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Picturing a green virtual public space for social change: a study of Internet activism and Web-based environmental collective actions in China

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While increased attention has been paid to the rise of Chinese environmental non-governmental organizations (ENGOs), the role that new information and communication technologies (ICTs) play in these ENGOs' collective actions has rarely been investigated. Based on first-hand information gained from field research with 19 environmental NGOs in Beijing, the author identified 18 Internet-based environmental collective actions and illustrated the specific conditions under which Chinese ENGOs employ the Internet to engage in these actions. Specifically, this study developed an analytical typology of ICT for the environmental movement to examine the extent to which and conditions under which Chinese ENGOs employ ICTs, especially the Internet, for chances of mobilization and social change. From six groups of thematically classified cases, the study also uniquely compared how various web conditions combine with and mediate various structural dimensions of the campaigns to achieve a certain level of social change.

Keywords: New ICTs; Internet; China; environmental NGO; environmental movement; green public culture; collective action

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Introduction

In 1999, the Save the Tibetan Antelope campaign was launched in China, constituting one of the country's first large-scale events of Internet participation. It became regarded as the most successful environmental web campaign in China. Greener Beijing, one of China's oldest web-born environmental non-governmental organizations (ENGOs), created the website Save the Tibetan Antelope and expanded to form online alliances with several hundred organizations across China. The campaign made innovative use of the Internet in a variety of ways. It first built web links with the most popular Chinese web portals, such as Sina.com and key media organizations, and then expanded the links to other sites in a viral marketing fashion. It employed visual images and marketing strategies, such as popup ads in popular websites, to spread the message. The campaign also used the Internet to organize large online benefit auctions and create a web-born MP3 song to appeal to the increasing multimedia taste of the Chinese web audience. This campaign constituted a milestone for the environmental movement in China in that innovative use of information and communication technologies (ICTs) achieved several goals, including an overall increase in the awareness of the plight of the antelope, the

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establishment of the Kekexili protection area, and a reduction of international trading in antelope fur.

Four years later, the Nujiang campaign, often seen as China's most successful environmental protection case, started its long journey. Nujiang is a river in Yunnan, the southwestern part of China, a land of stunning beauty with great ecological and cultural value, and also the largest UNESCO-approved world heritage site in China. It is also the last river in China without a hydroelectric power station. In August 2003, a plan to build such a station was approved by the State Development and Reform Commission. Several intellectuals and NGOs questioned the plan and strongly opposed it due to its huge negative impact on the ecosystem. Green Earth Volunteers, Friends of Nature, Green Rivers, and other NGOs in Beijing and Yunnan held lectures and information forums, organized exhibitions, and relied on mass media organization and new media to attract public attention. New media and directed websites, such as www.nujiang.ngo.cn and www.52nujiang.com, were deployed effectively to broadly disseminate the information. A series of proposals signed by the public were sent to various Chinese departments and even to UNESCO. Eventually, the plan to build the dam was tabled indefinitely. This case illustrates the nature of the battles that NGO alliances, supported by public and media participation, wage on the web, ultimately affecting business and government practices and policies.

Environmental movements have gained momentum and risen repeatedly as a strong force in response to the climate change that threatens the planet. Unlike the West, where environmental social movements and protests have a tradition extending from the nineteenth century, China's environmental activism has only started since the 1990s. Given government constraints and meager financial and human resources, many ENGOs were either born online or established a web presence to coordinate their collective actions and often engage in campaigns that are "apolitical" in nature. Greener Beijing was born under such conditions as one of China's first web-based ENGOs, and the Save the Tibetan Antelope campaign emerged as a mainly "non-political" environmental web campaign, which involved no direct offline demonstrations. Yet many restrictions that Chinese ENGOs face prompted innovative uses of ICTs, including web alliances, online auctions, and an online MP3 song, all of which ultimately helped save the antelope. These campaigns constitute the first cases in China that involve innovative use of the Internet by social activists. They also illustrate how Chinese environmental activists leverage crucial functions of ICTs, especially when they need to facilitate proactive, culturally valuable, and environmentally meaningful causes. Nonetheless, are ICTs the sole enablers for environmental change in China? If not, to what degree could the use of ICTs help Chinese environmental groups achieve social change? These are the guiding questions of this study.

The impacts of ICTs on respective environmental campaigns can be analyzed in the contexts of specific organizational, structural Internet conditions, read across the actors, goals, and strategies. The Nujiang campaign was not a web-originated campaign, though the web was crucial to coordinating online and offline efforts that eventually achieved policy change – the most powerful outcome that an environmental campaign could accomplish in China. Even though the Internet was more highly utilized in the Tibetan antelope campaign, no policy change resulted. What is common to both cases is that each campaign had strong advocacy goals, operated in a non-confrontational manner, yet achieved high mobilization levels and

involvement through networking NGOs and other organizations. What separates these two is that the antelope campaign was conducted exclusively online, while the Nujiang campaign was initiated offline and facilitated by the web. So why is the latter more successful in a way than the former? Why was an exclusively web-based campaign unable to achieve a powerful outcome on policy change? These questions will be answered in this study.

The Save the Tibetan Antelope and Nujiang cases illustrate two of the most successful campaigns in China; however, not all environmental cases reach this level of achievement. Many environmental campaigns tend to operate on a small scale, often represented by the work of a single ENGO; some of them are even less intense, non-confrontational, and do not have strong, specific goals. Many cases utilized various conditions of the web intensively, yet did not achieve a significant outcome, while other cases achieved impressive success without employing the web as intensely. What are the hidden conditions that invite these different outcomes? This study will examine not only key functions of the web, but also key structural dimensions of the campaigns to gain a deeper understanding of the various kinds of web-based environmental campaigns in China.

Although ICT-based environmental movements have been observed sporadically in a few countries, such as Italy (Diani, 1995), Burma (Danitz & Strobel, 1999), Nepal (Montgomery, 2002), Britain (Pickerill, 2004), and China (Yang, 2005b), literature that examines how ICTs are employed by environmental movements has received scant attention in the West and less still in China. Further, how ICTs are employed differently in national contexts other than the West is still an under-researched area (Atkinson, 2010). New ICTs play a crucial role for Chinese ENGOs to engage in online collective actions and create a green public virtual culture in China. Even though research attention has been given to the rise of ENGOs, the role of the Internet in the environmental movement has been ignored (Yang, 2003; Johnson, 2009). Even for the few pioneering studies that examine Internet activism, the focus is on one, two, or several case studies.

This situation presents both a motivation and a challenge to the current study. Unlike any previous study, this study empirically explores the impact of ICTs on environmental campaigns. Not only so, it also systematically and comparatively examines a collection of cases, trying to understand the intricate and nuanced details leading to how various levels of social change outcomes are generated by various combinations of campaign and Internet conditions. To do this, an analytical model for examining the Internet-based environmental collective actions was developed to comparatively study 18 identified cases. This model allows the classification of the cases into six thematic groups based on their patterns of social change outcomes, then empirically addresses the following research questions:

RQ1: To what extent have Chinese ENGOs utilized various uses and functions of the Internet for their daily work activities and environmental campaigns?

RQ2: Under which conditions does the use of the Internet in a Chinese environmental campaign enhance the chance of mobilization and social change?

RQ3: How do various conditions of the Internet use in Chinese environmental collective actions interact with various structural dimensions of the actions to enhance the chance of mobilization and achieving social change of various levels?

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In the next section, a review of ICTs for social change and the Chinese environmental movement and ENGOs is provided. The study then moves on to present analytical and interpretative findings. First, the Internet uses of these 19 ENGOs are summarized. Then, discussion centers on the conditions that generate environmental and social changes mediated by Internet-based collective actions, as distinguished from those that are web-based, partially web-based, and long-term web-based.

New ICTs, social change, and the Chinese environmental movement

With the advent of the new informational and networked era, social movement actors have actively mobilized collective actions, organized activities, and connected with the larger world using new ICTs. Activists often resort to media technologies to develop and deploy persuasive efforts and resources towards strategic goals of social change. New ICTs allow activists to post, edit, and disseminate information across geographical and media boundaries, create new virtual space for discourse exchange, and even form instantaneous online mobilization networks such as "Smart Mobs," all at a low cost of brokerage and organizing. Such a role of ICTs has been examined from a wide variety of recent ICT-based movements, such as the recent Iranian uprising, which utilized social media such as Twitter (Lucas, 2009); the famous Zapatista movement (Atkinson, 2010; Ronfeldt & Arquilla, 2001; Bob, 2005); the global justice movement (Juris, 2008; Langman & Morris, 2003); the 1999 anti-WTO protest (Postmes & Brunsting, 2002; Juris, 2005); and the People Power II movement in the Philippines (Bagalawis, 2001).

Similar to other social activists, environmental groups have had a long tradition in publishing their own alternative media. In 1893, the *Sierra Club Bulletin* was started by John Muir; this was followed by the issuing of *Bird-Lore* – the predecessor of the *Audubon Magazine* in 1899 (Cox, 2006). Castells long ago illustrated how environmentalists had been "at the cutting edge of new communication technologies as organizing and mobilizing tools, particularly in the use of the Internet," and observed a strong media orientation associated with the environmental movement (Castells, 1997, p. 129). In the era of new media, environmental activists have leveraged the Internet as an alternative medium to create their own environmental news services, to create web logs and videos, and to publicize information about their own organizations and campaigns (Cox, 2006). This is evidenced from EcoNet, the world's first computer network dedicated to issues of environmental preservation and sustainability in the 1980s (Castells, 2001), until today's burgeoning green online communities, such as openeco.org. One of the key functions of the Internet for environmental groups is coordinating online and offline collective actions. The rapid development of the Internet has seen the emergence of thousands of transnational NGOs, democratic grassroots organizations, social mobilization, and Internetworked social movements (Langman & Morris, 2003), all of which are organizations mediated through the Internet. Many environmental NGOs are among these new products of the Internet. This has been evidenced in China, where the environmental movement has recently arrived.

Over the past three decades, China's rapid economic development and successes have had dire environmental consequences. Faced with this growing crisis, the Chinese government has responded with some creative solutions and developed a series of pro-environmental policies, laws, and regulations (Schwartz, 2004), but

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another key response outside the government has emerged from the concurrent growth of Internet activism and environmental non-governmental organizations. Since the 1990s, Chinese ENGOs have proliferated and become key players in the emerging environmental movement marked by burgeoning numbers of ENGOs, frequently self-organized collective environmental campaigns, environmental education activities, and policy advocacy, both online and offline. Chinese ENGOs have organized many activities and campaigns to promote environmental protection and protest against environmental misconduct. An important aspect of this new Chinese movement is the key role new ICTs, primarily the Internet, play (Yang, 2003; Sullivan & Xie, 2009; Johnson, 2009). The year 1994, when China first gained access to the World Wide Web, also marked the birth of China's first environmental NGO – Friends of Nature. Since then, the development of the environmental movement and ENGOs has paralleled the growth of the Internet in China (Yang, 2005a; 2005b). Many ENGOs were either born online or quickly established a web presence to coordinate collective actions among members and the general public. Thus, the Internet has become an invaluable tool for ENGOs to create, expand, and maintain the network of environmental activism, and to greatly extend new possibility for environmental movement in current China.

However, as indicated by Livingstone (1999), technology-enabled social change depends on the social shaping and contexts of use of the technology out of complex social, political, and economic processes rather than just on the technological capacities per se. Thus, we must foreground an analysis of the role of Internet on Chinese environmental campaigns with a familiarity of the overall social, political, and organizational backgrounds that contextualize such campaigns. Currently, China is going through a *transformative period* that focuses on economic development and building a harmonious society. While the markets and businesses are experiencing rapid development, a special transformative culture and a civil society are emerging, both of which bring opportunity to ENGOs. Quite dissimilar from conditions in the West (where an overall loose legal atmosphere for environmental online activism prevails), the *transformative* social conditions in China bring opportunities and challenges to Chinese ENGOs, especially with regard to their use of the Internet.

The Chinese government displays an ambiguous attitude towards the development of ENGOs, often characterized as being "loose outside, tight inside."[1] While the government actively encourages environmental protection and has established many environmental policies, it also tightly restricts the registration of ENGOs (Yang, 2005b; Zhang, 2003). Under such an apparently paradoxical approach, many grassroots ENGOs cannot register and obtain the necessary legal status to act. On top of this, they are often hampered by scant financial and human resource support. Nevertheless, these conditions have counter-effectively encouraged the birth and vibrant growth of ENGOs of various types, especially on the web. Yang (2005a) identified six ENGO organizational types: registered NGOs, non-profit enterprises, unregistered voluntary groups, web-based groups, student-organized groups, and government-organized groups. Among these, the web-based ENGO is a new organizational form composed of unregistered volunteer groups operating online.

While the "empowering" function of the Internet and a close relationship between ICTs and environmentalism are also perceived in China, the precise nature of the

empowerment is quite different than that experienced outside China. While new media are often associated with the creation of a virtual public sphere for democratic social change in Western social movements (Downey & Fenton, 2003; Langman & Morris, 2003; Bennett, 2003), the nature of the Chinese environmental movement does not find the public sphere as a suitable research framework. Born and developed under the special historical, political, and social conditions in contemporary China, these movements are more properly viewed as an example of a "green public culture," where "local struggles create a mixed, context-varied politics in the pursuit of environmental justice" (Liu & Goodnight, 2008, p. 418). In practice, the new Chinese environmental movement is essentially "non-political" and indicates a different type of social movement with a unique set of goals, collective actions, and organizational characteristics (Yang, 2004).

Chinese ENGOS rarely assert the type of strategies, organizational resources, and schemes available to their Western counterparts (Sullivan & Xie, 2009) in order to explicitly champion democratic values. Rather, they tend to adopt a mild and gentle style to raise public consciousness, solve environmental problems, encourage citizen participation, and gingerly work towards cultural and political change through reasoned practice (Yang, 2004; 2005a). In this green public culture, "the language of political culpability, ideological praxis, or systemic reform takes a back seat" (Liu & Goodnight, 2008, p. 419). In today's transformative China, new ICTs help promote a performative green virtual public culture, where discussions on "pure" environmental issues are mixed both with an outlook of scientific development and with the hope of promoting a more democratic social atmosphere. Mobilization geared toward such goals is abundant, where the tone is often "nonpartisan" advocacy (Yang & Calhoun, 2007) and does not necessarily involve challenging the existing political system. Such a style is also reflected in the use of the Internet to mobilize ENGOs. Many environmental campaigns born out of these contexts tend to run on a small-scale, less intense, non-confrontational basis. These are important (context-specific) premises upon which the study of Internet activism in China should be based if we are to achieve a realistic understanding of Chinese ENGO actions.

Indeed, ICT is never a magic bullet for the eventual success of a movement alone. For instance, Castells (1997) illustrates three anti-globalization movements in three cultural settings: the Zapatista, the American Militia, and the Aum Shinrikyo movements. While new ICTs effectively created the organizational infrastructure and achieved considerable political goals for these movements, ICTs could not take these actors further to achieve broader political impact due to the reactive, weak-goaled nature of these movements. Even for a successful case like the anti-WTO protest in Seattle, its media hub, Indymedia, has its issues as a typical Internet-based social movement institution. The operation of Indymedia generates constant tensions between the principle of participatory, consensus-making-based radical democratic logic versus the actual discursive closure and tyranny associated with its technical practice of open publishing (Pickard, 2006a). In addition, Indymedia also runs into constant tension between its central united principle of all IMCs and its assumed autonomy of each individual IMC (Pickard, 2006b). These caution us that ICTs' role in social movements should not be over-exaggerated with a technological deterministic or utopian view. Rather, what is more appropriate is a social shaping and modest belief that new ICTs can be agents of progressive social change, but they are means of change alongside other forces, not inevitabilities or causes by themselves

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(McCaughey & Ayers, 2003). Thus, the social and political impact of ICTs for each social movement have to be analyzed along with the specific structural conditions, actors, goals, movement model, and adversary related to each. This context applied to this study as well.

Analytical framework and research questions

Given the scant theoretical framework on the role of new ICTs in social movement communication, I developed an analytical typology to examine the capacity of the Internet in organizing environmental collective actions and effecting social change in China. I borrowed the structure of a classical typology developed by Castells (1984) for evaluating the citizen movement in Madrid. To examine the 23 neighborhood mobilizations in Madrid, Castells worked with four components: structural dimensions, control variables, operators, and movement effects, and each of these components comprised several elements.[2] Most of these variables were coded in a dichotomous form, i.e. whether there is a presence or absence of the element in a movement. The 23 coded mobilizations were grouped based on the pattern of the social effects they produced (Castells, 1984).

While Castells's analytical model comprehensively captured all elements from the structure of a movement to its possible outcome, it is specifically designed for empirical observation of the neighborhood movement in Madrid more than 25 years ago. For this study, I borrowed two major components (structural dimensions and effects), replaced control variables and operator with Internet as mediating conditions, and partially borrowed its coding and analytical techniques but used high/low instead of presence and absence to indicate the state of an element.

Structural dimensions

The structural dimensions of a social movement have a crucial impact on its outcome (Bob, 2005). They are the features that structurally characterize the movement and distinguish one campaign from another. In this study, several dimensions were developed that are crucial for the context of the Chinese environmental movement.

Campaign goal

The social movement goal, including its scale, range, and specificity, has been found in classical social movement literature to recent studies of environmental movements as playing a crucial role for the campaign itself and the movement outcome (Snow & Benford, 1988; Giugni, 1998; Cox, 2006; Bennett & Segerberg, 2009). Castells (1997) analyzed three movements in the 1990s that opposed the new global order and discovered that a weak reactive social goal to defend against an adversary is one crucial condition that prevented these movements from reaching ultimate success. Sandler and Pezzullo (2007) also found out that well-defined goals can make alliances and collaborations between two movements successful. Earlier discussions suggested that the Chinese context tends to produce many environmental campaigns organized on a small scale without any clear issue or adversary declared. Yet a strong goal and clear adversary seem to accompany several successful campaigns, such as the Nujiang case. Thus, I include the campaign goal as a structural dimension that can be classified

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either as a weak goal (usually educational) or a strong goal (issue-specific with a clear targeted adversary).

Number of organizations

Networking and alliances among NGOs themselves or with other forms of organization have become increasingly common, especially in the environmental movement arena, as evidenced in the US recycling movement (Lounsbury, Ventresca, & Hirsch, 2003) and the green alliance between McDonald's and environmental organizations (Livesey, 1999). Gerhards and Rucht (1992) long ago proposed the concept of "mesomobilization" and a "mesomobilization actor," both of which are crucial for understanding movement networks, especially large movements joined by several movement ENGOs. Fulk (2006) called attention to the trend that inter-NGO networking is an imporatant means of organization. Echoing the often small-scale and non-issue specific goal of the Chinese environmental campaigns is the small number of NGOs involved. While most small-scale campaigns tend to be organized by a single NGO, other larger-scale campaigns, such as the Save the Tibetan Antelope Campaign, do see a dynamic NGO alliance at work. To form an alliance, a campaign requires the participation of at least several NGOs. Therefore, the number of organizations is included as a basic structural feature of the campaign.

Type of activity, audience reached, and level of intensity experienced

Given China's vast geographical area, the diverse range of environmental issues, and the early stage of China's environmental movement, the environmental collective actions tend to experiment with various fields, including but not limited to urban, education, rural, and animals, and they target various audiences. Therefore, I added type of activity and Audience reached as two other dimensions. Level of intensity the environmental activities/campaigns experienced is the last dimension added.

Mediating conditions

Through a study of environmental conflict in Tasmania, Lester and Hutchins (2009) found out that rather than forming new forms of media power, the Internet was used by activists as a tactical and alternative tool to practically reaffirm the historical dominance of existing media, thus mainly to gain mainstream news media access. This suggests that the role of the Internet in the environmental movement neither can be judged independently nor is a determining factor of the movement outcome. Rather, it needs to be judged on how well it interacts with other existing conditions and helps mediate between existing structural dimensions of the movement and its outcomes.

Therefore, I regarded the role of the Internet as a mediating function. To concretize this, I developed several mediating conditions that highlight the functions of the Internet's role in environmental campaigns. Partially from observation of Chinese ENGOs' websites and their campaigns, and partially from the new and alternative media literature (Castells, 2004; Downing, 2001; Ronfeldt & Arquilla, 2001; Yang, 2005a; Stein, 2007; Sullivan & Xie, 2009), I developed the following major conditions to measure the extent to which the Internet is used in each of the environmental collective actions to: disseminate information, recruit, educate,

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organize mobilization, and promote discussions and debates. Each of these types of Internet use will be judged by its level of intensity – whether each is frequently or infrequently employed. Many social movements, including Indymedia and Move-on.org, illustrated that organized intent is a must for online activism to be powerful (Stengrim, 2005). Castells (1984) also proposed that consciousness is an essential element in any movement to produce social change. Thus, I proposed an additional mediating condition – the level of Internet consciousness in a campaign (high or low) by the major actor(s) participating in a campaign. A movement depends on media for three things: mobilization, validation, and scope enlargement (Gamson & Wolfsfeld, 1993); in addition, these mediating conditions of the Internet may not play a direct role between the movement structures and the outcomes. Therefore, I added a second-level mediating condition – level of movement mobilization, which is largely determined by the Internet to more accurately describe the relationship.

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Outcomes of social change

The conceptualization of the types of outcomes of social change is based on both previous literature examining movement outcome as well as the range of movement outcome realistically sought after by Chinese ENGOs.

The classical literature on social movement outcomes focuses on two general categories: direct and indirect outcomes. The former are concerned with achieving movement goals that are a reflection of a movement's primary ideological rationale, such as winning new advantages, while the latter are concerned with the movement's influence and proximate objectives, such as changing the public's perception regarding an issue (Cress & Snow, 2000). Outcomes of environmental movement are usually case-specific, which has created no generalizable framework by which to measure and categorize types of environmental movement outcomes. In general, successful environmental movement outcomes range from a specific change in the environment to the establishment of environmental law and policy. In discussing the Grass-Roots Ecosystem Management Movement, Weber (2000) concluded that outcomes should be the product of community discussion on a case-by-case basis.

Thus, I conceptualized the following outcomes that will be measured simply by whether each is achieved or not (yes or no): policy change (ultimate success outcome, as a few cases achieved); change of government practice; change of business practice; and enhancement of environmental awareness (plus some actual environmental change). Based on the different levels of significance of these changes, I stratified the outcomes and classified the 18 cases later. I treated the most basic type of change – enhancement of environmental awareness – as a basic outcome; a specific change to a government or business practice related to environmental protection was classified as a moderate outcome facilitated by ICT intervention; changes to both the government and business practices were deemed a powerful outcome; and changes to environmental policy was the ultimate success outcome.

Based on these discussions, a typology was conceptualized (Figure 1) that enables the comprehensive capture of each Internet-based collective action organized by an individual or a group of collective ENGOs. This analytical model was based on a number of sources, including borrowing the technique of the topology of Castells's classical study, some classical social movement literature on movement structural dimensions and outcomes, new media literature on the function of new ICT, and most

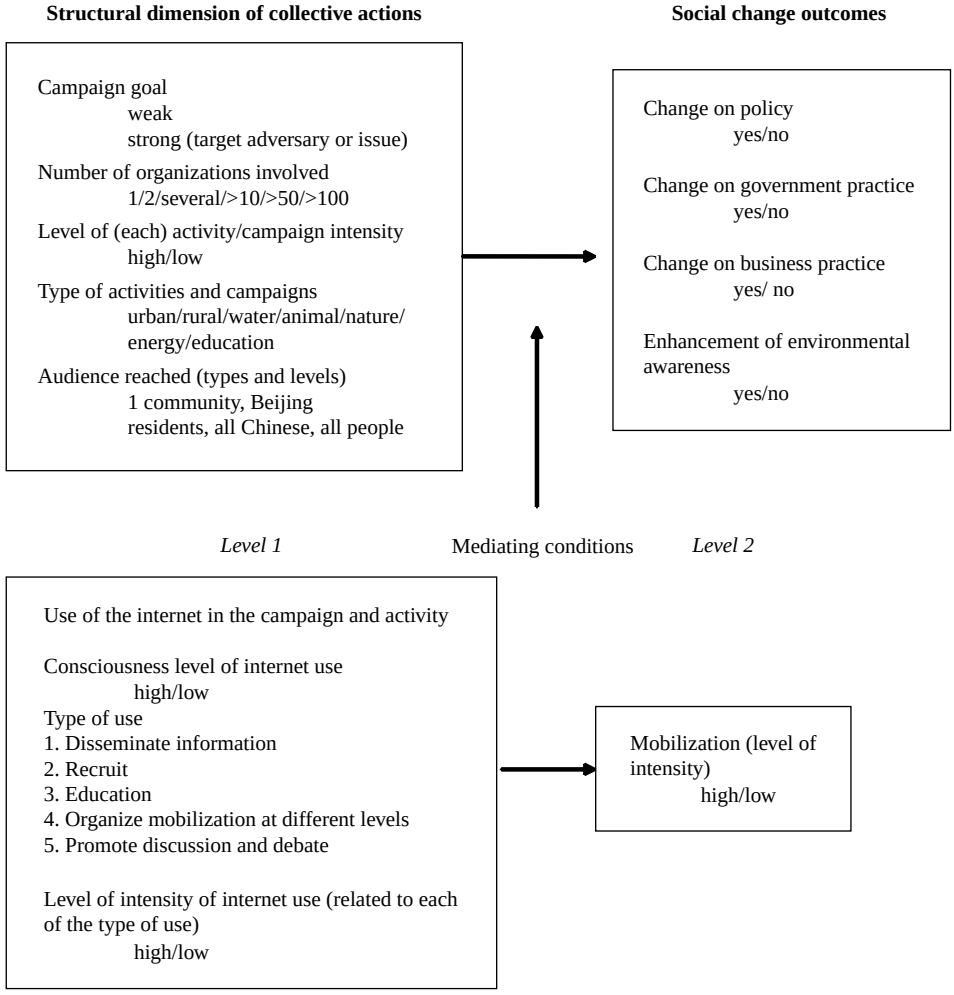

Figure 1. An analytical model for examining internet-based environmental collective actions.

importantly, China's specific social and cultural contexts in which these environmental collective actions are embedded.

Accompanying this analytical framework are the research questions RQ1, RQ2, RQ3 drawn from previous discussion and the framework that will guide the current inquiry (please refer to page 139).

Method

The interview was used as the major method for data collection because it is the best way to obtain first-hand information and gain insights from the Chinese ENGOs on how they employ ICTs to develop strategies, organize public participation, mobilize collective efforts, and promote social changes. In addition, the interview is a productive way to learn about the intricacies of their Internet activism and the social,

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organizational, and political contexts that influence the extent to which Chinese ENGOs employ the Internet for mobilization and achieving specific social changes.

I conducted one-on-one in-depth interviews with 25 people from 19 selected ENGOs respectively during a summer 2007 field research in Beijing to collect first-hand information about their Internet use on environmental activities and campaigns. The ENGO sample chosen includes solely Beijing-based NGOs because Beijing is the city where the most active Chinese ENGOs exist. I selected these 19 organizations to represent a variety of Chinese grassroots ENGOs in terms of their age, registration status and type, area of specialization, and mission. Such diversity is intended to ensure proper and balanced data representation and to minimize the likelihood that the examined web-based actions could be attributed to organizational homogeneity. For instance, an imbalanced portrayal of the Internet activism may be caused by studying only all ICT savvy or all non-IT savvy ENGOs. The ENGOs selected for this study were established as early as 1994 to as late as 2006. Their average age is 7.5 years, with the oldest at age 14 and the youngest at age 1. The areas of specialization of these ENGOs exhibit a wide variety, such as sea protection, wild life protection, desert protection, and rural communities, and many of them work on multiple areas of specialization. Except for Green Peace, Fuping Institute (a research NGO), and All Chinese Environmental Federations (the only government-operated non-governmental organization [GONGO] interviewed as a point of contrast), all other grassroots ENGOs have less than 10 staff members. In addition, among the 19 ENGOs, six are unregistered, seven are formally registered as social organizations,[3] and six are registered as non-profit organizations (NPO).

Altogether, 25 interviews were conducted with subjects ranging from founder, owner, and media officer to IT specialist and volunteer of an ENGO, and the interviews lasted from 40 minutes to two-and-a-half hours each. The interviewees were all key personnel who are closely involved in the Internet-based environmental activities in which a particular ENGO has engaged, though they vary in background and experience. All interviewees were very informative about the topic. The interviewees provided first-hand insider information about how ENGOs use the Internet to engage in both daily work and major Internet-based collective actions. Archival textual and web data were also collected in a follow-up step to examine the web use of ENGOs and some of the web-based campaigns and activities.

Interviews were recorded and transcribed for data analysis in two major steps. First, basic ethnographic information about the 19 ENGOs and their Internet use are summarized and coded into Table 2 and Table 3. The web use of these 19 ENGOs was measured by how well each ENGO meets the 10 conditions of web use (see explanation in the next section below). Second, after all Internet-based collective actions (18) were identified from all data sources (interview, web, and archival textual data), material about each of the collective actions was gathered, summarized, and coded into a summary table (not included) according to the analytical framework presented earlier. The summary coding examines the role and capacity of the Internet for each of the environmental collective actions (see Table 1).

Findings and discussions

The following sections will first present findings about the general web use of the ENGOs studied to understand how technologically ready they are to engage in

Internet-based activities and campaigns. Then it will closely examine the intricate conditions under which various types of web-based collective actions occur and how these conditions strive to facilitate the accomplishment of a range of outcomes, from policy change to awareness-enhancing in support of social change.

Web use of Chinese ENGOs

What emerged through the data was that the 19 ENGOs generally employ the Internet to build a website, host an online forum, and occasionally issue newsletters. In addition, they use the web primarily to perform the functions proposed as the mediating conditions in the analytical framework: disseminate information, recruit, educate, organize mobilization, and promote discussion and debate. Whether an ENGO has web expertise (usually through its own IT-savvy members) is also a key condition determining how well this ENGO can utilize the web. Another closely related organizational-level condition is whether this ENGO is highly conscious of how the Internet can assist with its daily work and environmental campaign.

Therefore, what distinguishes an ENGO that is actively engaged in web use from one that is less active is how well the 10 conditions discussed above are collectively met: whether this ENGO has a website, hosts an online forum, issues newsletters, has web expertise, has a high web consciousness level, and frequently uses the web to disseminate information, recruit, educate, organize mobilization, and promote discussion and debate. I coded the 10 conditions from the interview transcript and web and archival textual data for each of the 19 ENGOs to evaluate the level of their web use and summarized the detailed account for each ENGO in Table 3.

Each ENGO is assigned a score from 1 to 10 for its level of web use, depending on how well its web use conditions are met. For instance, the Beijing Raptor Rescue Center (BRRC) has a website (y), an online forum (y), web consciousness (y), and frequently uses the Internet to disseminate information and perform all the other 5 functions of the web (5 high). By adding 3 (the yeses) and 5 (the highs), BRRC earned a score of 8, which indicates a quite active level of web use. Among the 19 ENGOs, five have low active levels of web use (scored 1 to 5), five have medium active levels of web use (scored 6 to 8), and 9 achieved high active levels of web use (scored 9 to 10). The average score for all the 19 ENGOs is 7.3, which indicates a medium active level of web use on average.

To answer RQ1, an analysis of the general use pattern and level of Internet use by these ENGOs reveals that 14 out of 19 of the ENGOs (5 medium levels plus 9 high active levels of web use) interviewed have actively utilized various uses and functions of the Internet for their daily work and environmental activities. Thus, more than 70% of the ENGOs are equipped with advantageous "hardware" technological conditions to engage in online campaigns and activities, even though the "software" social constraints discussed earlier serve more as barriers.

Internet-based collective actions of Chinese ENGOs

Eighteen web-based environmental collective actions organized by ENGOs were identified through field research data and then analyzed. These 18 actions may not be inclusive of all cases, but they include all the cases discussed by the interviewees when asked for impressive major Internet-based campaigns and activities in which their

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Table 1. Coding example of web-based collection action of a Chinese ENGO.

	Structural dimension of collective actions					Mediating conditions							Outcomes of social change			
	Goal specificity	Type	Level	No.NGO	Audience	Consciousness Level	Disseminate information	Recruit	Education	Organize mobilization	Promote discussion & debate	Mobilization	Policy Change	Gov. Practice Change	Business Practice Change	Enhance Environmental Awareness
3. Ask me about the Environment (1)	weak goal	education	low	1	Beijing residents – all Chinese	high	high	high	high	low	low	low	no	no	no	yes

Note: This is an example of the coding not included in this article. High means a high level presence of the condition. For instance, under "mediating condition," if the condition "organize mobilization" got a "high," it means the campaign was able to frequently use the Internet to organize mobilization; oppositely, "low" under "promote discussion and debate" means that the campaign only infrequently used the Internet to promote discussion and debate.

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Table 2. Chinese ENGO biography.

	NGO (Name and website)	Year established	Registration (& type if yes)	No. of employees	Specialization	Interviewee info
1	Green Beijing http://www.greenbeijing.net/	1998	No, volunteer based	1–5	Comprehensive	Director (current owner)
2	Friends of Nature http://www.fon.org.cn/	1994	Yes, social organization	>10	Comprehensive; current focus on environmental education	Editorial manager and volunteer IT staff
3	Green Cross http://www.bjlsz.org.cn/aboutus.asp	2003	Yes, with Civil Affairs NPO	6–10	Biodiversity conservation, rural communities	Office director
4	Petroleum and Environment Network www.pencn.org	2005	No (target at NPO)	1–5	Petroleum industry, corporate social responsibility	Director
5	Ocean Protection Commune www.dahai.ngo.cn	2000	Yes, social organization	1–5	Sea protection	Director
6	Green Star Waste Battery Recycle Volunteers www.wangzixin.org	2001	No	1	Scrap battery recycling	Director
7	Wild China Film http://www.wildchina.cn/	2002	Yes, with Trade and Industry Bureau	1–5	Wild life protection	Owner (and founder)
8	Ground Green Union Web site not up yet.	2006	Yes, with Trade and Industry Bureau	1–5	Sustainable and organic rural community	Staff/volunteer
9	All China Environmental Federation http://www.acef.com.cn/	2005	Yes (GONGO), social organization	About 70	Comprehensive (core is environmental rights protection)	Department director
10	Animal Rescue Beijing (ARB) http://www.arbchina.org	1999	Yes, social organization (Civil Affairs)	1–5	Animal protection	Director
11	Beijing Raptor Rescue Center http://www.brrc.org.cn	2001	No, (Beijing Normal University alliance)	6	Wild animal protection, biodiversity	Center manager

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Table 2 – *continued*

	NGO (Name and website)	Year established	Registration (& type if yes)	No. of employees	Specialization	Interviewee info
12	Hunsandake Desert Reclamation Association http://bbs.hsdk.org.cn/index.php	2005	Yes, social organization (with Civil Affairs)	1–5	Desert management, and environment education	Director
13	Green Earth Volunteer http://www.chinagev.org http://www.greensos.cn/	1996	No, volunteer base	1–5	Currently on rivers, enhancing media professionals' and public environmental awareness	Owner (and founder)
14	Greenpeace China http://www.greenpeace.org/china/zh/	1997 (HK) 2002 (Beijing)	Yes, in Hong Kong	Around 50	Currently climate and energy, toxics, food and agriculture, and forest	Media officer
15	Civil Society Watch No website yet	2006	Yes, but with Trade and Industry Bureau	1–5	Environment and aids	Co-founder
16	Fuping Institute for Environment and Development http://www.ied.org.cn	1994	Yes, social organization	>40	Environmental policy and rights protection, capacity building, surveys and research	Communication manager
17	Roots and Shoots http://www.jgichina.org/rootsandshootml (www.genyuya.org.cn)	2000	Yes, but as NPO	6–10	Environmental education, community conservation, wild animal protection	Founding staff member and project manager
18	Greenhome Environmental Protection Center (GEPC) http://www.greenhome.net.cn/	1998	Yes, NPO	6–10	Environmental education, rural communities	Co-sponsor
19	Green web Alliance http://www.green-web.org/	1999	No, volunteer base	6–10	Environmental education, NGO web development	Volunteer

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Table 3. Web use of 19 Chinese ENGOs.

		Use of web/Internet (yes or no)				Function of web use (level of intensity of use: highly-frequent vs. lowly-frequent use)						
ID	NGO	Website	News-letter	Online forum	Web expertise	IT con-scious level	Disseminate information	Recruit	Education	Organize/ promote mobilization at different levels	Promote discussion and debates	Total (Y+high)
1	Greener Beijing	Y	N	Y	Y	high	high	high	high	high	high	9
2	Friends of Nature	Y	Y	Y	Y	high	high	high	high	high	high	10
3	Green Cross	Y	Y	N	Y	low	high	high	high	low	low	6
4	Petroleum and Environment Network	Y	Y	N	N	high	high	low	high	low	low	5
5	Ocean Protec-tion Commune	Y	N	Y	Y	high	high	high	high	high	high	9
6	Green Star Battery Recycle Volunteers	Y	N	N	N	low	low	low	low	low	low	1
7	Wild China Film	Y	N	Y	Y	high	high	low	high	low	high	7
8	Ground Green Union	N	N	Y	N	high	high	high	low	low	low	4
9	All China Environmental Federation	Y	N	N	Y	high	high	low	high	low	low	5
10	Animal Rescue Beijing (ARB)	Y	N	Y	N	high	high	high	high	high	high	8
11	Beijing Raptor Rescue Center	Y	N	Y	N	high	high	high	high	high	high	8

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Table 3 – *continued*

		Use of web/Internet (yes or no)				Function of web use (level of intensity of use: highly-frequent vs. lowly-frequent use)						
ID	NGO	Website	News-letter	Online forum	Web expertise	IT con-scious level	Disseminate information	Recruit	Education	Organize/ promote mobilization at different levels	Promote discussion and debates	Total (Y+high)
12	Hunsandake Desert Reclamation Association	Y	N	Y	Y	high	high	high	high	high	high	9
13	Green Earth Volunteer	Y	N	Y	Y	high	high	high	high	high	high	9
14	Greenpeace China	Y	Y	Y	Y	high	high	high	high	high	high	10
15	Civil Society Watch	N	N	N	N	high	high	low	high	low	low	3
16	Fuping Institute for Environment and Develop-ment	Y	N	Y	Y	high	high	High	high	high	low	8
17	Roots and Shoots	Y	Y	Y	N	high	high	high	high	high	high	9
18	Greenhome Environmental Protection Cen-ter (GEPC)	Y	N	Y	Y	high	high	high	high	high	high	9
19	Green web Alliance	Y	N	Y	Y	high	high	high	high	high	high	9

Note: Average scores among all 19 ENGOs = 7.3.

organizations have engaged. Thus, these 18 cases captured the major web-based actions carried out by these ENGOs and can serve as a window to view the bigger picture of web-based campaigns conducted by Chinese ENGOs. Langman and Morris (2003) suggested treating the Internet-based movement according to whether it is conducted through the net (the net as a tool) or in the net (the net as a social space or site of contestation). I borrowed this idea and classified the online actions into exclusively web-based and partially web-based collective actions. The former means online actions that take place in the net, such as online petitions and email campaigns, and the latter refers to those actions that are initiated online but carried out offline or vice versa. Both of these groups were further categorized into subgroups based on similar patterns of the social change outcomes they have achieved. A third group of collective actions also emerged from the data, which are referred to as long-term online collective actions. Thus, all 18 actions were classified into 6 thematic groups (refer to Table 4 for a detailed account for each group).

There is no corresponding relationship between each action and each ENGO. While most of the actions were conducted by a single ENGO, several of them were undertaken by a group of ENGOs being interviewed and other ENGOs or organizations not being interviewed. Among the 19 ENGOs, only 10 actually directly engaged in any kind of online actions. Some comparative data about the difference between the 10 engaged ENGOs and the 9 non-engaged ones in terms of their levels of web use, age, and registration status reflect interesting findings. First, these 10 ENGOs, in general, are among those organizations that utilize the Internet the most and have the overall highest levels of technological "hardware" conditions. Seven out of the 10 conditions of web use for all the 10 ENGOs reached 100% of high-level involvement, which means, for instance, that all of them have online forums and high IT consciousness levels. The average score of web use for all 10 ENGOs is raised to 8.9, which indicates a highly active level of web use collectively. Second, the average age of these 10 ENGOs rose to 10.5 years, as compared to 3.6 years for those non-engaged ENGOs. This indicates that under the current social conditions in China, older ENGOs that have very high levels of IT and web use experience are more ready to break through the social constraints by using the new ICTs for online activism and mobilization. In addition, although it is very difficult for NGOs to register as legal social organizations, the 50% of formal and legally-registered ENGOs (social organizations) among those engaged ENGOs versus the 22% among those non-engaged ones suggests that a formal legal status enhances the chance of engaging in online collective actions in China.

The following section will focus on discussions about the analysis and findings of the six groups of web-based environmental collection actions. It will be dedicated to answering RQ2 and RQ3. While there are no brief answers to these two questions, their answers will be found in the intricate picture of how each thematic group of cases differs from the others, what conditions are at play in creating these differences, and how within each group, various types of structural dimensions of the case interact with various mediating conditions to create movement outcomes of varying patterns.

1. a Web-based basic outcome cases

Case example (case 6): Himalaya blog. Around May 2007, Greenpeace China sent a research team to the Himalaya Mountains to study climate change. They cooperated

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with sina.com to establish a Himalaya blog for simultaneous interactions between research teams and the interested web audience. Researchers recorded their experience of the Himalayas and sent them to the blog via the Internet while they climbed the mountain, attracting a large audience and engaging them in online discussions about climate change. During the three days, their blog received 200,000 hits.

The first group, 1.a, is composed of cases 3, 5, and 6, which only achieved the most basic social change – enhancement of environmental awareness. Cases 5 and 6 share the same structural dimensions and web functions: both campaigns had only a weak goal, were quite active, organized by a single organization, targeted all people, triggered a high consciousness of engaging the web, and frequently used all five functions of the web (from disseminating information to promoting discussion and debate), which, in turn, led to high mobilization of the campaign. Case 3 differed because it had a low level of activity, less frequent use of the web to organize mobilization and promote discussion and debate, and thus, a low level of campaign mobilization. For case 3, the lack of all the needed high-level web functions in the campaign prevented the campaign from having a high level of mobilization, which in turn made it harder to produce more changes other than environmental awareness. However, even though all the high-level web functions were utilized, cases 5 and 6 achieved no greater outcome than case 3 did. This may be attributable to the similar goals of the campaigns. Cases 5 and 6 were both conducted by Greenpeace China. Case 5 was aimed at educating the public to oppose whale catching, and case 6 was aimed at educating the public about climate change through a live Himalayan blog. Thus, both targeted protecting nature without any specific advocacy goal targeting any adversary. Similarly, case 3, the Ask Me about the Environment campaign, was organized by Green Beijing in 2007 as an educational campaign. It was a small-scale and less intense campaign, with the main purpose of spreading environmental knowledge and promoting environmental awareness through selling environmentally themed, information-rich T-shirts online. Therefore, the outcomes of these three cases did not exceed awareness-enhancing.

1. b Web-based moderate outcome cases

Case example (case 7): an online campaign to protect the Beijing Zoo. In 2004, Green Web, a young ENGO composed of IT-savvy environmentally enthusiastic young people received information that the Beijing Zoo would be moved away from its current urban location to a suburb. The Beijing Zoo has 100 years of history and is the biggest city zoo in China. It has accumulated rich cultural details, scientific research results, and precious memories of people from all over China. The relocation decision was based neither on a public hearing nor a transparent policy, and so it attracted many opposing views. Green Web publicized the information on their website and other sites, which attracted local media and many people who posted messages and engaged in active online discussions. They also called for and collected online signatures from people to oppose the relocation plan. They sent online petition signatures along with a proposal to the People's Representatives Standing Committee. The campaign finally led to the shelving of the relocation plan. With a high level of utilization of the web and competent IT expertise, Green Web was able to quickly employ the web to send the information and organize an effective online petition that eventually led to the success of the campaign.

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Table 4. Profiles of 18 web-based environmental collective actions by six thematic groups.

Thematic groups	Web-based collective actions	Structural dimensions of the collective action	Mediating conditions and mobilization	Social change outcomes
1.a.Web-based basic outcome cases	3. Ask me about the environment (1) 5. Internet campaign against whale catching (14) 6. Himalaya blog (14)	–weak goal –high level of activity –by one single organization –targeted all people	–high consciousness of engaging the web –frequent use of all the web functions –high mobilization of the campaign	Environmental awareness enhancing
		Case 3 differs by: –low level of activity, –infrequent use of the web to organize mobilization, promote discussion and debate, –low level of campaign mobilization		
1.b.Web-based moderate outcome cases	2. A green Beijing for green olympics (1) 4. Online campaign against the building of RuShan Nuclear Power Plant (5) 7. Online campaign to protect the Beijing Zoo (19) 8. Online campaign to protect the wetland in Beijing suburb (19)	(case 4, 7, 8) –issue-specific campaign goal (targeting an adversary) –high level of movement activity –by one to several organizations	(all cases) –high consciousness level of engaging the web –frequent use of all the web functions (4, 7, 8) –high level of mobilization	Business practice OR government practice, and environmental awareness enhancing
		Case 2 differs by –weak campaign goal, –low movement activity level, –low mobilization level.		

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Table 4 – *continued*

Thematic groups	Web-based collective actions	Structural dimensions of the collective action	Mediating conditions and mobilization	Social change outcomes
1.c. Web-based powerful outcome case	1. Save the Tibetan antelope (1, 2, 7, 18, 19)	–high level of activity –strong, issue-specific goal –by > 100 organizations	–highly utilized all the five Internet functions –high level of mobilization	Business AND government practice, and environmental awareness enhancing
2.a. Partially web- based basic outcome cases	9. Summer solstice light off (2) 10. Protect the forest and oppose the use of disposable chopsticks (14) 11. Change to energy-saving light (14) 12. Eco-action Beijing (17) 13. Planting trees for the new century (18)	–weak goal –by one NGO, but *Other conditions vary	–high level of consciousness of the web –frequently use the Internet to disseminate information and educate –infrequently use the web to promote discussion and debate *Other conditions vary	Environmental awareness enhancing, and actual environmental changes
2.b.Partially web-based ultimate success cases	14. 26-degree air-conditioning 15. Nujiang campaign (2, 7, 13, 16) 16. Yuan Ming Yuan Park anti-seepage project incident	–very issue-specific clear advocacy goal –by several to 50 organizations –high level of activity	(case 14, 16) –low level of web consciousness, frequent use of the web to disseminate information, educate –infrequent use of the web to recruit, organize mobilization, promote discussions and debates.	Policy change, business AND government practice, and environmental awareness enhancing

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Table 4 – *continued*

Thematic groups	Web-based collective actions	Structural dimensions of the collective action	Mediating conditions and mobilization	Social change outcomes
			–Case 15 differs by: high frequent use of all web functions	
3. Long-term online forum campaign	17. Online forum "campaign" (all that has an active forum)	–high activity level –organization number varies	–frequent use of all web functions –high level of mobilization	Environmental awareness enhancing, and other changes yet-to-be-seen
	18. Green reporters' saloon online (13)			

Notes: The numbers in parenthesis after the collection actions indicates ID of the ENGOs participated. See Table 2 for the specific ENGOs referred by the ID.
*These cases do not all share similar structural dimensions and mediating conditions besides those listed here. They were grouped together because they were all initiated online then conducted offline.

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The second group, 1.b., includes cases 2, 4, 7, and 8. These cases not only enhanced environmental awareness, but also achieved either business practice or government practice change.[4] Thus, their outcomes can be considered moderate. What is similar among these cases is that they all deployed a high level of web functionality in the campaign: a high consciousness of engaging the web and frequent use of all five functions of the web, from information dissemination to the promotion of discussion and debate. Cases 4, 7, and 8 share more structural similarities: all had an issue-specific campaign goal (targeting an adversary), maintained a high level of movement activity, and had a high level of mobilization. Case 2 is different because of its weak campaign goal and low level of movement activity and mobilization. It appears that a high level of utilization of various web functions presented in this group of cases is a must, since these actions not only enhanced environmental awareness but also produced change in either governmental or business practice. Except for the similarity on high utilization of web functions, what also distinguishes this group from group 1.a is that cases 4, 7, and 8 are all issue-specific campaigns that have a clear advocacy goal. Case 7 above is a typical example, since it is an online campaign that opposes the relocation of the Beijing Zoo.

However, case 2 is an exception compared to other cases. Even though the activity and mobilization level of case 2 are low and its goal is weak, it still ended up changing some government practice. Why? In April 2000, together with Tsinghua University, Green Beijing launched the website Build Green Beijing for a Green Olympics and undertook a series of online activities, including information exchange and online signing. It is a friendly advocacy campaign designed to improve the environment in Beijing (without an adversary), and although its goal of educating the public is only very basic, this goal is smoothly aligned with that of the government. Therefore, it eventually persuaded the government to add some suggestions inspired by the campaign regarding the improvement of Beijing's environment to their practice, which helped the campaign to achieve a moderate outcome.

1. c Web-based powerful outcome case

Case example (case 1): Save the Tibetan Antelope Campaign (see introduction). The third group, 1.c, contains only the Save the Tibetan Antelope Campaign, which is a very famous online alliance campaign that took place in China recently. During the campaign, all the five Internet functions were highly utilized by the campaigner and the levels of activity and mobilization online were high, which ensured that the case enhanced the chances of bringing about successful changes on both government and business practices, in addition to enhancing environmental awareness. What distinguishes this case from the previous group of cases is that it engaged a large group of organizations (more than 100) to join its web alliance to protect the Tibetan antelope. This is a good illustration that, given the strong deployment of Internet functions, when the networking effect of the Internet is employed to a large extent, the influence of the web campaign can be quite strong.

2. a. Partially web-based basic outcome cases

Case example (case 12): Eco-Action Beijing campaign. From October 2006 to June 2007, Roots and Shoots (R&S) initiated an Eco-Action Beijing campaign to call for

R&S group members to participate in a series of environmental activities surrounding water issues in order to gain environmental awareness and build a green Beijing for the Olympics. The campaign was initiated online to carry out activities offline. A blog was built, and activity notices were sent to email lists and posted online. Offline training to R&S groups took place, and group members engaged in various offline activities to practice water conservation. The web was also used for members to summarize their offline activities and exchange experiences.

This fourth group, 2.a, is made of five cases, from cases 9 to 13, which only strove toward the basic outcome of enhancing environmental awareness (plus some actual environmental changes). Besides, these cases were grouped together because they were all initiated online and later conducted offline. These five cases share five similar conditions: a weak goal, organized by a single NGO, a high level of consciousness of the web, frequent use of the Internet to disseminate information and educate, and infrequent use of the web to promote discussion and debate. For four of the cases (10–13), they share two more additional similarities: a high-level use of the web to recruit and to organize mobilization.

One noticeable commonality among all the five cases is that they all infrequently use the web for purposes of discussion and debate. Another commonality is that all these campaigns targeted mobilization of the public to engage in a socially-responsible activity to change the actual environment, and their goals were not protesting against any adversary or issue. These commonalities indicate that a) when comparing this group to the previous major groups of web-based actions, the common low level of discussion and debate function employed indicates that, especially for a web-initiated activity to be carried out offline, it does not need heated discussion or even debate on the issue, which is the exact opposite of what is needed for a online-based campaign to be successful; b) when ENGOs initiate an online campaign, they could target a more specific issue or adversary and have multiple advocacy goals to protest, because the web gives them a relatively safe haven under the physically-restrictive social environment in China. However, when they use the Internet to initiate public participation to be carried out offline, none of these actions targeted protesting for any specific social or political issue; rather, they could only encourage the public to engage in "mild" activities for environmental changes on a small scale, as illustrated in the Eco-Action Beijing campaign above. This is unavoidable, given the limits that the social conditions in China carry into the physical world.

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2. b Partially web-based ultimate success cases

Case example (case 14): 26-Degree Air-Conditioning campaign. In 2005, nine leading Chinese and global ENGOs, such as Friends of Nature and World Wildlife Fund (WWF), initiated the proposal of limiting the air conditioning to under 26 degrees in the summer to save energy. They sent a proposal to relevant government departments, corporations, hotels, and department stores. Later, 50 more NGOs joined the action and built the "26-degree alliance". Local NGOs organized many local activities. The website, www.26c.ngo.cn, was created to help spread the information and call for more participants. By 2007, the government accepted the proposal and established the 26-degree air-conditioning policy. The web is only a facilitator in this campaign. But it is a case showing that when the goals of the

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ENGOs and government are aligned, cooperation between the two is very easy; the bottom-up effort can finally join the top-down effort and effect policy change in China. In addition, this case illustrated that change of policy and other practices do not necessarily depend on intense Internet activism; however, when ENGOs are united, their network efforts can be strong enough to effect policy change.

Among the fifth group, 2.b, all three cases (14, 15, and 16) were initiated offline but facilitated by the Internet, and all three have achieved impressive outcomes on all four types, from enhancing environmental awareness to achieving policy change. One distinguishing structural dimension shared by all three cases is that they were all campaigns conducted by several to over 50 organizations. Such a large network effect tremendously enhanced the quality of the campaign. Another commonality is that all these cases were initiated with a very issue-specific clear advocacy goal. The web function profiles of cases 14 and 16 are exactly the same: a low level of web consciousness, frequent use of the web to disseminate information and to educate, and infrequent use of the web to recruit, organize mobilization, and promote discussion and debate, which still led to a high level of mobilization. Case 15 differs because there is frequent use of all the web functions. It seems that the three lower levels of web functions exhibited in cases 14 and 16 could be replaced by their great physical network resources contributed by all participating partners. Another condition that leads to the full success of such cases has to be understood in the specific context. As in case 14, when the goal of the government and ENGOs are aligned, achieving policy change is no longer a hugely challenging task. The most successful case that ever happened to China's environmental movement is case 15, the Nujiang campaign, and its profile demonstrates a full range of frequent use of all web functions, similar structural dimensions to cases 14 and 16, and fully-achieved outcomes on all four types. This case shows that, given no aligned goal between the government and ENGO, it is only when a high level of web functions is complemented by large-scale network efforts with a good offline foundation and strong advocacy goal that a partially-online environmental collective action can be strongly successful.

This group of cases constitutes the most successful environmental actions conducted by Chinese ENGOs, and they all have very clear, issue-specific goals that were initiated offline. What distinguishes their goals from those of the web-based cases is that they are ultimately political in that they did not just protest against misconduct. The key here is that the successful protest against misconduct helped these ENGOs gain valuable rights as social organizations (the backbone for a civil society) for legitimate public participation and acting as legitimate third-parties to monitor the government's conduct. Such environmental advocacy symbolizes an important milestone, as the success of these cases can eventually lead ENGOs to the political arena in China.

3. Long-term online forum campaigns (changes yet-to-be-seen cases)

The last group of cases (cases 17 and 18) emerged from the online forums of many ENGOs. They usually exist over the long term, are not based on a particular event or incident, and revolve around a variety of topics. Such cases occur in almost all ENGOs that have an active online forum. I regard them as campaigns because they serve as an important part of the newly emerging green public virtual culture for Chinese ENGOs to engage the web audience in open discussions and debates about

various environmental and social issues in China. They are an inseparable part of the overall web-based collective actions, but their outcomes are best seen over a long period of time.

Conclusion

For all the 19 ENGOs studied, only 18 Internet-based collective actions were found. However, eight out of 18 of the actions facilitated and worked to produce changes either in government or business practice, and three achieved policy change. Given even the basic survival crisis faced by all Chinese ENGOs and the fact that only half of these engaged ENGOs actually have a legal status, these impressive results indicate that the Internet actually has a great capacity to promote social change through environmental Internet activism in China. However, the specific impacts of the Internet on mobilization and social change cannot really be summarized with such a brief conclusion.

While each case needs to be viewed within its specific context, structural dimensions, and web functions in order to be understood fully, when studying these cases collectively, comparisons between cases and groups of cases do reveal patterns that allow us to see under what conditions the Internet is more likely to help ENGOs mobilize and how the Internet mediates other conditions to achieve certain types of social change.

The findings about three groups of (exclusively) web-based online actions demonstrated the following strategic patterns. Among the first group of web-based basic outcome cases, when the campaign is operated under weak (usually only educational) goals and organized by only a single organization, whether the campaign exhibits high or low levels of utilization of the Internet and mobilization would not make much difference in the basic outcome it would produce. However, in order to yield more significant social change, such as change on government practice, an issue-specific clear advocacy goal must undergird the campaign. Then, a high level employment of the Internet would arouse high levels of online mobilization, which all become necessary conditions for moderate social change. Yet there are exceptions to this, as the green Olympic campaign illustrated earlier, when the mediating effects of the Internet at this level are temporarily unpredictable. In this case, when the specific magic goal alignment between the state and ENGO occurred, even weak-goaled campaigns with low levels of Internet utilization did not stop the campaign from achieving a moderate outcome. On the next level, when a clear, issue-specific goal is accompanied by a high utilization of the web and mobilization, and is further complemented by the utilization of a large online network effect created by the participation of a large number of organizations, even more significant changes can be achieved, as the Save the Tibetan Antelope case showed. These patterns indicate that in a web-based collective action, for lower-level outcome campaigns, the mediating effects of the Internet and its mobilization effects do not play a necessary role (a must) for the campaign to succeed; however, for a moderate to powerful outcome campaign, the Internet and its mobilization effects are necessary conditions for the campaign to succeed, along with other crucial conditions, especially clear, issue-specific advocacy goals and networked organizational participants. Therefore, even for web-based cases, the Internet is shown to have a facilitating function rather than a determining condition for movement success.

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In the two groups of partially web-based campaigns, similar to the basic outcome cases in the web-based cases, the weak goals and the single involved organization seem to be major conditions for the basic outcome that resulted in the partially web-based basic outcome cases (the ones initiated online and carried out offline), no matter how well the Internet is utilized and what the mobilization level is. However, among the partially web-based collective actions, those that were initiated offline and facilitated online were all able to create very successful outcomes, given strong advocacy goals, a large number of participating organizations, and the network effect involved, as well as high levels of Internet use and movement mobilization. Again, strong campaign goals and a large network of participating organizations are determining conditions for successful campaigns, while the Internet and high mobilization levels are necessary facilitating conditions for creating ultimate success for these campaigns. Yet there is again an exception, such as the 26-degree air-conditioning case, where the Internet exhibits a less important role when other local factors are at play. In this case, the magical alignment of the ENGOs' movement goal with that of the government proved critical.

In summary, while the Internet is a must, it is not enough by itself to achieve significant social change in the Chinese environmental movement. It can greatly enhance the chance of mobilization and play a crucial facilitating role only when other key structural dimensions, including a strong campaign goal and network organization effects, are met, especially for moderate to powerful outcomes to be achieved. Thus, the Internet does not determine or guarantee any movement effect, but at best, it is necessary for China's environmental movement in the Internet era to succeed.

This role of the Internet ought to be understood by embedding the Internet campaigns within the specific Chinese context. Without a formal legal status, most ENGOs found it very hard to obtain funding and other resources necessary to act and to mobilize public participation. Thus, many non-registered ENGOs choose to limit their work scope to environmental education and advocacy rather than mobilization. Even for those virtually very active ENGOs such as Green Web, limitations in their registration status restrict the scope of their activities, impeding the extent to which they are able to use the Internet to carry out offline activities to mobilize the public, even though technically they are quite capable of doing it. However, what is impressive is that even under such unusually restrictive social conditions, some ENGOs made every effort to test the waters of environmental advocacy in China. The Internet became a great alternative tool to compensate for the scant organizational resources they all face. Indeed, some of the most successful campaigns, such as the Save the Tibetan Antelope and Nujing campaigns, were all initiated by non-registered ENGOs that possess high-level web expertise. This implies that ENGOs have already consciously utilized the web to a great extent to promote social change in China.

It is important to notice that none of the web-based campaigns were able to ultimately generate policy change, which is the hardest outcome to achieve. The analysis revealed that the major role of the Internet in the Chinese environmental movement is its facilitating function, which, if combined with well-organized offline actions, has the potential to achieve significant social changes, as seen in the partially web-based collective actions that were initiated offline. However, for a campaign that is exclusively based online, the Internet is not strong enough to effect policy change given limited rights to act under the virtual sphere and the unusual social constraints and organizational conditions of ENGOs in China. Thus, the Internet has the

strongest mobilization effect when leveraging the existing offline network rather than creating new online ones; this is when the most successful social change happens. The Internet is seen as having a definitive effect on policy change, but it needs to be employed with strategic and intelligent human and organizational resources; only in this way can it eventually help Chinese ENGOs to put pressure on the government so as to promote reasoned changes for environmental protection.

As Zeng (2009) commented, the media is not only a channel for NGOs' public expression, it is also a platform of interaction between NGOs and the government in China. As a new medium, the Internet is an especially invaluable tool that can help push the efforts of Chinese ENGOs from the bottom toward the top layer to meet those efforts of the government, as two of the exceptional cases, the Green Olympic campaign and the 26-degree air-conditioning campaign, have illustrated. When enough pressure is deployed, changes will happen. As long as the Internet exists, a nascent civil society will grow in China.

As for the Chinese environmental activists, the following represents what many believe about the future: "We do not need very advanced IT tools; we have enough to make change already, but we have not and we will when the time comes" (from one interviewee).

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Notes

1. This is one of the repeated comments made by several interviewees.
2. The structural dimensions are composed of city, community, power, and consciousness of the movement. 2) Control variables are the sources of effects of social change made up of class position, class consciousness, and solidarity with other social movements. 3) Operators are composed of media, professionals, and parties, which are the organizational means. 4) Effects are the actual effects produced in urban systems, political institutions, and local cultures.
3. In China, NGOs are commonly referred to as "social organizations" rather than "non-governmental organizations"; therefore, social organization is equal to NGO in the West.
4. I grouped them together because often, the business organization is mingled with the government organization, and changing the practice of one is similar to changing the practice of the other.

References

Atkinson, J. (2010). *Alternative media and politics of resistance: A communication perspective*. New York, NY: Peter Lang Publishing.

Bagalawis, J.E. (2001, February 1). How IT helped to topple a president. *IT World*. Retrieved from http://www.itworld.com/CW_1-31-01_it

Bennett, W.L. (2003). Media power: The Internet and global activism. In N. Couldry & J. Curran (Eds.), *Contesting media power: Alternative media in a networked world* (pp. 17–39). Lanham, MA: Rowman and Littlefield Publishers, Inc.

Bennett, W.L., & Segerberg, A. (2009, September). *Collective action dilemmas with individual mobilization through digital networks*. Presented at the European Consortium for Political Research General Conference, Potsdam.

Bob, C. (2005). *The marketing of rebellion: Insurgents, media, and international activism*. New York, NY: Cambridge University Press.

Castells, M. (1984). *The city and the grassroots: A cross-cultural theory of urban social movements*. Berkeley and Los Angeles, CA: University of California Press.

Castells, M. (1997). *The power of identity*. Malden, MA: Blackwell Publishers, Inc.

Castells, M. (2001). *The Internet galaxy*. New York, NY: Oxford University Press.
Castells, M. (Ed.). (2004). *The network society: A cross-cultural perspective*. Northampton, MA: Edward Elgar Pub.
Cox, R. (2006). *Environmental communication and the public sphere*. Thousand Oaks, CA: Sage Publications, Inc.
Cress, D.M., & Snow, D.A. (2000). The outcomes of homeless mobilization. *American Journal of Sociology*, *105*, 1063–104.
Danitz, T., & Strobel, W.P. (1999). The Internet's impact on activism: The case of Burma. *Studies in Conflict and Terrorism*, *22*(3), 257–69.
Diani, M. (1995). *Green networks: A structural analysis of the Italian environmental movement*. Edinburgh: Edinburgh University Press.
Downey, J., & Fenton, N. (2003). New media, counter publicity, and the public sphere. *New Media & Society*, *5*(2), 185–202. doi: 10.1177/1461444803005002003.
Downing, J. (2001). *Radical media: Rebellious communication and social movements*. Thousand Oaks, CA: Sage Publications, Inc.
Fulk, J. (2006). *NGO alliances in the global sphere*. Presented at the conference on Crossing Boundaries: Global Communication in the New Media Age, National Chengchi Univeristy, Taiwan.
Gerhards, J., & Rucht, D. (1992). Mesomobilization: Organizing and framing in two protest campaigns in West Germany. *American Journal of Sociology*, *98*, 555–96.
Gamson, W.A., & Wolfsfeld, G. (1993). Movements and media as interacting systems. *The ANNALS of the American Academy of Political and Social Science*, *528*(1), 114–25.
Giugni, M.G. (1998). Was it worth the effort? The outcomes and consequences of social movements. *Annu. Rev. Sociol*, *98*, 371–93.
Johnson, T. (2009). *Extending environmental governance: China's environmental state and civil society* (Unpublished dissertation). Retrieved from http://theses.gla.ac.uk/737/01/2009johnsonphd.pdf
Juris, J. (2005). The new digital media and activist networking within anti-corporate globalization movements. *The ANNALS of the American Academy of Political and Social Science*, *597*(189), 189–208. doi: 10.1177/0002716204270338.
Juris, J. (2008). *Networking futures: The movement against corporate globalization*. Durham and London: Duke University Press.
Langman, L., & Morris, D. (2003). Internet mediation: A theory of alternative globalization movements. Retrieved from: http://www.csudh.edu/dearhabermas/langmanbk01.htm
Lester, L., & Hutchins, B. (2009). Power games: Environmental protest, news media, and the Internet. *Media, Culture, & Society*, *31*, 579–95. doi: 10.1177/0163443709335201.
Livingstone, S. (1999). New media, new audiences? *New Media Society*, *1*, 59–66.
Lounsbury, M., Ventresca, M., & Hirsch, P.M. (2003). Social movements, field frames, and industry emergence: A cultural–political perspective on U.S. recycling. *Socio-Economic Review*, *1*, 71–104.
Lucas, S. (2009, June 20). Twittering Iran: What the "new media" means for politics, protest, and democracy. *Enduring America*. Retrieved from: http://enduringamerica.com/2009/06/20/iran-what-the-new-media-means-for-politics-protest-and-democracy/
Liu, J., & Goodnight, G.T. (2008). China and the United States in a time of global environmental crisis. *Journal of Communication and Critical/Cultural Studies*, *5*(4), 416–21. doi:10.1080/14791420802416200.
Livesey, S.M. (1999). McDonald's and the environmental defense fund: A case study of a green alliance. *Journal of Business Communication*, *36*(1), 5–39. doi: 10.1177/002194369903600101.
McCaughey, M., & Ayers, M.D. (Eds.). (2003). *Cyberactivism: Online activism in theory and practice*. New York: NY: Routledge.

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Montgomery, L. (2002). NGOs and the Internet in Nepal. *Journal of Computer Mediated Communication*, *7*(2). doi: 10.1111/j.1083-6101.2002.tb00141.x.

Pickard, V. (2006a). Assessing the radical democracy of Indymedia: Discursive, technical, and institutional constructions. *Critical Studies in Media Communication*, *23*, 19–38. doi: 10.1080/07393180600570691.

Pickard, V. (2006b). United yet autonomous: Indymedia and the struggle to sustain a radical democratic network. *Media, Culture, and Society*, *28*, 315–36. doi: 10.1177/0163443706061685.

Pickerill, J. (2004). *Cyberprotest: Environmental activism online*. Manchester: Manchester University Press.

Postmes, T., & Brunsting, S. (2002). Collective action in the age of the Internet: Mass communication and online mobilization. *Social Science Computer Review*, *20*(3), 290–301. doi: 10.1177/089443930202000306.

Ronfeldt, D., & Arquilla, J. (2001). Emergence and influence of the Zapatista social netwar. In J. Arquilla & D. Ronfeldt (Eds.), *Networks and netwars* (pp. 170–99). Santa Monica, CA: Rand.

Sandler, R., & Pezzullo, P.C. (Eds.). (2007). *Environmental justice and environmentalism: The social justice challenge to the environmental movement*. Cambridge, MA: The MIT Press.

Schwartz, J. (2004). Environmental NGOs in China: Roles and limits. *Pacific Affairs*, *77*(1), 28–49.

Snow, D.A., & Benford, R.D. (1988). Ideology, frame resonance, and participant mobilization. *International Social Movement Research*, *1*, 197–217.

Stein, L. (2007, May). *National social movement organizations and the World Wide Web: A survey of web-based activities and attributes*, Presented at the annual meeting of the International Communication Association, San Francisco, CA.

Stengrim, L.A. (2005). Negotiating postmodern democracy, political activism, and knowledge production: Indymedia's grassroots and e-savvy answer to media oligopoly. *Journal of Communication and Critical/Cultural Studies*, *2*, 281–304. doi: 10.1080/14791420500332527.

Sullivan, J., & Xie, L. (2009). Environmental activism, social networks, and the Internet. *The China Quarterly*, *198*, 422–32. doi: 10.1017/S0305741009000381.

Weber, E.P. (2000). A new vanguard for the environment: Grass-roots ecosystem management as a new environmental movement. *Society & Natural Resources*, *13*, 237–60.

Yang, G. (2003). Weaving a green web: The Internet and environmental activism in China. *China Environment Series*, *6*, 89–93.

Yang, G. (2004, September). Is there an environmental movement in China? Beware of the "River of Anger." In G. Lin, G. Yang, C. Lee, & M. Xia (Eds.), *Active society in formation: Environmentalism, labor, and the underworld in China, Asian Program Special Report*, (*Report No.124*) (pp. 4–8). DC: Woodrow Wilson International Center for Scholars.

Yang, G. (2005a). Environmental NGOs and institutional dynamics in China. *The China Quarterly*, *181*, 46–66. doi: 10.1017/S0305741005000032.

Yang, G. (2005b, April). *Information technology and grassroots democracy: A case study of environmental activism in China*, Presented at the fourth annual Kent State University Symposium on Democracy, Kent, OH.

Yang, G., & Calhoun, C. (2007). Media, civil society, and the rise of a green public sphere in China. *China Information*, *21*(2), 211–36. doi: 10.1177/0920203X07079644.

Zeng, F. (2009). Guojia kongzhi xia de NGO yiti jiangou: Yi zhongguo yiti weili [NGO's media agenda building under state control: The case of China]. *Chuanbo yu shehui xuekan* [*The Chinese Journal of Communication and Society*], *8*, 19–53.

Zhang, Y. (2003). *China's emerging civil society*. Retrieved from http://www.brookings.edu/~/media/Files/rc/papers/2003/08china_ye/ye2003.pdf

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