piaofuwu" [Tackling 200,000 Cubic Metres of Floating Garbage]. 16 October.

CTGPN. 2004d. "Dijiuci heliu nisha xueshu taolunhui zuori bimou" [The Ninth International Symposium on River Sedimentation Drew to a Close Yesterday]. 22 October.

CTGPN. 2004e. "Zhang Guobao: Youxian fazhan shuidian shi Zhongguo nengyuan fazhan de zhongyao fangzhen" [Zhang Guobao: Giving Priority to Hydropower Exploitation Is an Important Policy Orientation of China's Energy Development]. 30 October.

CTGPN. 2004f. "Lu Youmei: Youxian kaifa shuidian shi kechixufazhan de zhongyao duice" [Lu Youmei: Giving Priority to Hydropower Exploitation Is an Important Policy of Sustainable Development]. 30 October.

CTGPN. 2004g. "Shijie gongchengshi dahui zai Hu zhaokai" [The World Engineer Conference Convened in Shanghai]. 5 November.

CTGPN. 2005. "Shuidian kaifa shi shehui kechixufazhan de zhongyao tujing" [Hydropower Exploitation Is an Essential Way for Society's Sustainable Development]. 24 June.

CTGPN Special: Jinshajiang Baodao. 2005. "Xiluodu dianzhan 26 ri kaigong" [Work on the Xiluodu Hydropower Station Starts on the 26th]. 25 December.

Escobar, A. 1995. *Encountering Development: The Making and Unmaking of the Third World*. Princeton, New Jersey: Princeton University Press.

EuroSibEnerg. 2011. "EuroSibEnerg and China Yangtze Power Announce Siberian Project JV." 24 February. <http://www.eurosib.ru/en/press/news/456/>.

Foucault, M. 1991. "Politics and the Study of Discourse" in Graham Burchell et al. eds. *The Foucault Effect: Studies in Governmentality*. Chicago: The University of Chicago Press.

Guardian. 2010. "Three Gorges Dam May Force Relocation of a Further 300,000 People." 22 January. <http://www.guardian.co.uk/environment/2010/jan/22/wave-tidal-hydropower-water>.

Hirsch, P. 2011. "Cascade Effect." *China Dialogue*. 8 February. <http://www.chinadialogue.net/article/show/single/en/4093>.

Hong Kong Wen Wei Po. 2002. "Three Gorges Dam Ready for Listing in Shanghai." 25 August.

HydroWorld. 2011. "EuroSibEnerg, Yangtze Power to Develop Hydro Projects in Siberia." 24 June. <http://www.hydroworld.com/articles/2011/06/eurosibenergo--yangtze.html>.

IPS News Agency. 2007. "China—New Promoter of Mega Dams." 23 May. <http://www.ipsnews.net/print.asp?idnews=37844>.

Lee, Y. 2012 & 2013. "Global Capital, National Development and Transnational Environmental Activism: Conflict and the Three Gorges Dam." *Journal of Contemporary Asia*. online 2 November, 2012; in print 43 (1): 102-126. .

Magee, D. 2006. "Powershed Politics: Yunnan Hydropower under Great Western Development." *China Quarterly*. No.185: 23–41.

Mertha, A. 2008. *China's Water Warrior: Citizen Action and Policy Change*. Ithaca and London: Cornell University Press.

Osborne, M. 2007. "The Water Politics of China and Southeast Asia: Rivers, Dams, Cargo Boats and the Environment." *Japan Focus*. 11 June. <http://japanfocus.org/-Milton-Osborne/2448>.

Osborne, M. 2010. "The Mekong River under Threat." *Asia-Pacific Journal*. 2-2-10. 11 January <http://www.japanfocus.org/-Milton-Osborne/3286>.

Pomeranz, K. 2009. "The Great Himalayan Watershed: Water Shortages, Mega-projects and Environmental Politics in China, India, and Southeast Asia." *Asia-Pacific Journal*. 30-2-09. 27 July. <http://japanfocus.org/-kenneth-pomeranz/3195>.

Reuters 2010a. "China Seen Quietly Opening Sluice for Mega Hydro Projects." 16 November. <http://af.reuters.com/articlePrint?articleId=AFTOE6AE05G20101116>.

Reuters. 2010b. "China Approves More Hydropower amid Clean Energy Push." 29 November. <http://af.reuters.com/article/energyOilNews/idAFTOE6AS06F20101129>.

Ria Novosti. 2010. "EuroSibEnerg, China Yangtze Power to Construct Hydro Power Plants in Russia." 29 November. <http://en.rian.ru/business/20101129/161547964.html>.

Shapiro, J. 2001. *Mao's War Against Nature: Politics and the Environment in Revolutionary China*. Cambridge: Cambridge University Press.

State Council, The Central People's Government of the People's Republic of China. 2013. "Nengyuan fazhan 'shier wu' guihua" [The 12th Five Year Plan of Energy Development]. 23 January. [http://www.gov.cn/zwggk/2013-01/23/content\\_2318554.htm](http://www.gov.cn/zwggk/2013-01/23/content_2318554.htm)

Telegraph. 2009. "China Halts 20bn-Pound Dam Project." 12 June. <http://www.telegraph.co.uk/news/worldnews/asia/china/5513499/China-halts-20bn-dam-project.html>.

United Nations. 2006. "Beijing Declaration on Hydropower and Sustainable Development." CSD Documents, E/CN.17/2006/10, Division for Sustainable Development.

Wittfogel, K. 1957. *Oriental Despotism: A Comparative Study of Total Power*. New Haven and London: Yale University Press.

## Harmful Algal Blooms in Asia: an insidious and escalating water pollution phenomenon with effects on ecological and human health

Patricia M. Glibert

**Abstract:** Harmful Algal Blooms (HABs), those proliferations of algae that cause environmental, economic, or human health problems, are increasing in frequency, duration, and geographic extent due to nutrient pollution. The scale of the HAB problem in Asia has escalated in recent decades in parallel with the increase in use of agricultural fertilizer, the development of aquaculture, and a growing population. Three examples, all from China but illustrative of the diversity of events and their ecological, economic, and human health effects throughout Asia, are highlighted here. These examples include inland (Lake Tai or Taihu) as well as offshore (East China Sea and Yellow Sea) waters. The future outlook for controlling these blooms is bleak. The effects of advancing industrialized agriculture and a continually growing population will continue to result in more nutrient pollution and more HABs—and more effects - in the foreseeable future.

**Keywords** water pollution; nutrient pollution; eutrophication; red tide; Lake Taihu; East China Sea; Yellow Sea

**Patricia M. Glibert** is a Professor with the University of Maryland Center for Environmental Science. Named one of the top 25 professors in Maryland, she is aquatic ecologist with over 30 years of experience working on issues related to nutrient loading, eutrophication, and harmful algae. In addition to her work in Chesapeake Bay, she has recently completed studies in East China Sea, Hong Kong coastal waters, Kuwait Bay, and the Gulf of Oman.

Massive population. Manufacturing epicenter. Rapid economic growth. These are our images of China. Here's another: pollution powerhouse. As stated by Kahn and Yardley<sup>1</sup>, "...just as the speed and scale of China's rise as an economic power have no clear parallel in history, so too its pollution problem has shattered all precedents. Environmental degradation is now so severe, with such stark domestic and international repercussions, that pollution poses not only a major long-term burden on the Chinese public but also an acute political challenge..." The temporal and spatial scale of the massive economic expansion of polluting industries is unprecedented. This expansion has been at a huge environmental cost with ramifications that include human and ecological health, as well as enormous economic costs.

Although pollution is occurring on land, in the air, and in water, the challenge of water pollution is particularly great. The scale of the water pollution problems in China almost defies description. A few stark statistics highlight the magnitude of this issue. In 2007, official estimates of the extent of water pollution were doubled due to previously unreported agricultural waste.<sup>2,3</sup> In 2010, over 40% of all state-monitored rivers were considered "Grade 4," meaning unsuitable for human contact.<sup>4</sup> Hundreds of millions of Chinese lack access to safe drinking water due to pollution.<sup>5</sup>

Typically one associates water pollution with chemical discharges from industrial processes. Yet these types of pollutants are only one of the types of pollutants that affect water. Increased infectious bacteria or other water-borne diseases, such as cholera, in areas receiving raw sewage are another.<sup>6</sup> Still another is the increased proliferation of toxic or harmful algal blooms (HABs). Harmful algae are those proliferations of algae that can cause ecological harm to food webs when they accumulate in massive quantities, and they can cause both

ecological and human health impacts when these cells produce toxic or other bioactive compounds.<sup>7</sup>

Harmful algae can grow in all waters, from rivers and lakes to reservoirs and oceans, and in all these waters the events can cause significant impacts. The frequency, duration, and geographic extent of harmful and toxic algae are increasing throughout Asia, and throughout much of the world (Fig. 1).<sup>8,9,10</sup> While China is experiencing some of the largest impacts

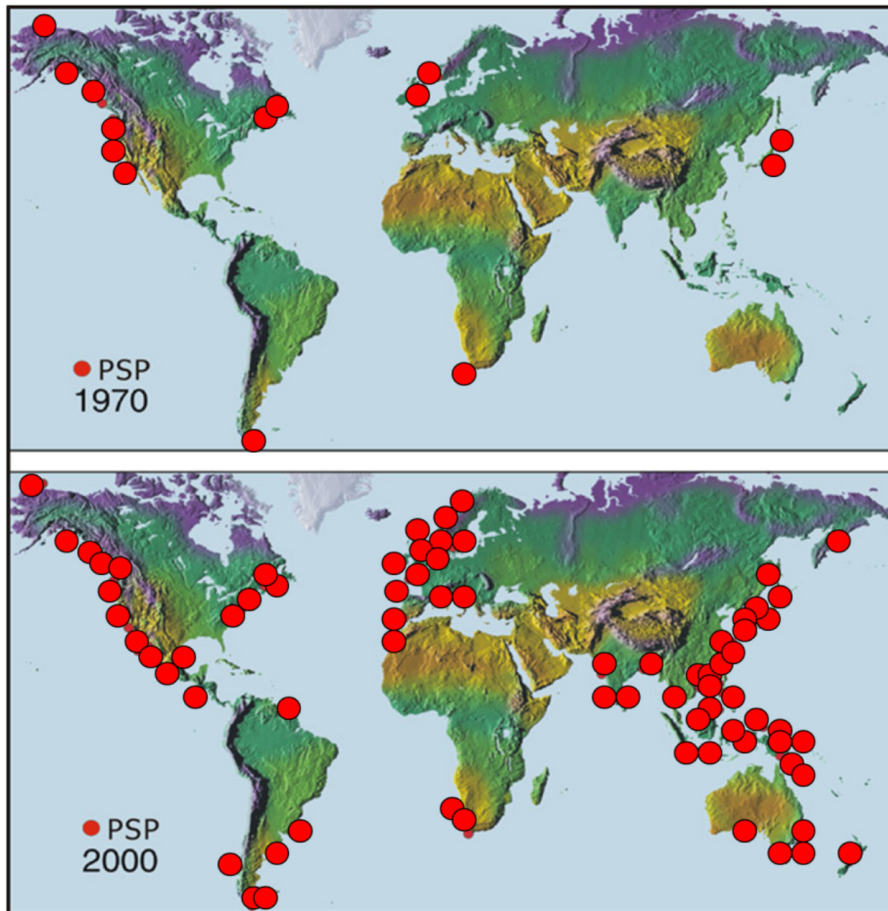


Figure 1: The change in global distribution from 1970 to 2000 of the harmful algae that cause paralytic shellfish poisoning (PSP). The upper panel shows the recorded occurrences of PSP by 1970, while the lower map shows the recorded occurrences of this syndrome through the year 2000. The expansion has been particularly large throughout southeast Asia, Europe and South America. Paralytic shellfish poisoning is but one syndrome caused by HABs and results in diarrhea, nausea, vomiting, and respiratory paralysis when shellfish which have consumed the toxic algae are eaten by humans. Map reproduced from Glibert et al. (2005) with permission of the Oceanography Society.

from HABs in Asia, other areas in Asia with particular concern over increasing HABs are the Philippines, Malaysia, Hong Kong, Japan, and Korea.<sup>11</sup> The countries of West Asia are also not immune to such problems, and numerous new HAB events and associated ecological and economic effects have been reported in this region over the past decade.<sup>12,13,14</sup> It has been estimated that direct human poisoning events in Asia from toxic algae number in the thousands annually.<sup>15</sup> One of the most common environmental effects of HABs is fish kills, including fish grown in the expanding aquaculture industry. Damages to the aquaculture industry have been estimated in the tens to hundreds of millions of dollars for blooms that have occurred in Korea, Japan, and the Philippines. Single HAB fish-kill events in Korea have been estimated to have cost from \$1-100 million in lost fish, while in Japan such events have been estimated to have resulted in losses of fish worth more than \$300 million.<sup>16</sup>

The increasing frequency of HABs, their relationship to population and economic development and the increasing use of industrialized fertilizers, and their economic and human health consequences are the subjects of this paper. This brief synopsis is not meant as a review of the ecology or the dynamics of algal blooms, but rather as an introduction to the



kinds of environmental, economic, and human health impacts that can occur. This paper begins with a brief, general description of algal blooms, the diversity of organisms producing HABs, and the general ecological and human health consequences of such phenomena. Then, an overview of increasing nutrient enrichment is provided and the linkage drawn between population growth, agricultural and economic development, and the nutrients that fuel the proliferation of such blooms. Several examples of HAB events and their impacts are then highlighted. While these examples do not illustrate all possible HAB event types, they do serve to illustrate the diversity of these problems and the fact that such events occur from freshwater to marine waters and that the causative organisms are also diverse. The examples chosen are all from China but, as noted above, throughout Asia, similar examples involving the species described here as well as numerous other HAB species can be found.

#### THE HARMFUL ALGAL BLOOM PHENOMENON

Algae are a normal part of the aquatic ecosystem; they form the base of the aquatic food web. Most are microscopic in size, but some are macroscopic. Most algae are not harmful. Algae only can become “harmful” when they either accumulate in massive amounts or when the composition of the algal community shifts to species that make compounds (including toxins) that disrupt the normal food web or that can harm human consumers.<sup>17</sup> Much has been written about the ecological and biological complexity of HABs and the conditions associated with their formation.<sup>e.g. 18,19,20</sup>

Some HABs are technically not “algae” at all, but rather small animal-like microbes that obtain their nutrition by grazing (on other small algae or bacteria); they either do not photosynthesize at all or only do so in conjunction with grazing.<sup>e.g. 21,22,23</sup> Other HABs are more bacteria-like. These are the cyanobacteria (CyanoHABs), some of which have the ability to “fix” nitrogen from the atmosphere as their nitrogen source. Thus, the term “HAB” is an operational term, not a technical one.<sup>24</sup> Some HABs are planktonic, living in the water column, while others live in or near the sediment or attached to surfaces for some or all of their life cycle.

By definition, all HABs cause harm - either ecological, economic, or human health. Not all HABs make toxins; some are harmful in other ways. Among those that do make toxins, there are many types of toxins, with new toxins ones being discovered frequently.<sup>25</sup> Making the task of understanding these phenomena all the more complex, not all species are toxic under all conditions, and it is not completely understood when and why different species may become toxic.<sup>26</sup>

There are many species of HABs, and they have a vast array of environmental and human health impacts<sup>27</sup> (Fig. 2, Table 1). Some algal toxins kill fish directly. Others do not have direct effects on the organisms that feed on them, such as fish or filter-feeding shellfish, but the toxin can accumulate in the shellfish and then cause harm to the humans who consume them. In other cases, the toxins are released into the water column where they can get into the water supply and affect human consumers through their drinking water.

The effects of HAB toxins on humans are many; the species that make these sorts of toxins are diverse,<sup>28</sup> as are the pathways of exposure (Table 1). One important pathway by which people are exposed to toxin, as mentioned above, is through consumption of seafood that had previously been exposed to HABs or their toxins. For example, when shellfish are eaten that have consumed (through their filter feeding) the HAB diatom *Pseudo-nitzschia* spp. the most common symptoms are cramps and vomiting, but neurological disorders, such as short-term memory loss, can also occur.<sup>29</sup> (Note that the use of the term “spp.”, denotes multiple species of an organism). Because of this latter effect, this syndrome is

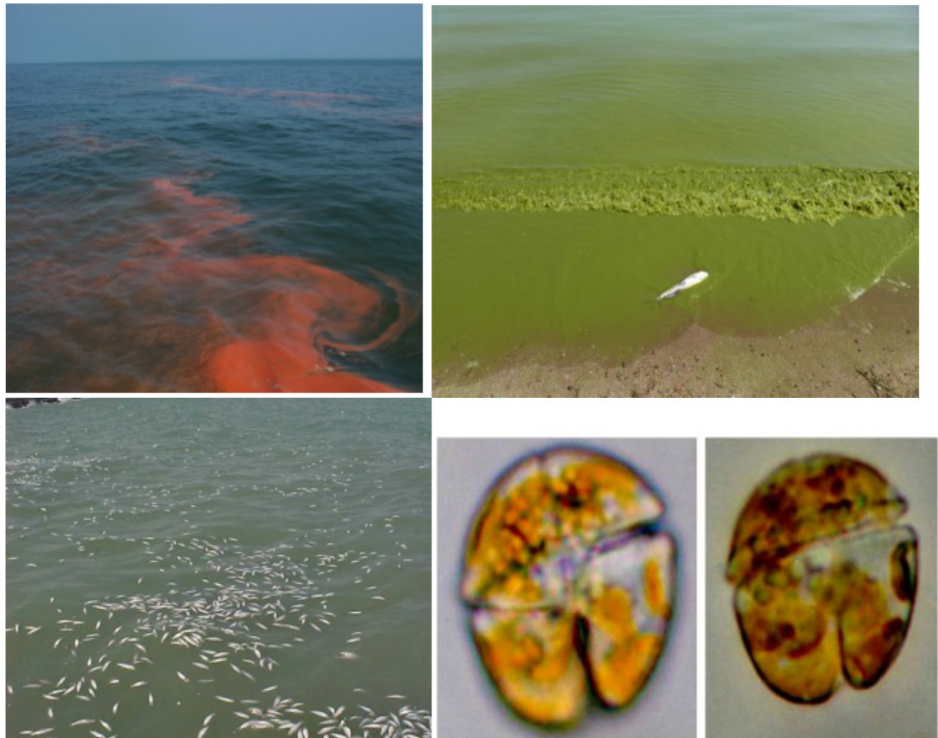


Figure 2: Images of a “red tide” in East China Sea (upper left; photo by J. Li), a freshwater “green tide” (upper right; photo by T. Archer), a fish kill from toxic algae (lower left; photo by P. Glibert), and microscopic views of a common toxic red tide microorganism (lower right; photos by Y. Fukuyo).

termed Amnesic Shellfish Poisoning (ASP).<sup>30</sup> Exposure to this HAB type is now being linked to seizure and memory loss in laboratory animals, and to premature births and strandings in animals such as sea lions.<sup>31,32,33</sup> As another example, when mussels or other shellfish are consumed that have previously ingested the HAB dinoflagellate *Alexandrium* spp., effects can range from numbness around lips and mouth to respiratory paralysis and, with high doses, death.<sup>34</sup> This HAB syndrome is termed Paralytic Shellfish Poisoning (PSP). Another common HAB dinoflagellate species in Asia that causes PSP toxicity is *Pyrodinium bahamense* (var. *compressum*); this species has been particularly problematic in the Philippines, Indonesia, and Malaysia, where many human fatalities have been reported over the past several decades.<sup>35</sup> ASP and PSP are just a few of the effects of HAB toxins (Table 1).

ILLNESS	TOXIN AND CAUSATIVE SPECIES	SYMPTOMS
Amnesic Shellfish poisoning (ASP)	Domoic acid from the diatom <i>Pseudo-nitzschia</i> spp. in shellfish	Short-term memory loss, vomiting, cramps
Diarrhetic shellfish poisoning (DSP)	Okadaic acid from the dinoflagellate <i>Dinophysis</i> spp. in shellfish	Diarrhea, vomiting, cramping
Neurotoxic shellfish poisoning (NSP)	Brevetoxin from the dinoflagellate <i>Karenia</i> spp. in shellfish, aerosolized toxins	Nausea, diarrhea, eye irritation, respiratory distress, death
Paralytic shellfish poisoning (PSP)	Saxitoxin from the dinoflagellate <i>Alexandrium</i> spp. and other species in shellfish	Numbness around lips and mouth, extremities; respiratory paralysis, death
Cyanotoxin poisoning	Microcystins and other toxins from cyanobacteria in water	Skin irritation, respiratory irritation, tumor-promotion, liver cancer, failure; neurological diseases such as Parkinson’s, ALS, and dementia

Table 1. The general types of poisoning that occur from toxic algae, their vectors, and the symptoms or disease expression. Reproduced from Glibert (2008).

Other important pathways by which humans are exposed to HAB toxins are direct contact with water (swimming, drinking) and indirect contact via aerosols. One of the

most common HAB types in freshwater, and one exemplifying the effect of both direct and indirect contact, is the CyanoHAB, *Microcystis* spp. Exposure to water with this HAB or its toxin can cause skin or respiratory irritation, but prolonged, repeated, or intensive exposure to the HAB toxin has been associated with tumor promotion, especially liver cancer.<sup>36</sup> As this toxin and other related toxins can affect the nervous system, it has been suggested that some neurological diseases such as Parkinson's Disease or dementia may also be related to some of the toxic and bioreactive compounds originating from this HAB group.<sup>37</sup> In yet other cases, toxins carried by sea spray and breathed by human consumers may cause respiratory distress.<sup>38</sup>

In addition to direct effects from toxins, some HABs are harmful to the ecosystem through their sheer biomass accumulation.<sup>39</sup> It is these visible accumulations that gave these events their common term, "red tides". Such biomass accumulation can lead to a multitude of negative consequences. For one, their accumulation can reduce the light penetration in the water column, thereby reducing habitat suitability for the growth of submersed grasses. Exceedingly high biomass can also cause fish gills to clog, leading to suffocation.<sup>40</sup> High biomass blooms can also lead to the development of "dead zones."<sup>41</sup> Dead zones are formed when the algae begin to die and their decomposition depletes the water of oxygen. Dead zones do not support (aerobic) aquatic life, and are responsible for losses of millions of dollars worth of fish annually.<sup>42</sup>

#### **FERTILIZED TO DEATH**

The term for the enrichment of waters with excess nutrients leading to algal proliferation and a cascade of ecosystem consequences is eutrophication.<sup>e.g.43,44</sup> The nutrients which fuel eutrophication, nitrogen and phosphorus, make their way into waterways from two main anthropogenic sources - their use in agriculture and from sewage discharge, although industrial sources of these nutrients are not insignificant in some places. In agriculture, nitrogen and phosphorus-based fertilizers are used to enhance crop yield and food production. While there are natural sources of nitrogen and phosphorus, the use of chemical fertilizers is responsible for the "Green Revolution," which supports the ever-increasing human population.<sup>45</sup> The rate of use of industrial fertilizers has escalated in the past several decades.<sup>46,47,48</sup> China has increased its use of nitrogen fertilizer fourfold since the 1970s and together with the other countries of southeast Asia uses half of the world's nitrogen supply.<sup>49</sup>

The transfer of fertilizer nutrients through agriculture to food is extremely inefficient, however, leading to large amounts of nutrients being exported to the environment. About 14% of fertilizer nitrogen is consumed in food when vegetables are eaten, but only 4% is consumed in food when meat is eaten.<sup>50</sup> Those chemical fertilizers not taken up directly by the farm crops and harvested find their way into the environment in several ways. They can run off from farm fields directly into streams and rivers. They can percolate into the groundwater. In some instances, especially in the case of nitrogen, some of the fertilizer volatilizes into the atmosphere and can be transported and later deposited on land or sea by wet or dry deposition.<sup>51</sup>

In addition to fertilizer use, animal agriculture is expanding to meet the dietary demands of the population, and increasingly animal production is concentrated in large industrial feeding operations (concentrated animal operations, CAFOs). China has tens of thousands of such operations, which are estimated to produce more than 40 times the nitrogen pollution of industrial factories.<sup>52</sup> Moreover, animal waste is not treated and thus is an important source of nitrogen pollution in local waterways. Aquaculture is another type of concentrated animal operation, and the export of nitrogen from these expanding industries

is substantial.<sup>53,54</sup> Of course, both animals and people consume these nutrients in their food and, in return, generate nitrogen and phosphorus in their waste. Although most industrialized parts of the world treat human sewage, this treatment typically does not actually remove nitrogen.

Although there are thousands of species of algae, not all of them respond equally to nutrient enrichment. Algal *blooms* occur when there is a rapid increase in their growth rate and biomass. Algal blooms can be promoted when these nutrients from agriculture, aquaculture, or sewage are discharged into water, and when other physical, chemical, or biological conditions are favorable for growth of these microbes.<sup>55,56</sup> Nutrients - particularly nitrogen and phosphorus - are essential for the growth of algae. These chemicals are necessary for the organisms to build new biomass (amino acids, proteins, DNA, lipids), and for energy (ATP) for metabolism.<sup>57</sup> Just like plants on land, different species of algae have preferences for different nutrients, different forms of those nutrients, and different proportions of nutrients. For example, some species preferentially use ammonium or urea for their nitrogen; others use nitrate.<sup>58,59,60</sup> Some species have also been shown to increase their toxicity levels in the presence of excess nitrogen relative to phosphorus, a critical concern when HABs proliferate in reservoirs, as the toxins can get into the water supply.<sup>61,62</sup> That China, as well as many other Asian countries, have escalated their use of nitrogen fertilizers relative to phosphorus fertilizers may be relevant in this regard.<sup>63</sup> Understanding which species preferentially use which forms of nutrients and in which proportions relative to knowledge of source and amounts of nutrient loads and the pathways by which nutrients are cycled in the environment provides important clues to understanding which species may proliferate under which conditions.

The examples below highlight three cases of HABs in China. These case studies are meant to illustrate that HABs have effects from freshwater to marine waters and that there is a diversity of HAB types and effects, but that all have several things in common. All of these cases resulted from excessive nutrient pollution; all caused harm to the environment and had resulting economic consequences; some were associated with human health impacts. Finally, the examples serve to highlight that the options for reducing the frequency or magnitude of such events are few. The ecology and dynamics of these blooms are complex and fascinating in their own right; the emphasis placed here is on the changing frequency or magnitude of these events and their effects.

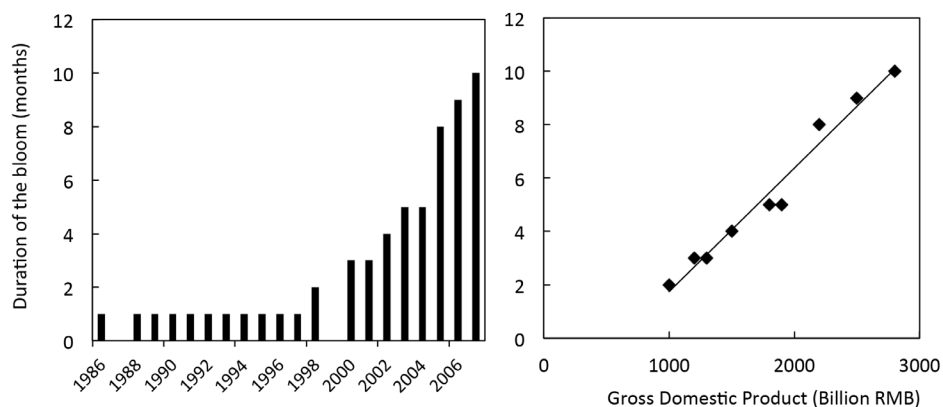
#### **TAIHU**

Lake Tai (Taihu), the third largest lake in China, is located in the watershed of the Chiangjiang (Yangtze) River, the most industrialized area of China. This lake serves as a drinking water reservoir for over 2 million people.<sup>64</sup> Long known as a scenic area and tourist destination, Taihu is now choked annually with blooms of the toxic CyanoHAB species, *Microcystis aeruginosa*. This species makes several toxic or bioactive compounds, the most toxic of which is microcystin.<sup>65</sup>

The impact of these blooms is staggering. Blooms have been of such magnitude that as recently as a few years ago, the water supply intake had to be closed, leaving millions of people without potable water for several weeks.<sup>66,67</sup> In 2007 alone, over 6,000 tons of algae were removed from Taihu and from the drinking water pipes.<sup>68</sup> Tons of algal-killing chemicals were added to treat the water. City managers and leaders demanded that 1,000 factories be closed to reduce industrial and atmospheric sources of nitrogen and phosphorus to the lake.<sup>69</sup>

A recent analysis of the change in bloom frequency and duration shows that prior to

Figure 3: A - left panel - Annual duration (number of months) of the *Microcystis* sp. blooms in Lake Taihu, and B - right panel - annual duration of the bloom in relation to the annual gross domestic product. Figure replotted from Duan et al. (2009).



limited in extent, but in the most recent years blooms are covering virtually all of the lake.<sup>73</sup> This change in frequency and magnitude is related to the rapid development of the region and the corresponding increase in levels of nitrogen and phosphorus. Strong and significant relationships have been found between changes in nutrient loads and biomass of these bloom-forming microbes.<sup>74,75</sup> The relationship between nutrient pollution and the extent of these blooms is illustrated by the strongly significant correlation between gross domestic product and the initial date of bloom formation as well as duration (Fig. 3B).<sup>76</sup> Gross domestic product here is a proxy variable for population growth and the rapidly expanding anthropogenic footprint in the watershed, and to distinguish these pollution effects from those due to global warming (which would not be related to gross domestic product).<sup>77</sup> Both population growth and growth of agriculture are significant sources of nutrient pollution to the lake. Waste from CAFOs alone is estimated to contribute 35% of the nutrient pollution to Taihu.<sup>78</sup> Fertilizer use in the Taihu watershed is estimated to be >40% higher than the national average.<sup>79</sup> Further evidence that nutrient pollution is related to these blooms is the fact that 3 million tons of sewage enter the lake daily, with only about half of that receiving any treatment.<sup>80</sup>

The human health concerns related to these algal blooms are many. It has been reported that the increase in liver cancer in this eastern region of China is related to the toxins found in drinking water.<sup>81,82</sup> These toxins, among which are those derived from the *M. aeruginosa* and related CyanoHAB blooms, are also consumed when people eat fish or duck from the lake that have consumed these toxins. While no statistics are available with regard to the toxin effects of the most recent blooms in Taihu, it has been reported that toxin levels from *M. aeruginosa* in Taihu have soared in the past few years and are now many, many-fold higher than the “safe” levels established by the World Health Organization.<sup>83</sup> A recent study of children exposed to microcystin from another lake had very high rates of liver cancer.<sup>84</sup> Chinese officials now formally recognize the existence of “cancer villages,” where unusually high rates of cancer are reported as a result of water, as well as other, pollutants.<sup>85</sup>

Investments of hundreds of millions of dollars are now being made in sewage upgrades in the Taihu region,<sup>86</sup> which should help to lessen bloom frequency and/or intensity, but pressures from agricultural discharge are likely to continue. Other control measures have, or are being taken. For example, water diversions from the Changjiang River have been undertaken with the goal of reducing the nutrient levels, but such measures are only effective for

subregions of the lake or have been other unintended consequences, such as potentially elevated nutrient loads from the river diversions themselves.<sup>87,88</sup>

**EAST CHINA SEA**

The second example of algal blooms and their effects is taken from the coastal waters of the East China Sea. Coastal blooms do not always have the public’s attention to the extent that freshwater blooms do, as they are away from view of most citizens. However, their effects can be just as significant from human health, ecosystem health, and economic points of view. Blooms in the East China Sea have been increasing, just as those of Taihu, and their occurrence tracks the increases in nutrient fertilizer use over the past several decades, as well as the increase in intensity of aquaculture development (Fig. 4).<sup>89,90,91</sup> In this case, the causative nutrients originate in the upper reaches of the Changjiang River and are transported offshore with the flow of the river.

One particularly massive bloom occurred in 2005 in this region.<sup>92</sup> The causative species

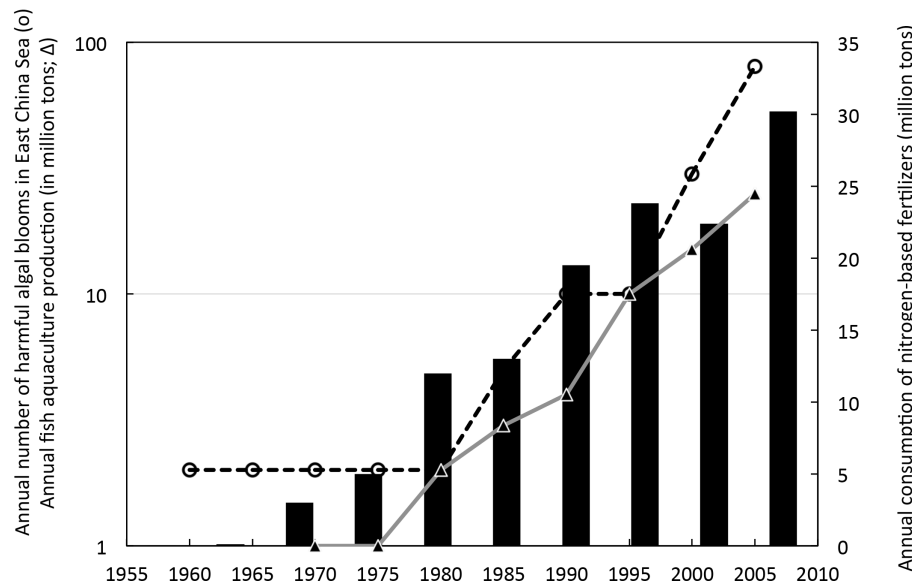


Figure 4: Comparison of the number of harmful algal bloom events in the East China Sea over time (o) in relation to the expansion in finfish aquaculture in the East China Sea (Δ) and the overall consumption of nitrogen-based fertilizer by China (bars). Note the use of the log scale on the primary Y-axis. Data on numbers of harmful algal blooms and aquaculture development are derived from Furuya et al. (2010) and the nitrogen fertilizer data are from the Food and Agriculture Organization of the United Nations (FAO).

were several, but the main one that led to ecosystem damage was *Karenia mikimotoi*, a dinoflagellate. The total area affected by this bloom was ultimately estimated to be over 15,000 km,<sup>2,93</sup> resulting in a massive fish kill in the coastal aquaculture areas.<sup>94</sup> The East China Sea has intensive aquaculture production.<sup>95</sup> The production of high market-value fish-cage aquaculture in this area has increased more than twofold from the early 1990s to the early 2000s.<sup>96</sup> Red drum, croaker, grouper, and sea bream, worth about \$2.5 million, were lost due to this bloom.<sup>97</sup>

*Karenia* spp. makes a toxin, a polyether compound called brevetoxin, that affects the nervous system.<sup>98</sup> Brevetoxin kills fish directly. Shellfish are unaffected by this toxin (they have no nervous system), but fish and all mammals are affected.<sup>99</sup> Shellfish can, however, accumulate this toxin. The most common source of exposure for people is through consumption of shellfish, but in many Asian countries, fish are also an important vector. In Asia, it is common to consume whole fish, rather than fillets, exposing consumers to the liver and stomachs, where the fish would have the highest level of toxins.<sup>100</sup> Some of the symptoms associated with toxin poisoning from *Karenia*-affected seafood include, “nausea, vomiting, diarrhea... numbness and tingling in the lips, mouth and face, as well as numbness and tingling in the extremities... [Moreover,]... overall loss of coordination, and partial

limb paralysis may also occur... [as well as] slurred speech, headache, pupil dilation, and overall fatigue... and more severe clinical progression that often involves paralysis, respiratory distress and death if undiagnosed and untreated."<sup>101</sup> Because many of these symptoms are common to many intestinal or neurological illnesses, the effects of *Karenia*-toxin poisoning are typically underreported and misdiagnosed not only in Asia but in other regions of the world where this species also occurs.<sup>102</sup> Effects of brevetoxin may remain in the ecosystem even after the bloom itself has passed.<sup>103</sup> Human impacts of the 2005 bloom in the East China Sea were minimized due to the fact that the bloom was located offshore and due to the unfortunate fact that the bloom killed the aquaculture fish, making them unsuitable for market and therefore human consumption.

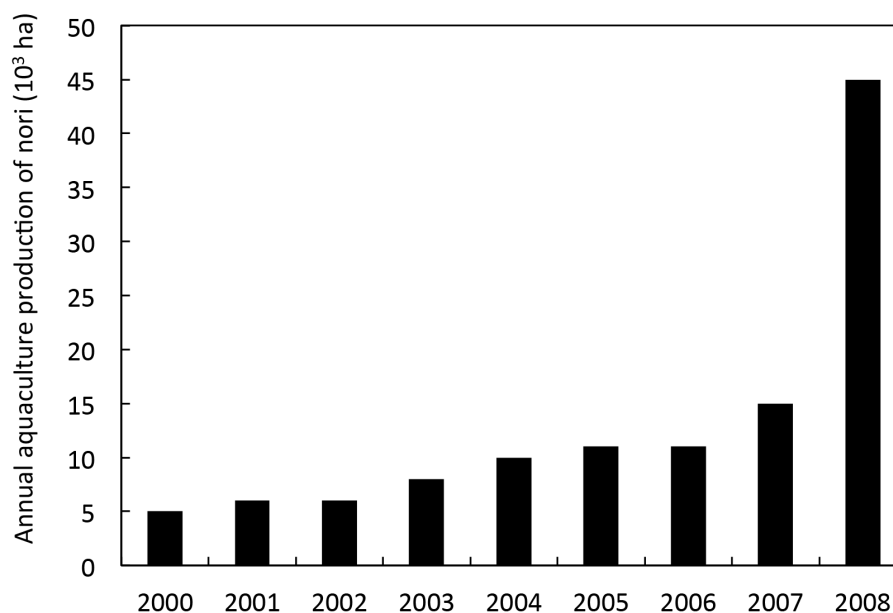
Few direct countermeasures are being undertaken to control these blooms. However, extensive research is being undertaken to understand - and ultimately predict - when such outbreaks may occur. e.g.<sup>104</sup> Such knowledge may allow aquaculturists to take measures to protect their investment.

#### YELLOW SEA

The third example of the increasing impacts of harmful algae in China comes from the Yellow Sea. This example is one that received widespread international coverage. In 2008, a bloom of the macroalgal species *Enteromorpha prolifera* (also called *Ulva prolifera* or sea lettuce) occurred at the venue of the Olympic Games sailing competition, almost blanketing the water with filamentous scum.<sup>105</sup> Blooms of this magnitude in this region had not previously been observed. One of the features of this species and its blooms is that it tends to float, making detection from remote sensing (satellite imaging) feasible. It is from such approaches that the scale of these blooms and their change over time can be estimated.<sup>106</sup> A 10-year record of images of the region shows that prior to 2007, the area covered by *E. prolifera* was <21 km<sup>2</sup>. In 2008 the scale of the bloom was >1900 km<sup>2</sup>, and in 2009 it was 1600 km<sup>2</sup>.<sup>107</sup>

The Yellow Sea has long had massive nutrient loading, especially nitrogen.<sup>108</sup> Interestingly, there is no evidence that the quantity of nutrient loading changed dramatically in 2008 when the magnitude of these blooms began to escalate (the increase in nutrient load-

Figure 5: Annual production of nori in the Yellow Sea. Note the extent of the change between 2007 and 2008. Data replotted from Hu et al. (2010).



ing has been more steady over the past decades). One change that did occur between 2007 and 2008 was the scale of aquaculture production of the seaweed *Porphyra yezoensis* (or nori). Nori are the thin sheets of seaweed used in cooking, typically in sushi. The scale of production of nori increased from ~600 Ha in 1999 to >40,000 Ha in 2008 (Fig. 5).<sup>109</sup> Nori are cultured on rafts and ropes, the same physical substrate to which *E. proliferata* attaches. Culturing nori without *E. proliferata* “contaminants” is difficult. When nori are harvested, *E. proliferata* detaches and begins to float away. When the winds and currents are favorable, the *E. proliferata* algae are then transported into the Yellow Sea, where they can continue to access nutrients and grow. Under the “right” conditions (including favorable winds), they can accumulate in bloom proportion along the shore near Qingdao. This is the scenario that occurred in 2008, leading to the massive and costly blooms at that time. The bloom reoccurred, albeit at various magnitudes, in the same region in 2009 and 2010. The aquaculture production of nori thus provides the conditions for the *initiation* of growth of *E. proliferata*, but its *biomass* accumulates when the bloom is transported to the nutrient-rich Yellow Sea, where its prolific growth and accumulation exemplifies its name, *prolifera*.

The 2008 Olympic games were severely impacted by this bloom event (Fig. 6). Approximately 1 million tons of algae were removed from the waters before the sailing regatta, requiring about 15,000 members of the Army to assist in the removal effort.<sup>110</sup> It has been estimated that the cost associated with the management of the *E. proliferata* event in 2008

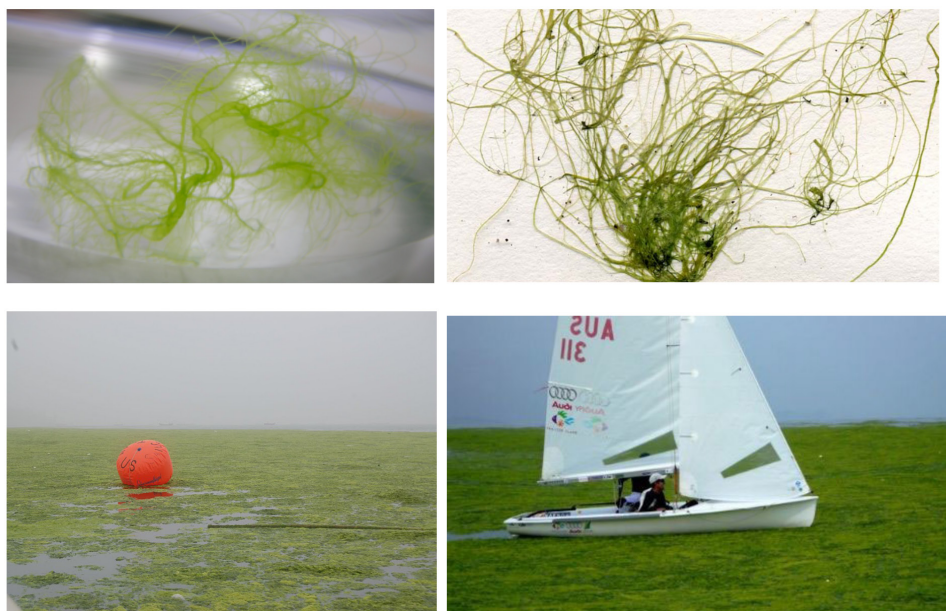


Figure 6: The 2008 bloom that blanketed the venue for the Olympic Sailing Regatta in Qingdao was caused by *Enteromorpha proliferata* (upper left panel- photo by M.J. Zhou; upper right panel- photo by G.W. Saunders, [www.unb.ca/cemar](http://www.unb.ca/cemar)), causing a massive area of the region to be covered by algae (lower left panel- reproduced from Furuya et al., 2010; lower right panel- photo by V. Kovalenko, [yachtpals.com](http://yachtpals.com)).

was greater than \$100 million. In addition to the immediate costs of clean up, the bloom also caused massive damage to the abalone and sea cucumber industries, both important cultured species in the Qingdao region. When these losses are calculated along with the immediate management costs, the total economic loss due to the 2008 *E. proliferata* bloom is closer to \$200 million.<sup>111</sup> This figure overshadows the estimate of the profit of the nori industry in 2007, which was roughly \$50 million.<sup>112</sup> Qingdao, when not an international destination for sailors, is a local tourist and holiday region for Chinese. Thus, the economic losses associated with blooms of this magnitude are enormous.

*Enteromorpha proliferata* is a species that occurs worldwide, often associated with regions of high nutrient input, including near sewage outfalls.<sup>113</sup> This case study highlights the complexity of the interactions that may be required for a bloom to affect a particular region. As shown here for the Yellow Sea, nutrient enrichment is a necessary condition for this



quantity of biomass of algae to be formed - but in order for the bloom to be initiated, the nori industry and the availability of physical substrate were also required.

In small amounts, this species is not generally considered to be toxic to wildlife or to humans. However, in large quantities toxic compounds form which can have devastating impacts. When large quantities of *Enteromorpha* spp. begin to decompose, ammonia and hydrogen sulfide are given off.<sup>114</sup> These can be at levels that are acutely toxic to fish.<sup>115</sup> Low levels of hydrogen sulfide can also cause human illnesses. At low doses, eye irritation or sore throat may occur, while at higher levels symptoms may range from dizziness to breathing difficulty to memory loss. New data also suggests that *Enteromorpha* spp. make the compound dopamine which inhibits other animals as a chemical defense against grazing.<sup>116</sup> Neither the levels of dopamine from the 2008 Qingdao bloom, nor its potential effects on wildlife or humans who came in contact with it are known. Prolonged exposure to such chemicals *in general* is associated with neurological disorders such as depression, schizophrenia and attention deficit disorder.<sup>117</sup>

The phenomena of these blooms in the Yellow Sea is still comparatively young and much is yet to be learned about their causes, impacts, and potential controls. What is apparent is the need for the economic costs of these events to be balanced against the economics of the growing aquaculture industry.

#### OUTLOOK

This brief review has highlighted just a few examples of the types, impacts, and economic costs associated with the expanding HAB problem in China. The examples discussed here are not unique to China but represent some of the types of HAB events that occur throughout Asia. The increased use of nitrogen and phosphorus-based fertilizers has expanded in recent decades, with the positive outcome of increased food supplies and reduced malnutrition. Global fertilizer use is projected to double by the year 2080.<sup>118</sup> World population is expected to reach 9 billion within the next few decades, and diets are becoming more meat-based with economic development, leading to increasing concentration of meat production in CAFOs.<sup>119</sup> The growth of aquaculture throughout Asia is also occurring at an astounding pace.<sup>120</sup> Energy consumption is rising (Fig. 7).<sup>121</sup> Population, agriculture, aquaculture, and energy consumption are all associated with increasing nutrient pollution, especially nitrogen.<sup>e.g.122,123</sup> Most of these increases are on track to occur in parts of Asia that are already saturated with nitrogen and poorly prepared to deal with the resulting environmental and human health effects of nutrient pollution. Pressures for increasing development are at odds with the pressures for reducing nutrient loads. Costs for building new sewage treatment facilities or developing more efficient agriculture are still often considered to be too great an investment to yield an immediate payback. The consequences of development and the excessive use of nutrients are increased eutrophication, changes in ecology and biodiversity, more HABs, and more algal toxins.<sup>124</sup>

While China was highlighted here, the types of algal blooms described are expanding throughout Asia and the world. There are many more types of toxic algal blooms than described here, with equally challenging human health and economic consequences. Although the science of understanding how and why these events occur has been rapidly advancing, the prospects of reducing these events or their impacts are, unfortunately, not very bright. When climate change and rising temperatures are also considered, the outlook is even more bleak. The growth of many of the species that form these blooms increases under warmer conditions.<sup>125</sup> Some CyanoHAB species, including *M. aeruginosa*, have been found to become more toxic at higher temperatures.<sup>126</sup> Indirect effects of warming must

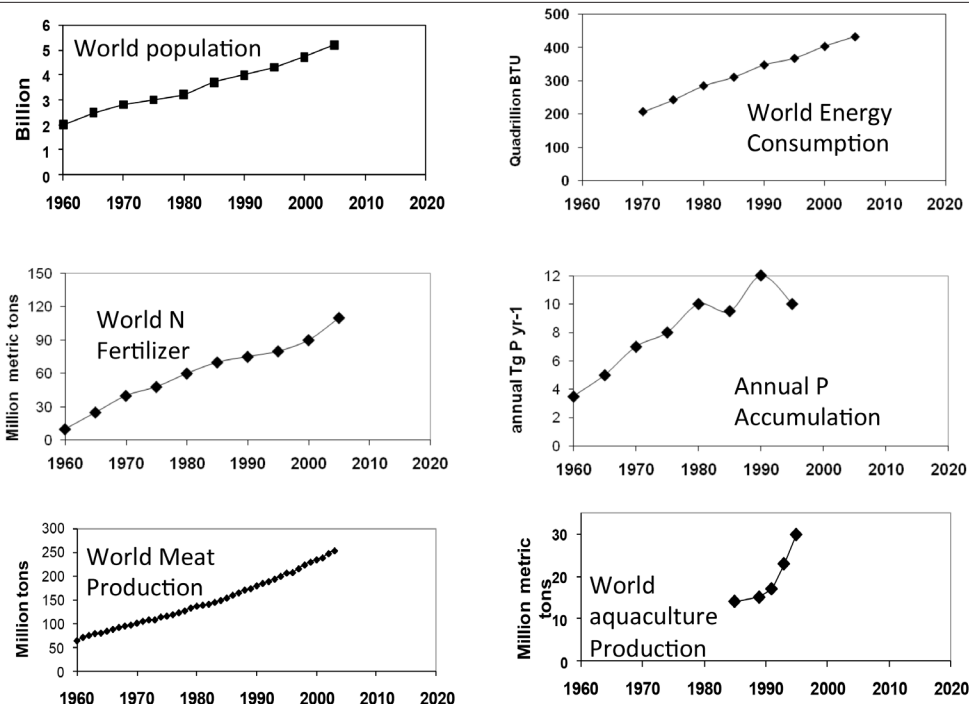


Figure 7: General trends in population, energy consumption, fertilizer use, and accumulation, and meat and aquaculture production from 1960 to present. Data compiled from [www.census.gov/ipc/www/img/worldpop.gif](http://www.census.gov/ipc/www/img/worldpop.gif), Global Fertilizer Industry, [www.fertilizer.org](http://www.fertilizer.org), and the Food and Agriculture Organization (FAO) of the United Nations (2007). Reproduced from Glibert et al. (2010) with permission of the *Journal of Marine Systems*.

also be considered. As temperatures warm, precipitation patterns will continue to change. Higher precipitation rates, projected for some parts of the world, will lead to greater runoff and greater water pollution.<sup>127</sup> Warmer temperatures will also increase the rate at which nitrogen gaseous compounds (for example, ammonium) are volatilized to the atmosphere. The problems are thus enormous and immeasurably complex, and the challenges associated with reversing these events in the short term are more than daunting.

To address these needs, the community of biologists and chemists studying these events will need to interface closely with a wide array of peers in other fields: public health officials (to further understand human health effects); fisheries biologists and fishermen (to further understand impacts on ecosystems); climate scientists (to assess climate change scenarios); watershed modelers and hydrologists (to estimate future changes in the land derived inputs); and social scientists, managers, and policy makers (to define future land use scenarios and to interpret results in a policy context).<sup>128</sup> There is progress along these lines and cross-regional Asian studies on HABs are underway.<sup>129</sup> Predictive models are advancing to provide early warning for aquaculturists. Monitoring of water and seafood is underway in many areas to protect human health. Massive sums are being invested to upgrade sewage treatment in many areas. At the current scale, however, these efforts are far too little to stem the effects of advancing industrialized agriculture (and aquaculture) and a growing human population. Unfortunately, ecosystems and human health will likely continue to be affected by HABs in Asia and worldwide at an escalating pace until the economic scale of lost ecosystem services and human health impacts outpaces economic and population growth. Nutrient loads must be reduced, but the challenge is great.

#### ACKNOWLEDGEMENTS

This is contribution number 4774 from the University of Maryland Center for Environmental Science.

## NOTES

1. Joseph Kahn and Jim Yardley, "As China Roars, Pollution Reaches Deadly Extremes," *New York Times*, August 26 (2007), <http://www.nytimes.com/2007/08/26/world/asia/26china.html?pagewanted=all>.
2. Jonathan Ansfield and Keith Bradsher, "China Report Shows More Pollution in Waterways," *New York Times*, February 9 (2010), <http://www.nytimes.com/2010/02/10/world/asia/10pollute.html>.
3. Shai Oster, "China Report Finds Extensive Pollution," *Wall Street Journal*, February 10 (2010), <http://online.wsj.com/article/SB10001424052748704182004575054811793594150.html>.
4. Anonymous, "Raising a Stink," *The Economist*, August 5 (2010), <http://www.economist.com/node/16744110>.
5. World Health Organization, United Nations Children's Fund (UNICEF), "Water Supply and Sanitation Council. Global Water Supply and Sanitation Assessment 2000 Report," New York, NY: UNICEF (2000).
6. Pieter T.J. Johnson, Alan R. Townsend, Cory C. Cleveland, Patricia M. Glibert, Robert W. Howarth, Valerie J. Mackenzie, Eliska Rejmankova and Mary H. Ward, "Linking Environmental Nutrient Enrichment and Disease Emergence in Humans and Wildlife," *Ecological Applications* 20 (2010): 16-29.
7. Patricia M. Glibert and Grant Pitcher, eds. "GEOHAB: Global Ecology and Oceanography of Harmful Algal Blooms, Science Plan," (SCOR and IOC, Baltimore and Paris), 86 pp.
8. Patricia M. Glibert, P.M. and JoAnn M. Burkholder, "The Complex Relationships between Increasing Fertilization of the Earth, Coastal Eutrophication and Proliferation of Harmful Algal Blooms," in *Ecology of Harmful Algae*, ed Edna Granéli and Jefferson T. Turner, (The Netherlands: Springer, 2006), 341-354.
9. John Heisler, Patricia M. Glibert, JoAnn M. Burkholder, Donald M. Anderson, William Cochlan, William Dennison, Quay Dortch, Christopher Gobler, Cynthia Heil, Edythe Humphries, Alan Lewitus, Robert Magnien, Harold Marshall, Kevin Sellner, David Stockwell, Diane Stoecker, and Marc Suddleson, "Eutrophication and Harmful Algal Blooms: A Scientific Consensus," *Harmful Algae*, 8 (2008): 3-13.
10. Ken Furuya, Patricia M. Glibert, Mingjiang Zhou and Robin Raine, "GEOHAB Asia. Global Ecology and Oceanography of Harmful Algal Blooms in Asia: A Regional Comparative Programme" (IOC and SCOR, Paris and Newark, Delaware, 2010), 9.
11. Furuya et al., "GEOHAB Asia. Global Ecology and Oceanography of Harmful Algal Blooms in Asia: A Regional Comparative Programme," 16.
12. Cynthia A. Heil, Patricia M. Glibert, Mohammad A. Al-Sarawi, Muna Faraj, Menaf Behbehani, and Muna Husain, "First Record of a Fish-Killing *Gymnodinium* sp. Bloom in Kuwait Bay, Arabian Gulf: Chronology and Potential Causes," *Marine Ecology Progress Series* 214 (2001): 15-23.
13. Patricia M. Glibert, Jan Landsberg, Joyce Evans, Mohammad A. Al-Sarawi, Muna Faraj, Mohammad A. Al-Jarallah, Alison Haywood, S. Ibrahim, Phil Klesius, C. Powell, and Charles Shoemaker, "A Fish Kill of Massive Proportion in Kuwait Bay, Arabian Gulf, 2001: The Roles of Infectious Bacteria, Harmful Algae, and Eutrophication," *Harmful Algae* 12 (2002): 1-17.
14. Mindy L. Richlen, Steve L. Morton, E.A. Jamali, A. Rajan, and Donald M. Anderson, "The Catastrophic 2008-2009 Red Tide in the Arabian Gulf Region, with Observations on the Identification and Phylogeny of the Fish-Killing Dinoflagellate *Cochlodinium polykrikoides*," *Harmful Algae* 9 (2010): 163-172.
15. Tian Yan and Mingjiang Zhou, "Environmental and Health Effects Associated with Harmful Algal Blooms and Marine Algal Toxins in China," *Biomedical and Environmental Sciences* 17 (2004): 165-176.
16. Furuya et al., "GEOHAB Asia. Global Ecology and Oceanography of Harmful Algal Blooms in Asia: A Regional Comparative Programme," 16.
17. Glibert and Pitcher, eds, "GEOHAB: Global Ecology and Oceanography of Harmful Algal Blooms, Science Plan," 1-16.
18. Glibert et al., "The Global Complex Phenomenon of Harmful Algal Blooms," 136-147.
19. Glibert and Burkholder, "The Complex Relationships between Increasing Fertilization of the Earth, Coastal Eutrophication and Proliferation of Harmful Algal Blooms," 341-354.
20. Patricia M. Glibert, JoAnn M. Burkholder, Edna Granéli and Donald M. Anderson, "Advances and Insights in the Complex Relationships between Eutrophication and HABs: Preface to the Special Issue," *Harmful Algae* 8 (2008): 1-2.
21. Glibert et al., "The Global Complex Phenomenon of Harmful Algal Blooms," 136-147.
22. JoAnn M. Burkholder, Patricia M. Glibert, and Hayley Skelton, "Mixotrophy, a Major Mode of Nutrition for Harmful Algal Species in Eutrophic Waters," *Harmful Algae* 8 (2008): 77-93.
23. Kevin J. Flynn, Diane K. Stoecker, Aditee Mitra, John A. Raven, Patricia M. Glibert, Per Juel Hansen, Edna Granéli, and JoAnn M. Burkholder, "Misuse of the Phytoplankton-Zooplankton Dichotomy: the Need to Assign Organisms as Mixotrophs within Plankton Functional Types," *Journal of Plankton Research* 35 (2013): 3-11.
24. Glibert et al., "The Global Complex Phenomenon of Harmful Algal Blooms," 136-147.
25. Ibid.
26. Edna Granéli and Kevin Flynn, "Chemical and Physical Factors Influencing Toxin Content," in *Ecology of Harmful Algae*, eds. Edna Granéli and Jefferson T. Turner (The Netherlands: Springer, 2006), 229-241.
27. Lorraine C. Backer and Dennis J. McGillicuddy, Jr., "Harmful Algal Blooms at the Interface between Oceanography and Human Health," *Oceanography* 19 (2, 2006): 94-106.
28. Granéli and Flynn, "Chemical and Physical Factors Influencing Toxin Content," 229-241.
29. Backer and McGillicuddy, Jr., "Harmful Algal Blooms at the Interface between Oceanography and Human Health," 94-106.
30. Ibid, 96.

31. Johnson et al., "Linking Environmental Nutrient Enrichment and Disease Emergence in Humans and Wildlife," 16-29.
32. Jessica Tiedeken and John S. Ramsdell, "Embryonic Exposure to Domoic Acid Increases the Susceptibility of Zebrafish Larvae to the Chemical Convulsant Pentylentetrazole," *Environmental Health Perspectives*, 115 (2007), 1547-1552.
33. Sibel Bargu, Tracey Goldstein, Kathryn Roberts, Chunyan Li, Frances Gulland, "Pseudo-nitzschia Blooms, Domoic Acid, and Related California Sea Lion Strandings in Monterey Bay, California Marine Mammal Science," *Nature Geoscience* (2012), doi: 10.1111/j.1748-7692.2011.00480.x.
34. Backer and McGillicuddy, Jr., "Harmful Algal Blooms at the Interface between Oceanography and Human Health," 94-106.
35. Rhodora Azanza and Max Taylor. "Are *Pyrodinium* blooms in the Southeast Asian Region Recurring and Spreading? A View at the End of the Millennium," *AMBIO: A Journal of the Human Environment* (2001) 30: 356-364.
36. Backer and McGillicuddy, Jr., "Harmful Algal Blooms at the Interface between Oceanography and Human Health," 94-106.
37. Bas W. Ibelings and Ingrid Chorus, "Accumulation of Cyanobacterial Toxins in Freshwater "Seafood" and its Consequences for Public Health: A Review," *Environmental Pollution* 150 (1, 2007): 177-192.
38. Backer and McGillicuddy, Jr., "Harmful Algal Blooms at the Interface between Oceanography and Human Health," 94-106.
39. Glibert et al., "The Global Complex Phenomenon of Harmful Algal Blooms," 136-147.
40. Glibert and Pitcher, eds. "GEOHAB: Global Ecology and Oceanography of Harmful Algal Blooms, Science Plan," 1-6.
41. Robert J. Diaz and Rutger Rosenberg, "Spreading Dead Zones and Consequences for Marine Ecosystems," *Science*, 321 (2008): 926-929.
42. Patricia M. Glibert, "Eutrophication"(2012) In Robin Kundis Craig, Bruce Parfy, John Copeland Nagle, Oswald Schmitz, & William Smith (Eds.), *The Berkshire Encyclopedia of Sustainability: Vol. 5. Ecosystem Management and Sustainability* Great Barrington, MA: Berkshire Publishing, pp. 124-127.
43. Robert W. Howarth and Roxanne Marino, "Nitrogen as the Limiting Nutrient for Eutrophication in Coastal Marine Ecosystems: Evolving Views over Three Decades," *Limnology and Oceanography* 51 (2006): 364-376.
44. JoAnn M. Burkholder and Patricia M. Glibert, "Eutrophication and Oligotrophication," *Encyclopedia of Biodiversity* (Elsevier, 2013), Vol. 3: 347-371.
45. Vaclav Smil, "Enriching the Earth: Fritz Haber, Carl Bosch, and the Transformation of World Food Production," (Cambridge, Massachusetts: The MIT Press, 2001), 200-214.
46. Howarth and Marino, "Nitrogen as the Limiting Nutrient for Eutrophication in Coastal Marine Ecosystems: Evolving Views over Three Decades," 366.
47. Smil, "Enriching the Earth: Fritz Haber, Carl Bosch, and the Transformation of World Food Production," 110.
48. Patricia M. Glibert, John Harrison, Cynthia Heil, and Sybil Seitzinger, "Escalating Worldwide Use of Urea – A Global Change Contributing to Coastal Eutrophication," *Biogeochemistry*, 77 (2006): 441-463.
49. *Ibid*, 443.
50. James N. Galloway, and Ellis B. Cowling, "Reactive Nitrogen and the World: 200 Years of Change," *Ambio* 31 (2002): 64-71.
51. J.W. Erisman, A. Bleeker, J. Galloway and M.S. Sutton, "Reduced Nitrogen in Ecology and the Environment," *Environmental Pollution* 150 (2007): 140-149.
52. Linden J. Ellis, "A China Environmental Health Project Research Brief: Environmental Health and China's Concentrated Animal Feeding Operations," *The Wilson Center* (2007), [http://www.wilsoncenter.org/sites/default/files/factory\\_farms\\_feb28.pdf](http://www.wilsoncenter.org/sites/default/files/factory_farms_feb28.pdf).
53. Alexander F. Bouwman, Marci Pawlowski, C. Liu, Arthur H.W. Beusen, Sandra E. Shumway, Christine Overbeek and Patricia M. Glibert, "Global Hindcasts and Future Projections of Coastal Nitrogen and Phosphorus Loads due to Shellfish and Seaweed Aquaculture," *Reviews in Fisheries Science* 19 (2011): 331-357.
54. Alexander F. Bouwman, Christine C. Overbeek, Arthur H.W. Beusen, Marcin Pawlowski and Patricia M. Glibert. "Global Hindcasts and Future Projections of Inland and Coastal Nitrogen and Phosphorus Loads due to Finfish Aquaculture," *Reviews in Fisheries Science* 21 (2013): 112-156.
55. Donald A. Anderson, Patricia M. Glibert, and JoAnn M. Burkholder, "Harmful Algal Blooms and Eutrophication: Nutrient Sources, Composition, and Consequences," *Estuaries* 25 (2002): 562-584.
56. Patricia M. Glibert, Donald M. Anderson, Patrick Gentien, Edna Granéli, and Kevin G. Sellner, "The Global Complex Phenomenon of Harmful Algal Blooms," *Oceanography* 18 (2) (2005): 136-147.
57. Val H. Smith, "The Nitrogen and Phosphorus Dependence of Algal Biomass in Lakes: An Empirical and Theoretical Analysis," *Limnology and Oceanography* 27 (1982): 1101-1112.
58. Glibert et al, "Escalating Worldwide Use of Urea – A Global Change Contributing to Coastal Eutrophication," 441-463.
59. Heisler et al., "Eutrophication and Harmful Algal Blooms: A Scientific Consensus," 3-13.
60. Patricia M. Glibert and Gry Miné Berg, "Nitrogen Form, Fate and Phytoplankton Composition," in *Experimental Ecosystems and Scale: Tools for Understanding and Managing Coastal Ecosystems*, ed. Victor S. Kennedy, W. Michael Kemp, John. E. Peterson and William. C. Dennison (New York: Springer, 2009) pp. 183-189.
61. Edna Granéli and Kevin Flynn, "Chemical and Physical Factors Influencing Toxin Content" in *Ecology of*

- Harmful Algae*, eds. Edna Granéli and Jefferson T. Turner (The Netherlands: Springer, 2006), 229-241.
62. Ian R. Falconer and Andrew R. Haumpage. "Health Risk Assessment of Cyanobacterial (blue-green algal) Toxins in Drinking Water," *International Journal of Environmental Research and Public Health* 2005. 2: 43-50.
  63. Patricia M. Glibert, P.M. and JoAnn M. Burkholder. 2011. "Eutrophication and HABs: Strategies for Nutrient Uptake and Growth Outside the Redfield Comfort Zone." *Chinese J. Oceanology and Limnology*. 29: 724-738.
  64. Boqiang Qin, Guangwei Zhu, Guang Go, Yunlin Zhang, Wei Li, Hans W. Paerl, Wayne W. Carmichael, "A Drinking Water Crisis in Lake Taihu, China: Linkage to Climatic Variability and Lake Management" *Environmental Management* 45 (2010): 105-112.
  65. R.M. Dawson, "The Toxicology of Microcystins," *Toxicon* 36 (1998): 953-962.
  66. Richard Stone, "China Aims to Turn Tide Against Toxic Lake Pollution," *Science* 333 (2011): 1210.
  67. Qin et al., "A Drinking Water Crisis in Lake Taihu, China: Linkage to Climatic Variability and Lake Management" 105-112.
  68. Pei-yu "Catherine" Tai and Linden Ellis, "A China Environmental Health Project Research Brief: Taihu Green Wash or Green Clean?," Woodrow Wilson International Center for Scholars (2008): <http://www.wilsoncenter.org/publication/taihu-green-wash-or-green-clean>, 1.
  69. Ibid, 1.
  70. Hongtao Duan, Ronghua Ma, Xiaofeng Xu, Fanxiang Kong, Shouxuan Zhang, Weijuan Kong, Jianyan Hao, and Linlin Shang, "Two Decade Reconstruction of Algal Blooms in China's Lake Taihu," *Environmental Science and Technology* 43 (2009): 3524.
  71. Ibid, 3524.
  72. Ibid, 3524.
  73. Ibid, 3525.
  74. YuWei Chen, Chengxin Fan, Katrin Teubner and Martin Dokulil, "Changes in Nutrients and Phytoplankton Chlorophyll-*a* in a Large Shallow Lake, Taihu, China: an 8-Year Investigation," *Hydrobiologia* 506-509 (2003): 273-279.
  75. Chun Ye, Qiuji Xu, Hainan Kong, Zhemin Shen and Changzhou Yan. "Eutrophication Conditions and Ecological Status in Typical Bays of Lake Taihu in China," *Environmental Monitoring and Assessment* 135 (2007): 217-225.
  76. Duan et al., "Two Decade Reconstruction of Algal Blooms in China's Lake Taihu," 3526.
  77. Ibid, 3522.
  78. Ellis, "A China Environmental Health Project Research Brief: Environmental Health and China's Concentrated Animal Feeding Operations," [http://www.wilsoncenter.org/sites/default/files/factory\\_farms\\_feb28.pdf](http://www.wilsoncenter.org/sites/default/files/factory_farms_feb28.pdf).
  79. Shuqing An and Ranran Wang, "Human-Induced Drivers of the Development of Lake Taihu," in *Lecture's on China's Environment* ed Xuhui Lee (Yale School of Forestry and Environmental Studies, New Haven, CT), 151-165.
  80. Tai and Ellis, "A China Environmental Health Project Research Brief: Taihu Green Wash or Green Clean?," 2.
  81. S.Z. Yu, "Drinking Water and Primary Liver Cancer," 1989, in *Primary Liver Cancer*, ed. Z.Y. Tang, M.C. Wu, S.S. Xia (Beijing: Springer and China Academic Publications, 1989), 30-37.
  82. Y., Ueno, S. Nagata, T. Tsutsumi, A. Hasegawa, M.F. Watanabe, H.D. Park, G.C. Chen, G. Chen, S.Z. Yu, "Detection of Microcystins, a Blue-green Algal Hepatotoxin, in Drinking Water Sampled in Haimen and Fusui, Endemic Areas of Primary Liver Cancer in China, by Highly Sensitive Immunoassay," *Carcinogenesis* 17(1996): 1317-1321.
  83. Yongmei Liu, Wei Chen, Dunhai Li, Zebo Huang, Yinwu Shen, and Yongdin Liu, "Cyanobacteria-/cyanotoxin-Contaminations and Eutrophication Status Before Wuxi Drinking Water Crisis in Lake Taihu, China," *Journal of Environmental Sciences* 23(2011), 578.
  84. Yan Li, Ji-an Chen, Qing Zhao, Chaowen Pu, Zhiqun Qiu, Renping Zhang, Wei-qun Shu, "A Cross-Sectional Investigation of Chronic Exposure to Microcystin in Relationship to Childhood Liver Damage in the Three Gorges Reservoir Region, China," *Environmental Health Perspectives* 119 (2011): 1483-1488. <http://dx.doi.org/10.1289/ehp.1002412>.
  85. Anonymous, "China Acknowledges 'Cancer Villages,'" BBC News, China. 22 Feb 2013 <http://www.bbc.co.uk/news/world-asia-china-21545868>.
  86. An and Wang, "Human-Induced Drivers of the Development of Lake Taihu," 161.
  87. Qin et al., "A Drinking Water Crisis in Lake Taihu, China: Linkage to Climatic Variability and Lake Management" 105-112.
  88. P.Z. Xu, B.Q. Qin, B. Horst, W.Y. Huang, S.M. Yu, Y.P. Zhang. "Nitrogen Surplus of Upstream Agriculture Land of Lake Taihu and Eutrophication Impact." *Journal of Lake Sciences* (2006) 18: 395-400 (in Chinese with English abstract).
  89. Glibert and Burkholder, "The Complex Relationships between Increasing Fertilization of the Earth, Coastal Eutrophication and Proliferation of Harmful Algal Blooms," 341-354.
  90. Furuya et al., "GEOHAB Asia. Global Ecology and Oceanography of Harmful Algal Blooms in Asia: A Regional Comparative Programme," 11.
  91. Patricia M. Glibert, Mingjiang Zhou, Mingyuan Zhu, and Michele A. Burford, "Preface to the Special Issue on Eutrophication and HABs: The GEOHAB Approach," *Chinese Journal of Limnology and Oceanology* 29

- (2011): 719.
92. D.L. Tang, B.P. Di, G.F. Wei, I.H. Ni, I.S. Oh and S.F. Wang, "Spatial, Seasonal and Species Variations of Harmful Algal Blooms in the South Yellow Sea and East China Sea," *Hydrobiologia* 568 (2006) :245–253.
  93. Ji Li, Patricia M. Glibert, Mingjiang Zhou, Songhu. Lu, and Douding Lu, "Relationships between Nitrogen and Phosphorus Forms and Ratios and the Development of Dinoflagellate Blooms in the East China Sea," *Marine Ecology Progress Series* 383 (2009): 14.
  94. Ibid, 14.
  95. Bouwman et al. "Global Hindcasts and Future Projections of Inland and Coastal Nitrogen and Phosphorus Loads due to Finfish Aquaculture," 112-156.
  96. Ibid, 112-156.
  97. Li et al., "Relationships between Nitrogen and Phosphorus Forms and Ratios and the Development of Dinoflagellate Blooms in the East China Sea," 14.
  98. Backer and McGillicuddy, Jr., "Harmful Algal Blooms at the Interface between Oceanography and Human Health," 94-106.
  99. Leanne J. Flewelling, Jerome P. Naar, Jay P. Abbott, Daniel G. Baden, Nélio B. Barros, Gregory D. Bossart, Marie-Yasmine D. Bottein, Daniel G. Hammond, Elsa M. Haubold, Cynthia A. Heil, Michael S. Henry, Henry M. Jacobs, Tod A. Leighfield, Richard H. Pierce, Thomas D. Pitchford, Sentiel A. Rommel, Paula S. Scott, Karen A. Steidinger, Earnest W. Truby, Frances M. Van Dolah, and Jan H. Landsberg, "Red tides and Marine Mammal Mortalities-Unexpected Brevetoxin Vectors may Account for Deaths Long After or Remote from an Algal Bloom," *Nature* 435 (2005) 755-756.
  100. Sharon M. Watkins, Andrew Reich, Lora E. Fleming, and Roberta Hammond, "Neurotoxic Shellfish Poisoning," *Marine Drugs* 6 (2008): 431-455.
  101. Ibid, 431-455.
  102. Glibert et al., "The Global Complex Phenomenon of Harmful Algal Blooms," 136-147.
  103. Flewelling et al., "Red tides and Marine Mammal Mortalities- Unexpected Brevetoxin Vectors may Account for Deaths Long After or Remote from an Algal Bloom," *Nature* 435 (2005) 755-756.
  104. Furuya et al., "GEOHAB Asia. Global Ecology and Oceanography of Harmful Algal Blooms in Asia: A Regional Comparative Programme," 68 pp.
  105. Chuanmin Hu, Daqiu Li, Changsheng Chen, Jianzhong Ge and Frank E. Muller-Karger, "On the Recurrent *Ulva prolifera* Blooms in the Yellow Sea and East China Sea," *Journal of Geophysical Research* 115 (2010), C05017, 2.
  106. Ibid, 2.
  107. Ibid, 2.
  108. C. Lin, X. Ning, J. Su, Y. Lin, and B. Xu, "Environmental Changes and the Responses of the Ecosystems of the Yellow Sea During 1976-2000," *Journal of Marine Systems* 55 (2005): 223-234.
  109. Ibid, 5.
  110. Furuya et al., "GEOHAB Asia. Global Ecology and Oceanography of Harmful Algal Blooms in Asia: A Regional Comparative Programme," 21.
  111. Chao Wang, Rencheng Yu, and Mingjiang Zu, "Acute Toxicity of Live and Decomposing Green Alga *Ulva (Enteromorpha) prolifera* to abalone *Haliotis discus hannai*," *Chinese Journal of Oceanology and Limnology* 29 (2011): 541-546.
  112. Hu et al., "On the Recurrent *Ulva prolifera* Blooms in the Yellow Sea and East China Sea," 7.
  113. Burkholder and Glibert, "Eutrophication and Oligotrophication," 347-371.
  114. Roger H. Charlier, Philippe Morand, Charles W. Finkl, and Alexandre Thys, "Green Tides on the Brittany Coasts," *Environmental Research, Engineering and Management* 3 (2007): 52-59.
  115. Chao Wang, Rencheng Yu, and Mingjiang Zu, "Acute Toxicity of Live and Decomposing Green Alga *Ulva (Enteromorpha) prolifera* to abalone *Haliotis discus hannai*," 545.
  116. Kathryn L. Van Alstyne, Amorah V. Nelson, James R. Vyvyan and Devon A. Cancilla, "Dopamine Functions as an Antitherbivore Defense in the Temperate Green Alga *Ulvaria obscura*," *Oecologia* 148 (2006): 304-311.
  117. Jean-Martin Beaulieu, Tatyana D. Sotnikova, Sébastien Marion, Robert J. Lefkowitz, Raul R. Gainetdinov and Marc G. Caron, "An Akt/ $\beta$ -Arrestin 2/PP2A Signaling Complex Mediates Dopaminergic Neurotransmission and Behavior," *Cell*, 122 (2005): 261-273.
  118. Patricia M. Glibert, "Why the Global Change in Nitrogen Should Concern US," *Public Affairs Journal* 4 (2008): 47.
  119. Glibert et al, "Escalating Worldwide Use of Urea – A Global Change Contributing to Coastal Eutrophication," 441-463.
  120. Bouwman et al., "Global Hindcasts and Future Projections of Inland and Coastal Nitrogen and Phosphorus Loads due to Finfish Aquaculture," In press.
  121. Patricia M. Glibert, J. Icarus Allen, Lex Bouwman, Christopher Brown, Kevin J. Flynn, Alan Lewitus and Christopher J. Madden, "Modeling of HABs and Eutrophication: Status, Advances, Challenges," *Journal of Marine Systems* 83 (2010): 262–275.
  122. Ibid, 262-275.
  123. Bouwman et al., "Global Hindcasts and Future Projections of Inland and Coastal Nitrogen and Phosphorus Loads due to Finfish Aquaculture," In press.
  124. Johnson et al., "Linking Environmental Nutrient Enrichment and Disease Emergence in Humans and Wildlife," 16-29.

125. Hans W. Paerl and Jef Huisman. "Blooms Like it Hot." *Science* 320 (2008): 57-58
126. Timothy L. Davis, D.L. Berry, Gregory L. Boyer and Christopher J. Gobler, "The Effects of Temperature and Nutrients on the Growth and Dynamics of Toxic and Non-Toxic Strains of *Microcystis* during Cyanobacteria Blooms," *Harmful Algae* 8 (2009): 715-7125.
127. Patricia M. Glibert, "Why the Global Change in Nitrogen Should Concern US," 47.
128. Glibert et al., "Modeling of HABs and Eutrophication: Status, Advances, Challenges," 262-275.
129. Furuya et al., "GEOHAB Asia. Global Ecology and Oceanography of Harmful Algal Blooms in Asia: A Regional Comparative Programme," 68.

## A Reader's Companion to the Confucian Analects

Henry Rosemont, Jr., *A Reader's Companion to the Confucian Analects* (Palgrave Macmillan Publishers, New York, NY, 2012) ISBN: 978-1137303387

Henry Rosemont's newest contribution to early Chinese Philosophy functions, in his own words, not as "another interpretation of [Confucius's *Analects*], but rather as an aid for contemporary students to develop their own interpretive reading of it, in hope of thereby aiding them in the search for meaning, purpose, and service, in their own lives" (book blurb). For those of us who teach the *Analects*, this volume is a welcome addition to the growing number of resources available to us as we guide our students to finding their own way in that profound but curious text.

One difficulty of teaching a complex text like the *Analects* is to find ways to empower students to become competent, independent readers of the text. In *A Reader's Companion to the Confucian Analects*, Henry Rosemont offers us a well-organized compendium of tools to help us achieve this lofty task. Rosemont's brief book offers a variety of short chapters and appendices that will be of use to teachers and students alike. In doing so, it covers some of the same ground that translators typically offer in their translations of the *Analects*: a Wade-Giles to Pinyin conversion table; a concordance of key characters, along with their range of possible meanings; a list of passages related to each disciple (in Rosemont's term, students); and a brief annotated bibliography, as well as standard histories of the text. In addition to these useful materials, Rosemont offers advice on "how" and "why" to use them, which makes all the difference to the success of this book.

Rosemont argues that because Confucianism has changed in its ideological commitments over time, the central feature of the teaching is not its theories, but its emphasis on the practice and celebration of the rituals. As Rosemont says, "Confucianism has never really been a system at all" (2). In light of that, what is a reader—most especially, a philosophical reader looking for a system—to do with this text? Rosemont's view that Confucianism is not a system is accompanied by another sensible claim—that the Confucian project is particularistic. For example, at 11.22, Confucius is reported to have told Gongxi Hua to immediately practice what he has learned, but also said to Zilu to consult his elders first. In this passage, Confucius explains that this difference is due to what each student, given the imbalance in his character traits, needs to be on the Way. Rosemont takes this passage as an indication of how best to understand all of the question and answer passages of the *Analects*: Confucius's teachings in these passages indicate his advice to each individual, not general principles applicable in the same way to everyone.

Rosemont recommends that readers study how Confucius's answers to student questions arise from his sense of the particularities of their situation, including their character and what they need to develop to be on the Way. As he says, "[B]ecoming acquainted with [the students] is perhaps the most important single technique that can be employed by serious readers in order to most fully understand and appreciate the remarks Confucius makes to them, and the answers he gives to their queries" (21).

Accompanying Rosemont's technique of focusing on the students is his commitment



to the semantic view that “Virtually every saying [in the *Analects*] is multivocal” (ix). His glossary reflects that view by offering a variety of glosses for each character. To take one, 仁 (*ren*) is presented as meaning the following: “Authoritative, Benevolence, Human heartedness, Consummate conduct, etc.”(64). But, Rosemont claims, not all interpretations of specific passages that use one or another of these glosses are equally valid. Using some of the glosses would produce interpretations that we judge to make little sense and so must assess as uncharitable (54).

In some of his most interesting analyses, Rosemont sifts through possible readings, seeking the most charitable interpretation. For example, how in action-guiding contexts should we understand 知 (*zhi*): (Realize, Realization, To realize, Knowledge, Wisdom, Acknowledge)? In reprising an argument he and Roger Ames developed in *The Analects of Confucius: A Philosophical Translation*, Rosemont argues that in most cases, “*zhi*” means “realize” in the sense of making real, which he glosses as “to put into practice” (32). He argues that this gloss will help us avoid obvious falsehoods. Consider the following passage: 16:9 “*Zhi* had from birth is the highest; *zhi* obtained from learning is next highest.” Rosemont argues that to translate *zhi* as propositional knowledge of contingent facts or theories makes this translation: “Some folks know contingent facts and theoretical explanations of them from birth.” Since this translation is obviously counter-intuitive, we need to find an alternative interpretation of *zhi*. As he later claims, *zhi* is more akin to “knowing how” (32).

Some of the interpretations that Rosemont offers strike me as controversial. As I indicated above, he claims that in most instances in the *Analects* “*zhi*” means to realize in the sense of “putting into practice.” As promising as this suggestion may be, the examples he offers (33) are hard to parse using this interpretation. Consider this:

Children must realize (*zhi*) the age of their parents. On the one hand, it is a source of joy, on the other hand, of fear. (4.21) (Rosemont 33)

What would it mean to say that here Confucius is saying that children must “put into practice” the age of their parents? Or, to use another gloss he offers, what would it mean to say that here Confucius is suggesting that children must “make real” the age of their parents? These glosses do not yield intelligible English sentences. The principle of interpretive charity requires us to try some alternative glosses.

In raising these points, I am actually using the very method this text teaches. In my mind, this result is an important, remarkable achievement of the text. The way it gets readers actively engaged in interpreting the *Analects* offers students a method that can be used to assess its very own interpretive claims. This is as it should be. Its approach to the text’s basic features, along with the tools it offers students, presents us with a useful primer on how to become independent readers of the *Analects*.

*James Peterman, Professor of Philosophy, Director of Community Engagement and the Bonner Leaders Service Internship Program, Sewanee: The University of the South.*

## Review of Karen Strassler's Refracted Visions

Strassler, Karen. *Refracted Visions: Popular Photography and National Modernity in Java*. Durham: Duke University Press, 2010. ISBN 978-0822346111

Finding good ethnographies for my Southeast Asia anthropology course at St. Olaf College is always a challenge. I look for books that are rigorous, well written, and that fit with the historical materials on my syllabus. There are wonderful books out there, but many suffer from the challenges characteristic of anthropological writing – they assume too much prior knowledge, overuse technical jargon, and/or focus too narrowly to sustain undergraduate interest. How fortunate, then, to find Karen Strassler's 2010 book *Refracted Visions: Popular Photography and National Modernity in Java* (Duke University Press).

*Refracted Visions* is a history of photography in Indonesia, but it is also much more than that. Strassler works in the subfield of visual anthropology, an approach that investigates the cultural organization of a visual landscape. In short, visual anthropologists ask, what are the peculiarities of our ways of seeing? How are our perceptions shaped by historical developments, political power, and categories like “insider” and “outsider”? In her book, Strassler addresses such questions while emphasizing how technology shapes visual habits in Indonesia. She renders sophisticated theoretical insights and careful ethnographic research in elegant prose.

Strassler's book comprises six substantive chapters along with an analytical introduction that details her theoretical interests and a brief epilogue about digital photography. The core chapters each examine a different genre of Indonesian photography and give the book its chronological structure. The genres Strassler analyzes include colonial-era landscape photography, early nationalist photo studio backdrops, state identification photos, 1970s and 80s family photographs, and student photography in the 1990s protests that brought down Suharto's New Order. Her last chapter is more formally ethnographic, examining the beautifully complex use of photography in an amateur history museum. As fits the subject matter, the book is lavishly illustrated with 127 photographs. From the cover image to the photos that serve as epigraphs to each chapter, the visuals work to train the eye of the reader, leading us into Strassler's ways of seeing.

Strassler's anthropological methodology blends both ethnographic and archival research. Set in the central Javanese court city of Yogyakarta, her research sites include expected locations like photography studios and the weekend outings of photography clubs, but some of her choice insights come from serendipitous encounters with either photographs or photographers. Friends show Strassler their cherished photos and tell the stories that go with them. Studio photographers dig out dusty old backdrops in their shops and share with Strassler the albums full of customers. Most critically, Strassler's research coincides with the dramatic events of 1998, where photographic evidence proved crucial testimony to the violence of the tottering New Order regime. Strassler confidently shifts between these different modes of research, versed as she is in the concepts of visual anthropology and the complex dynamics of central Java.

The core of Strassler's analysis is to take mundane images and refigure them as dynamic

objects. She shows, for instance, how identification photographs work as disciplinary tools of the state to identify its subjects, but she also argues that such images have other lives as tokens of love and affection, and as memorials to the dead. Another chapter explores how cheap cameras became widely available in Indonesia as a result of the 1970s economic boom. Strassler reveals how such a shift more deeply integrated photography into ritual events like weddings, and quickly became required to make such life-cycle rituals seem complete. New rituals arrived in Indonesia to serve the camera: birthday parties, a recent import to the country, function in Strassler's analysis as living backdrops for photo taking.

Finally, Strassler emphasizes the role of photography in Indonesia's turbulent national politics. The events that marked the birth of the New Order in the 1960s, Strassler asserts, were largely not photographed. The few scattered images produced during that time haunt those who lived under Suharto's authoritarian regime. The end of Suharto's reign in 1998 came during an era of mass photography, and was copiously documented by student activist/photographers. The circulation of these images, Strassler argues, helped produce the ambivalence experienced by activists during the tumult of post-New Order politics. In Strassler's view, technology is not a neutral factor in contemporary Indonesia, but rather a dynamic force reshaping affect, ritual, and politics.

Ambitious theoretical interests match Strassler's broad reach into Indonesian history and society. She draws upon Walter Benjamin, Roland Barthes, and the work of South Asianist Christopher Pinney. Part of Strassler's semiotic analysis builds from the work of philosopher Charles Peirce, who analyzed the triadic nature of signs. Symbols, icons, and indexes can be exceedingly abstract for undergraduates, but Strassler conveys the power of a Peircean analysis in a compelling and accessible way. In particular, the indexicality of photographs (their capacity, for instance, to be given as gifts) shows how they are not fixed icons but rather lively processes. An identification photograph taken for the purposes of state management gains a powerful meaning when it is the only personal photograph someone owns. It can also become a token of affection when passed to another person, and even a memorial to the deceased. Strassler shows how photographs in Indonesia transform constantly—as politics, the economy, artistic conventions, and technology change. The photographs and their myriad meanings index the powerful dynamism of twentieth-century life in the archipelago.

Thus, Strassler highlights concepts of modernity and nationalism along with semiotic theories. Her subtitle for *Refracted Visions* references “national modernity in Java” and shows how the visual field she analyzes is shaped by the conditions of Dutch colonialism and the specifics of Indonesia's post-colonial configuration. Her title argues that technology is not a singular process, or merely one with local characteristics, but rather that modern processes like photography and mechanical reproduction unfold in unpredictably local ways. For example, a key part of modernity in the Dutch East Indies and independent Indonesia was the role of ethnic Chinese cultural brokers. Throughout Southeast Asia, ethnic Chinese were crucial figures in developing colonial capitalism. Strassler deftly shows how important they were to other realms of cultural production in the region. Among many such cultural influences, ethnic Chinese helped introduce and disseminate photography in the Indies. Indonesia's alternative modernity was not just a hybrid of Europe, but rather a complex combination of refractions and visions.

Such theoretical and empirical richness makes the book a joy to teach. The course I use it for is called Modern Southeast Asia (for an outline of the course see Williamson 2009), and the syllabus includes texts on the region's engagements with colonialism along with the anti-colonial revolutions that brought about independence. We read Pramoedya's *This Earth*

of *Mankind*, and Strassler begins her book with a passage from *This Earth*. We also discuss the region's bountiful diversity and intensely cosmopolitan character, likewise themes echoed in Strassler's text. Part of the course includes watching feature films from Southeast Asia, including 1995's *Nostalgia For the Countryside* from Vietnam; the 2004 film *Sepet* from Malaysia; and to best connect with Strassler's book, a 2007 Indonesian film directed by Nan Traveni Achmas titled *The Photograph* (2007). *Refracted Visions* helps students to think more complexly about the meanings of such filmed representations of Southeast Asian life.

A course in Southeast Asia taught in Minnesota can only roughly evoke the region's sensory experience. We can't easily take in the smells of a Singapore hawker center or the humid heat of a Bangkok street corner. We can, though, gain a sense of the audio landscape, by listening to Javanese Gamelan music and the beat of Pointe Blanc's *Iphmali*. The visual landscape is also accessible via the magic of the Internet and the treasures found on YouTube. Strassler's book helps us to better interrogate that visual field; it leads students to wonder what British colonialism looked like in Orwell's Burma, to question the sights produced by the Japanese occupation in Malaysia, and to better make sense of the myriad images that circulate of the American War in Vietnam. And, of course, our discussion of the book leads us to wonder what visual dimensions of Southeast Asia are less accessible to those of us far away from the region.

Students learn a lot about Southeast Asia in general and Indonesia in particular from Strassler's book. They learn about the importance of colonialism, the role of immigrant communities, the tumult of politics, and the pace of globalization. They also get the opportunity to learn about places closer to home, like the university where they study and the sites where they venture off campus. The best books do this work of connecting seemingly disparate entities. Photography is a big part of the twenty-first century college life, both in the United States and in Indonesia. Cameras are built into the mobile phones that seem to be grafted onto the hands of the planet's affluent young. Related technologies like Facebook make the visual field an increasingly photographic one. Thus, throughout our time together discussing *Refracted Visions* we are not only talking about Indonesia and Southeast Asia, but also about our own relationships to technology. For its many rewards of insight, I highly recommend Karen Strassler's text for the liberal arts Asian Studies classroom.

*Thomas Williamson, Associate Professor, Sociology-Anthropology, St. Olaf College.*

#### REFERENCES

Strassler, Karen. *Refracted Visions: Popular Photography and National Modernity in Java*. Durham: Duke University Press, 2010.

Williamson, Thomas, "Teaching Modern Southeast Asia," *ASIANetwork Exchange* 16 (2009): 72-85.

#### MISSION STATEMENT

The mission of the *ASIANetwork Exchange: A Journal for Asian Studies in the Liberal Arts* is to highlight the central role of reflective research to teaching about Asian societies and cultures. The Exchange shares information useful to educators in liberal arts settings through the publication of original research and media reviews in order to provide materials to assist teachers in their own professional development and to deepen the understanding of Asia among campus communities.

#### REQUIREMENTS FOR MANUSCRIPT SUBMISSION

When preparing a manuscript, please note that the *ASIANetwork Exchange: A Journal for Asian Studies in the Liberal Arts* is committed to publishing current research, as well as high-quality pedagogical essays written by specialists and non-specialists alike. We are particularly interested in publishing articles, book and media reviews that address the needs of the undergraduate classroom. Authors are encouraged to consult the most recent issues for guidance on style and formatting.

Manuscripts and images should be submitted electronically through the *ASIANetwork Exchange* online management system at [www.asianetworkexchange.org](http://www.asianetworkexchange.org). You must register as an author on our website in order to submit articles and reviews. Inquiries may be directed to the Editors at [editors@asianetworkexchange.org](mailto:editors@asianetworkexchange.org).

- Electronic text should use MS Word-compatible software; include a PDF file if using non-standard characters. Low-resolution images and illustrations are acceptable for the **review process**; all images, tables and figures should include titles or captions. Please note that in the event of publication, the author is responsible for acquiring high-resolution images (300 dpi; .jpg) along with permission to publish them.
- Article manuscripts, including notes and references, should range between 3,000 and 5,000 words, and must include a 150 word abstract and 5-6 key words at the beginning of the document.
- Authors' names must be left off of the manuscript, as *ASIANetwork Exchange* engages in double-blind reviews.
- Manuscripts must be double-spaced with 12-point type and 1 inch margins including extracts, notes, and references, and formatted for letter-size (8.5 x 11 in.) paper if possible.
- **Notes should be as few as possible and appear at the end of the text. Bibliographical information should be headed "References"**
- Use parenthetical in-text citation, and author-date formatting for references per Chicago Manual of Style (16th ed.), Chapter 15, or <http://www.chicagomanualofstyle.org>.
- Please use the following Romanization: Chinese: Pinyin; Japanese: Hepburn; Korean: McCune
- Manuscripts submitted to *ASIANetwork Exchange* should not have been published elsewhere and should not be under review for publication elsewhere.

