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The Internet and State Control in Authoritarian Regimes: China, Cuba, and the Counterrevolution

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SUMMARY

It is widely believed that the Internet poses an insurmountable threat to authoritarian rule. But political science scholarship has provided little support for this conventional wisdom, and a number of case studies from around the world show that authoritarian regimes are finding ways to control and counter the political impact of Internet use. While the long-term political impact of the Internet remains an open question, we argue that these strategies for control may continue to be viable in the short to medium term.

Many authoritarian regimes translate a long and successful history of control over other information and communication technologies into strong control of Internet development within their borders. Potential challenges to the state may arise from Internet use in several areas: the mass public, civil society, the economy, and the international community. Authoritarian states will likely respond to these challenges with a variety of reactive measures: restricting Internet access, filtering content, monitoring on-line behavior, or even prohibiting Internet use entirely. In addition, such states seek to extend central control through proactive strategies, guiding the development of the medium to promote their own interests and priorities. Through a combination of reactive and proactive strategies, an authoritarian regime can counter the challenges posed by Internet use and even utilize the Internet to extend its reach and authority.

In this paper we illustrate how two authoritarian regimes, China and Cuba, are maintaining control over the Internet's political impact through different combinations of reactive and proactive strategies. These cases illustrate that, contrary to assumptions, different types of authoritarian regimes may be able to control and profit from the Internet. Examining the experiences of these two countries may help to shed light on other authoritarian regimes' strategies for Internet development, as well as help to develop generalizable conclusions about the impact of the Internet on authoritarian rule.

There is a growing consensus among politicians and pundits in the United States that the Internet poses an insurmountable threat to authoritarian regimes. President Bush has asserted that the Internet will bring freedom to China, while Secretary of State Colin Powell recently stated that “the rise of democracy and the power of the information revolution combine to leverage each other.” Members of the Clinton administration were also prolific proponents of the idea that the Internet is inevitably a force for democracy. Business leaders and media commentators usually concur, and voices to the contrary have been few and far between.

Yet political science scholarship has had little to say about the issue. Most literature on democratization in the developing world does not explore the potential role of the Internet or even the information and communication technologies (ICTs) that predate it. As Daniel Lynch has recently argued, “on the question of telecommunications, the silence of the transitions literature is deafening.”[1] Several democratization scholars have paid lip service to the influence of ICTs on authoritarian rule, mostly in reference to the role of television in the “demonstration effect” or “snowballing” in Eastern European transitions.[2] Beyond this handful of brief mentions, the potential impact of new technology goes largely ignored. For its part, the literature on the Internet and the political process focuses largely on the United States and other advanced industrial democracies.[3] In sum, no significant body of scholarly work has sought to address the widespread popular belief that the Internet will undermine authoritarian rule.

Nonetheless, a handful of cross-regional analyses from different fields, combined with various case studies of the Internet in authoritarian regimes, do provide an initial basis for thinking about the Internet’s impact on authoritarianism. The picture that emerges from this collection of studies is far more nuanced than conventional wisdom would suggest. Of the three major cross-regional analyses that have been done, none provides convincing evidence that Internet use is likely to undermine authoritarianism. In a macro-level study of 144 countries, Christopher Kedzie found a statistically significant correlation between network connectivity and political freedom, but he notes that these results cannot conclusively determine causality. Moreover, his

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most recent data are from 1993, before the Internet was much of a presence in the developing world.[4] Using more recent data, Pippa Norris found a significant correlation between democratization and Internet users per capita, but she suggests that political change is a determinant of Internet diffusion, not the other way around.[5] Kevin Hill and John Hughes have analyzed the political content of postings to newsgroup discussions of authoritarian countries (such as soc.culture.cuba), but since few postings come from within the country in question, their predictions of democratic impact seem questionable.[6]

Beyond these cross-regional analyses, most research on the Internet in authoritarian regimes has consisted of individual case studies and journalistic press reports. Contrary to the conventional wisdom, many of these suggest authoritarian regimes are finding ways to control and counter the political impact of Internet use. In Singapore, a long-standing semi-authoritarian regime is implementing an ambitious yet carefully planned ICT strategy, using a combination of legal, technical, and social measures to shape the development of Internet use.[7] In military-run regimes such as Burma, governments can curtail dissident communication by preventing popular access to the Internet and forbidding use of other ICTs such as fax machines and satellite dishes.[8] In the Middle East, authoritarian regimes such as Saudi Arabia and the United Arab Emirates are controlling the political and social impact of the Internet through ambitious censorship schemes.[9] And while much attention has focused on the role of Internet-coordinated student protest in the downfall of Suharto in Indonesia, analysts have found it hard to draw a causal link between protesters' use of the technology and regime change.[10]

Admittedly, these case studies cannot predict the future. As access to the Internet increases or other intervening variables evolve over time, Internet use may indeed play a greater role in challenging authoritarian regimes—perhaps even contributing to their eventual demise. But at present, many authoritarian regimes are successfully controlling Internet use, while using the medium to both extend their reach and push forward national development. It is likely that their strategies for control will continue to be viable during the short to medium term.

In authoritarian regimes, the state has often played a strong historical role in the development and control of ICTs and the mass media. Usually this legacy of control carries forward into a similarly strong role in Internet development. Democratic governments may find themselves struggling to impose effective regulation on a medium that has grown rapidly without their immediate oversight. Yet authoritarian regimes often dominate the Internet from its beginnings and shape its growth and diffusion. In many cases, therefore, it is not logical to ask whether authoritarian regimes can exert control over a supposedly anarchic and independently flourishing medium.

In analyzing the impact of the Internet on authoritarian regimes, relevant questions include the following: Who is using the Internet, and for what purposes? What challenges to the state are likely to arise from this use, and how will the state respond? And finally, is the authoritarian state proactively guiding the development of the Internet so that the medium serves state interests?

To address the first two questions, we will examine the potential challenges that arise from Internet use in four domains:

- *Mass Public.* As posited by democratization scholars analyzing the impact of television broadcasts in Eastern Europe, public access to ICTs may facilitate a "demonstration

effect," whereby exposure to outside ideas or images of transitions in other countries spurs a revolution of rising expectations and the eventual overthrow of the authoritarian regime.[11] Alternatively, use of e-mail, Internet chat rooms, bulletin boards, and the World Wide Web may contribute to "ideational pluralism" and a more gradual liberalization of the public sphere in authoritarian countries.[12]

- *Civil Society Organizations.* Civil society organizations (CSOs) may use the Internet to support their activities in a variety of ways, including logistical organization and the public dissemination of information. In many cases CSOs play a crucial role in undermining authoritarian regimes, either by pressing for an initial political opening or by triggering scandals that delegitimize authoritarian rule.[13] Likewise, CSOs may rise up to overwhelm a controlled process of top-down liberalization after an initial opening has been permitted.[14]
- *Economy.* Internet use in the economic sphere may pose multiple challenges to authoritarian rule. The Internet may present significant opportunities for entrepreneurship in a developing economy, possibly leading to the emergence of a new domestic business elite. In addition, if the Internet contributes to economic growth more generally it may facilitate the growth of a middle class. Both of these forces may place increasing demands on the regime that challenge its control of society.[15]
- *International Community.* The coercive efforts of foreign governments and multilateral institutions, through such measures as the imposition of sanctions and extension of conditional loans and aid, are frequently an influential factor in democratization.[16] Transnational advocacy networks of CSOs, social movements, the media, and other actors outside of the target country often play a key role in mounting campaigns for such decisive action, and use of the Internet is often crucial to the success of their activities.[17]

These uses of the Internet have the potential to challenge the stability of authoritarian regimes. In cases where Internet use appears threatening, states will respond and even try to preempt these challenges, seeking to maintain control over the Internet as they have with other media in the past. Their responses are likely to involve a combination of two types of strategies: reactive and proactive. Reactive strategies are the most visible, involving direct efforts to counter or circumscribe the potential challenges outlined above by clamping down on Internet use. Included in this category are strategies such as limiting access to networked computers; filtering content or blocking web sites with software tools; monitoring users' on-line behavior; or even prohibiting Internet usage entirely.

States also seek to exert control over the Internet in another fashion, proactively guiding Internet development and usage to promote their own interests and priorities. While reactive strategies respond to existing or potential challenges of Internet use, proactive strategies attempt to develop an Internet that is free from such challenges while also consolidating or extending state authority. These strategies may involve efforts to distribute propaganda on the Internet, both domestically and internationally; build state-controlled national Intranets that serve as a substitute for the global Internet; implement e-government services that increase citizen satisfaction with the government; and even strengthen state power on an international scale by engaging in information warfare, such as hacking into web sites and spreading viruses. In

addition, governments may harness the Internet to serve economic development goals, with an understanding that economic growth and a general increase in the standard of living may also help shore up public support for the current regime.

In this paper, we argue that many authoritarian regimes can counter the challenges of Internet use with a combination of reactive and proactive strategies. Far from hastening its own demise by allowing the Internet to penetrate its borders, an authoritarian state can actually utilize the Internet to its own benefit and increase its stability by engaging with the technology. Furthermore, a variety of different types of authoritarian regimes, each one facing unique challenges posed by its population's Internet use, may still be able to maintain control over the Internet through different combinations of the above strategies. We do not claim that all authoritarian regimes will successfully control the Internet—or even that the successful regimes of today will maintain their control in the long run—but we do argue that at present effective control of the Internet is much more prevalent than conventional wisdom would suggest.

We illustrate below how two long-standing authoritarian regimes, China and Cuba, have both pursued Internet development and maintained state control through different combinations of reactive and proactive strategies. Each country is something of an ideal type, representing two extremes of authoritarian Internet control: Cuba has sought to limit the medium's political effects by carefully circumscribing access to the Internet, while China has promoted widespread access and relied on content filtering, monitoring, deterrence, and self-censorship. At the same time, there are notable similarities in both governments' efforts to channel proactively the development of the Internet in ways that enhance state power. Examining their experiences will lend insight into the challenges the Internet is likely to present to other authoritarian regimes, and the strategies such regimes may employ as they seek to control and benefit from this new medium.

CHINA

Access to the Internet in China has grown exponentially since the country established its first connection in 1993. Official Chinese agencies claim that 22.5 million people had access to the web by the end of 2000, although international sources put the figure closer to 17 million.[18] Marketing firms predict that China will overtake Japan as the Asian country with the most Internet users by 2004.[19] China has also witnessed a rapid increase in domains and web sites—roughly 20 percent per quarter according to some estimates—and more and more Internet users are accessing the Internet from personal computers at home and the office, as well as from the more traditional areas of school and public Internet cafés.[20] As the Internet takes hold in the country, many international observers have begun to suggest that the technology poses an insurmountable threat to China's authoritarian regime. But the Chinese government has responded with a number of restrictions designed to counter potentially challenging uses of the Internet, as well as a range of proactive measures designed to reap the technology's benefits.

Since the Chinese Communist Party came to power in 1949, the state has maintained a strong, if fluctuating, degree of control over ICTs. State strategies toward media and ICTs have historically addressed the balance between economic modernization and political control—a

tension often mentioned in present-day discussions of the Internet's development in China. As such, although the Internet may differ radically from past forms of media, we can also place it against a wider history of state control of media and ICTs.[21]

In the command economy of the Mao Zedong era, the media's function was to serve state interests and impose ideological hegemony on society.[22] Mao's regime was characterized by vertical control of communication, necessitating a top-down media system. This was complemented by an elite-focused telecommunications network, which discouraged horizontal communication among the mass public.[23] With the advent of Deng Xiaoping's market reforms, the state loosened its grip on ICTs, liberalizing to some extent the ideological arena and paving the way for eventual partial deregulation of the telecommunications sector. Yet the state remained very much involved in the control and dissemination of official ideology, as well as the strategic deployment of telecommunications networks.[24]

As a consequence of this control, the development of the Internet in China has been largely a product of state initiative. Long before today's Internet had become a global phenomenon, the Chinese government began a process of "informatization," using information technology to modernize the economy and help decentralize decision-making, yet also make the administrative process more transparent so as to better control it from Beijing.[25] In 1993, the government initiated its "Golden Projects," which provided Internet protocol (IP) connections between ministries and state-owned enterprises. In tandem, China's academic community established the first computer network in China, and in 1993, it set up a direct connection to Stanford University that gave it access to the global Internet.[26]

In the following years, the Internet began to expand in a somewhat undirected manner, but the State Council still imposed controls on organizations involved with its development. In 1996, amid disagreement between the Ministry of Posts and Telecommunications (MPT) and the Ministry of Electronic Industries (MEI) about who was to control the Internet, the State Council set up a Steering Committee on National Information Infrastructure to coordinate Internet policy. One of the key things the committee did was to establish who had the right to run the limited number of interconnecting networks, thus setting a precedent for a limited number of state-determined Internet backbones. Although the new Ministry of Information Industry absorbed this committee's functions in 1998, Internet development in China continues along the same basic principles.[27]

Yet because the Chinese state is far from monolithic, it faces built-in internal challenges that may hamper top-down control of the Internet. The Internet was a mass communication tool as well as an outgrowth of the telecommunications network, and as such, it did not drop neatly into either the state's propaganda apparatus or its telecommunications branch, which were vertically controlled and separate from each other.[28] During the key years of the Internet's development, the MEI and the MPT also fought to establish dominance in this new sector, and a rift is still felt despite their merger. Now, with many different bureaucratic organs demanding control over lucrative and politically strategic components of Internet development, the state is attempting to increase top-level oversight and control of its bureaucracy, in part by using the Internet itself.

Despite disagreements within the government as to strategy, the top leadership continues to see the development and promotion of the Internet in China as a tool for economic

development, with the understanding that at some level this modernization will help consolidate popular support for the current regime. Yet as the Internet develops in China, its interactive nature implies even greater challenges in balancing economic potential and political control. In response to potentially challenging uses of the Internet, the state has developed a variety of restrictive measures for control and containment, drawn in part from studying other Asian governments.[29] These measures include blocking web sites, monitoring chat rooms and on-line content, selective arrests and crackdowns, and promoting self-censorship. The government has also developed a proactive strategy that includes e-government measures, an increased on-line propaganda effort, and a nuanced channeling of public discourse.

Potential Challenges and Reactive State Response

Most of the speculation about the Internet's political effects in China concerns its impact on the mass public. Because it allows access to multiple sources of images, news, and ideas, some believe the Internet can challenge state hegemony over the distribution of information and ideologies.[30] As more and more of China's educated, young urban professionals gain access to the Internet, they are becoming increasingly aware of foreign products, culture, and political norms. Moreover, in chat rooms focusing on political and social themes, users are better able to circulate new ideas, generating discussions not previously possible on a nationwide level. During two recent incidents in China—the explosion of a schoolhouse in Jiangxi province and the downing of a U.S. surveillance plane on Hainan Island—Chinese Internet chat-room users generated lively discussions that were both critical and supportive of the government. At times, these discussions severely threatened the state's information control mechanisms.[31] Some observers suggest that, as a direct result of participation in these forums, the Chinese people will eventually place demands for political liberalization on the state.[32]

In response to this potential challenge, Chinese authorities have adopted two main strategies: filtering material and promoting self-censorship. Web sites deemed politically sensitive, including those of foreign news media and human rights organizations, are routinely blocked. A profusion of regulations make clear that potentially "subversive" comments—including those promoting Taiwanese independence or highlighting Falun Gong practices—will not be tolerated. Chat room administrators hire censors, or "Big Mamas," to screen and quickly remove offensive material from bulletin boards. Indeed, during the schoolhouse blast incident in March 2001, these censors immediately deleted all chat-room comments thought too politically sensitive or critical of the government.[33]

Recent crackdowns on Internet cafés have encouraged their owners to keep a close eye on web surfers, and they have also prompted café users to patrol their own activities.[34] Due to harsh regulations, many Chinese-language portals are for the most part filled with politically safe content, while chat-room users largely police themselves. As such, although its methods are increasingly tested, the state has for the most part managed to dampen the emerging sphere of independent communication by employing a mixture of regulation, policing, and threats.[35]

Internet use by domestic CSOs (such that they exist in China) also poses a potentially formidable challenge to the Chinese state.[36] Western media have chiefly focused on the case of

the Falun Gong, the now-banned spiritual movement that has used the Internet to coordinate protests in China and spread information around the world. Individual dissidents also have sought to use the web to disseminate information: notable cases include Lin Hai, who sent a list of e-mail addresses to a pro-democracy magazine; and Huang Qi, who ran a human rights web site within China. In addition, the fledgling China Democracy Party claimed that the Internet was critical to the formation and rapid mobilization of its membership in 1998.[37]

The Chinese government has responded harshly to these potential challenges with a series of technological measures, restrictive laws, and well-publicized crackdowns. After Falun Gong's April 1999 protest, authorities moved quickly to suppress the group's web use within the country, shutting down its Chinese web sites and blocking public access to those overseas. In October 2000, the Ministry of Information Industry issued a series of regulations forbidding the dissemination of politically sensitive material on the Internet, including "the teachings of evil cults." As a result, overseas Falun Gong practitioners now say it is increasingly difficult to communicate with mainland Chinese followers by e-mail.[38] Dissidents like Lin Hai and Huang Qi have been arrested and tried for their Internet use, and their fates have been well-publicized in Chinese media, undoubtedly serving as a message to others who might use the Internet to challenge existing institutions. Similarly, the state has moved quickly to arrest key members of the China Democracy Party, using traditional punitive and deterrent measures to stop what was in part an Internet-enabled challenge.

Internet use and development by the private sector can also pose challenges to state control of the economy and the political sphere. On a broad level, Internet-driven economic development may eventually help create a middle class that will push for political liberalization. Supporters of China's entry to the World Trade Organization also assert that foreign investment in China's Internet sector will help open the country to more objective news and information; aid in the creation of a domestic entrepreneurial class; and pressure the Chinese government for greater transparency and freedom of information.

Yet the state may be able to respond to the challenges of economic liberalization by frightening and/or coopting any Internet entrepreneurial sector or emerging middle class.[39] Because the state controls the broad regulatory environment as well as the minutiae of operating licenses and the like, investors take pains to keep good relations with the government at various levels.[40] Recently, the Chinese government has flooded the Internet sector with numerous regulations, from conflicting rules about the definition of "state secrets" on the web to restrictions on foreign ownership.[41] In addition, the state's demonstrated ability to control the fortunes of domestic and foreign investors has succeeded in keeping the emerging entrepreneurial class grounded in "a culture of dependence and anxiety."[42] Foreign investors have also evinced little enthusiasm to petition Beijing in favor of free speech or more liberal information policies.[43] As a consequence, it remains to be seen if (1) an entrepreneurial class will actually emerge as an economically independent and powerful social force, and (2) it will take an active interest in politics, much less the politics of opposition.

As with other authoritarian regimes, dissidents and activists outside the country have initiated some of the most large-scale and well-publicized web activity dealing with China, from information gathering and dissemination to overt calls for political action. Groups such as

Human Rights Watch, Human Rights in China, and the Committee to Protect Journalists post news of arrests and human rights violations, circulate on-line petitions, and maintain e-mail databases of Chinese dissidents and other activists.[44] U.S.-based Chinese dissidents maintain Chinese-language web sites and sometimes use e-mail to disseminate information within China.[45] The international arm of the Falun Gong has also used the Internet to influence international policy toward China, posting details of Chinese government crackdowns on the Internet. Although it is unclear whether such transnational advocacy can affect internal Chinese politics, it has begun to impact the country's foreign relations.[46] As China increasingly opens its markets to the West and attempts to gain international legitimacy as both an economic and political world power, its leadership may prove more susceptible to such forms of Internet-based activism.

In response to international uses of the Internet for political advocacy, China has engaged in its own propaganda campaigns, posting counter-information on government and government-sponsored web sites to influence both domestic and international opinion. Overseas practitioners of Falun Gong also contend that the Chinese government uses information warfare techniques—such as hacking into web sites and spreading viruses—to disable and discredit their organizations.[47]

Finally, the Chinese state faces a number of internal challenges to Internet governance. At present, over twenty party and government organizations consider the Internet part of their bureaucratic domain, and both local and national arms of state bureaucracy have commercial interests in promoting the new technology.[48] Power struggles and turf-grabbing by various ministries have at times curtailed the state's ability to effectively govern the Internet. In addition to these conflicting interests, inefficiencies and lack of communication among bureaus can also hamper effective state control of the medium.[49] In part, the state's response to its own internal divisions has been a reactive one, as the top leadership seeks to consolidate ministries and curtail local decision making. But the state is also responding to these internal challenges by implementing a number of proactive e-government strategies, as detailed below.

Proactive State Response

China's reactive methods of controlling the Internet have received the most international attention, but the leadership has also developed a number of equally significant proactive strategies designed to leverage the Internet to strengthen the Chinese state. Through both overt measures (such as e-government procedures and the design of a nationwide Intranet) and more subtle means (such as channeling on-line discourse in ways that support the regime), the Chinese state has shown that it can use the Internet to enhance the implementation of its own agenda.

The first of these proactive strategies involves the "informatization" of government—an e-government plan designed to strengthen state processes by transforming the bureaucracy. The regime seeks to streamline many of its government operations through networked information management and to consolidate Beijing's central authority through more efficient communication with provincial governments. Although its ambitions for e-government far outstrip its achievements, a number of departments and bureaucracies have established home

pages or put databases and archives on the web. While these actions are part of a genuine effort to increase transparency and address citizens' concerns with government processes, they also facilitate the state's goal of efficient intra-governmental communication. In addition, China's State Council and Ministry of Information Industry have started on-line auctions to increase transparency and reduce kickbacks in awarding government contracts. These measures would address the widespread problem of corruption, which the government sees as a threat to central authority and an impediment to modernization.

The Chinese state has also harnessed the Internet to distribute on-line propaganda and engage in "thought work." Chinese authorities are aware that nationalism, if successfully channeled and controlled, can be a potent force for revitalization of regime legitimacy. The People's Daily Strong Country web site, an official forum set up after the bombing of the Chinese embassy in Belgrade in 1999, experienced a resurgence in popularity following the U.S. spy plane incident on Hainan Island. Nationalistic postings were encouraged until they began to challenge the regime.[50] The government has also set up specific web sites to present its own perspective on current events, especially in the case of the Falun Gong. These measures all fit with the government's plan to build a large, coordinated on-line propaganda system in the near future. Propaganda chief Ding Guangen recently directed major state media organs to "fully develop and use the Internet" in line with this plan.[51]

While the state nurtures an on-line culture that supports its goals and encourages self-censorship, it is also taking steps to ensure it will possess the technologies to put muscle behind its threats. Last November's "Security 2000" fair, organized in part by the Ministry of Public Security, was designed specifically for the government to interact with large American companies peddling products such as blocking and anti-hacking software.[52] Although the products themselves will be used to enforce reactive measures, the government's forward-looking strategy of seeking out and engaging with Western companies—a strategy somewhat contrary to the regime's suspicion of foreign software products—shows that it is serious about harnessing all aspects of the Internet's potential.

In addition to distributing propaganda on the global Internet, China is reviving the idea of a national Intranet, which will be designed to substitute for the global Internet by providing on-line services paired with acceptable content (whose exact nature has yet to be detailed) for Chinese citizens.[53] Although this plan has been discussed and deferred for a number of years, its recent revival as a national priority demonstrates the state's continued worry about the infiltration of foreign ideas and its determination to take an active stance in addressing this.

Another proactive strategy is the promotion of Internet development in the hopes that economic modernization will increase the regime's popularity and political legitimacy. As Yi Feng has argued, the likelihood of short-term political upheaval is lower in authoritarian regimes that are perceived to have increased living standards and promoted economic growth.[54] The state may also respond to the challenge of economic liberalization by preemptively allowing certain forms of political liberalization—such as the broadening of acceptable discourse—to alleviate political pressure while taking credit for economic prosperity.[55]

At a local level, the state has tried to promote Internet-driven economic development by creating high-technology industrial zones (as in Beijing's Zhongguancun district), which incubate

domestic Internet start-ups and encourage homegrown talent.[56] It has tried, with varying degrees of commitment and success, to alleviate specific domestic and foreign investor concerns about the dangers of operating in an unregulated sector. It has encouraged graduates of China's top universities to stay at home and work in the technology sector rather than leaving for lucrative positions abroad—a strategy that ties into the government's overall ambition to nurture a tech-savvy population who will feed and power economic modernization.

Finally, the Chinese government is developing a strategy for information warfare that will allow it to more effectively project its power on an international scale. Recent writings by Chinese military specialists show that China is increasingly focusing on "asymmetric warfare" options, including guerrilla war and cyber attacks against data networks.[57] In recent years, U.S. newspapers have reported suspected Chinese hacker attacks on U.S. weapons labs, and military experts believe that China is willing to reduce its standing army while increasing its reliance on a "multitude of information engineers and citizens with laptops instead of just soldiers."[58] Although Chinese hacker attacks on U.S. web sites in May 2001 did not demonstrate the offensive capacity Chinese military analysts have envisioned, the continuing study and development of information warfare can be seen as a top-priority proactive measure in line with the country's goal of modernizing and transforming its military strategy.

CUBA

In contrast to China's dramatic and exponential growth in Internet access, the Internet in Cuba has grown slowly but steadily since the country established its first direct connection in 1996. In the two years between 1999 and 2001, access to e-mail and the Internet approximately doubled, but the numbers are still relatively small. According to government figures released in March 2001, only 60,000 Cubans out of a population of 11 million have been granted e-mail accounts, and only one-third to one-half of these can send messages internationally. Out of 110,000 computers on the island, only a couple thousand have been fully connected to the World Wide Web.[59] As the above numbers imply, e-mail access is much more common than direct Internet access in Cuba, although many of those with access to domestic or international e-mail can also access the Cuban Intranet—web pages hosted on servers within Cuba. Diffusion of the Internet in Cuba is limited by a number of factors, including the country's economic situation, the U.S. embargo, and the regime's strategy of controlling the Internet by limiting public access. Without a major change in any of these variables, the Internet in Cuba is likely to continue its slow but steady pattern of growth.

Like most Marxist-Leninist regimes, Cuba has a long history of exercising state control over ICTs. In the forty-two years since the Cuban Revolution, the state's efforts have been motivated by a number of different concerns. Defense of Cuban sovereignty and national security are chief among these. American corporations owned and operated much of the telecommunications infrastructure and mass media in pre-revolutionary Cuba, and the regime's initial efforts to dominate the media were in part a reaction to this history of foreign control. Ever since, the United States has sought to foment internal opposition to the Cuban government through radio and television broadcasts. Cuban authorities have adopted a defensive posture in response, pouring extensive resources into the jamming of these unwelcome signals.

Other political and economic concerns have also played a role in Cuba's motivations for control of ICTs. Internationally, the regime has attempted to harness ICTs for propagandistic purposes, through such vehicles as Radio Havana Cuba. Internally, state control has allowed the regime to use the mass media for extensive top-down political mobilization, an important function since the early days of the revolution. In addition, the Cuban leadership has long professed the belief that only state-guided development of media and ICTs can extend social benefits to the population as a whole, and it has historically placed an emphasis on extending the telephone network into rural areas. Finally, as the regime has faced mounting economic difficulties during the 1990s, economic concerns have increasingly come to play a role in its centralized control of ICT development. As such, it has allocated scarce resources in areas that can generate hard currency.

Soon after coming to power, the Castro regime moved quickly to establish control over the mass media and telecommunications through expropriation, intimidation, and economic sanctions. The Cuban telecommunications system was nationalized in August 1959, and by the end of 1960 the regime had effectively asserted control over print and broadcast media.[60] Since then, all ICTs in Cuba have been owned and operated by the state to serve the political goals of the Cuban Revolution.[61] There is no central government agency involved in censorship of Cuban media, but control of content is exercised at the editorial level, where most editors have ties to the power structure and share the perspective of regime elites.[62]

In addition to implementing these proactive elements of media control, Cuban authorities have reacted strongly against any attempts to communicate outside of official channels. Independent journalists are routinely harassed and arrested even though their stories rarely reach the Cuban people. In 1999, the Cuban government passed a harsh anti-subversion law, mandating long jail terms for independent journalists and others considered to be cooperating with U.S. attempts to undermine the regime.[63]

Just as it has played a central role in the development of ICTs and mass media, the Cuban government has worked to establish strong control over the Internet. The initial impetus for Internet development in Cuba came largely from outside the government: the country's first international e-mail connection was established at the behest of foreign activists living in Cuba, and an expatriate Canadian businessman played a major role in the push for full Internet access by developing Cubaweb, a web site to promote foreign investment and tourism in Cuba. But the government soon came to realize that this new medium presented potential threats and benefits that it should address. In the early 1990s, actors in the United States began to take an interest in using e-mail to promote internal opposition to the Castro regime, thus heightening the security concerns of Cuban authorities. At the same time, Cuba came to recognize the utility of the Internet for its own propaganda purposes. In 1996, when the Cuban air force shot down two private planes flown by an anti-Castro exile group, the recently established on-line edition of the state newspaper *Granma Internacional* was the only way for foreign audiences to read the Cuban government's version of events.[64]

By 1996, therefore, the Cuban government had decided that it would engage with the Internet. In doing so, it took firm control of the new medium, extending its reach through a combination of proactive and reactive strategies that focused on control of Internet access. Decree Law 209, passed in June 1996 to govern Cuba's connection to the Internet, stated that

access would be selective and would be granted "in a regulated manner... giving priority to the entities and institutions most relevant to the country's life and development."

Indeed, Cuba has promoted Internet development in areas that the state considers priorities. However, to defend against the challenges that the Internet might pose to the regime, the government has also restricted access where it is potentially subversive. The regime allows access to the Internet only through approved institutions—mainly select universities and places of employment—and almost never grants individual access from home. Although the government itself appears to block few (if any) web sites at the central level, institutions often limit Internet access to sites they consider relevant to the task at hand. Aside from a single (and for most Cubans, prohibitively expensive) Internet café in Havana's Capitolio building, there is essentially no legal, commercially available public access to the Internet.[65] Through its strategy of access restriction, the government seeks to ensure that the Internet is used mainly by the politically trustworthy, and only in collective environments where use can be informally monitored.[66]

In the past year, the Cuban government has begun to implement (and publicize internationally) its plans for public access to a national Intranet through some 300 youth computing clubs and several thousand post offices around the island. Although Cuba has restricted public Internet access, it would encourage public use of the Intranet, which would allow access to national e-mail and web pages hosted within Cuba.[67] If access is ever extended to sites outside of the country, it will almost certainly be limited to pre-approved material.[68] Through the Intranet, the Cuban government hopes to bring the benefits of network access to a wider segment of the population, but also to create a politically safe substitute for public Internet access.

The Cuban government's access controls are not perfect, and a growing number of users manage to connect to the Internet illegally from home, using passwords from their workplace or accounts acquired through the black market or personal connections. It is impossible to estimate precisely the extent of such underground Internet use, although it is undoubtedly limited by the considerable expense and difficulty of obtaining an Internet-capable computer. While comparatively well-off Cubans may be able to gain Internet access in this manner, known dissidents and members of the political opposition are watched closely and have virtually no hope of acquiring even underground Internet access. Still, there is the potential for underground Internet access to grow and become more of a challenge to state control. In particular, Cuba may eventually relax the restrictions on individual Internet access to capture some of this black-market revenue, just as it legalized the use and possession of dollars in 1993 to capitalize on the already widespread trade in the currency.

Potential Challenges and Reactive State Response

The Internet poses several potential challenges to the regime that provoke a reactive state response. The first of these involves Internet use by the mass public. Like China, Cuba is undoubtedly concerned about "ideational pluralism" and the potential for its citizens to access a wide range of information on the Internet.[69] This concern extends to other forms of media: Cuba pours enormous resources into blocking U.S. radio and television broadcasts, and it quickly

banned the homemade satellite dishes that began to proliferate in the early 1990s. In the case of the Internet, therefore, Cuba's strategy of access restriction seeks in part to minimize the potential threat of widespread use among the mass public. While other authoritarian regimes have allowed broader access and relied on censorship to maintain control of the Internet, Cuba's strategy of access restriction obviates the need to maintain an elaborate, centralized system of blocking web sites and tracking e-mails. Those granted access to the Internet are generally sympathetic to the regime's point of view, and their use of the medium poses little threat to state security.

Internet use by CSOs in Cuba is another factor that may challenge state sociopolitical control. During the 1990s, the Cuban government has somewhat reluctantly allowed the sprouting of grassroots CSOs involved with religion, conservation, and sustainable development. In addition, a handful of human rights organizations and dissident groups have long existed (albeit illegally) as bottom-up organizations in Cuban society. During recent years, U.S. policy toward Cuba has increasingly sought to engage the Cuban people while opposing the regime, and a major component of this strategy has involved reaching out to Cuban CSOs.[70]

In this environment, the Cuban government has kept a watchful eye on organizations with extensive international contacts, and it is undoubtedly concerned about the potential use of e-mail for logistical organization among politically threatening CSOs. As a result, it has carefully meted out access among CSOs according to their political orientation. Dissident and human rights organizations openly opposed to the regime have little hope of gaining Internet access: most have their telephone calls regularly monitored, and several have had computers confiscated by authorities. CSOs that have positive relationships with the regime have faced few obstacles to access, while those with a neutral political outlook generally have had more difficulty in obtaining an Internet connection.[71]

The implications of Internet use in the domestic economy pose a third potential challenge to the regime. While Cuba has been forced to implement some market reforms during the economic difficulties of the 1990s, it has generally contained them to the dollar-denominated, export-oriented sector of the economy. The regime has been quite reluctant to take steps that could generate class divisions between Cubans, and it looks disapprovingly upon the *nouveaux riches* who have emerged from gains in tourism or the informal economy. Although the obstacles may be significant, the Internet could present another lucrative opportunity for enterprising Cubans to make money, potentially exacerbating social tensions. Indeed, Cubans have been allowed to pursue self-employment for several years, and a few have begun doing freelance web design for international clients. These clients benefit from cheap labor costs, yet still pay more than Cubans typically earn through most other pursuits.[72] But the government still controls Internet access for this handful of budding entrepreneurs, and as long as access does not become a freely available commodity, it would be impossible for such activity to grow faster than the government desires. As such, it is highly unlikely than any sort of "Internet class" will emerge in Cuba in the short to medium term.

A final threat that the Internet might pose to Cuba's authoritarian regime concerns its use by international actors. The largest share of Cuba-related political information on the Internet emanates not from domestic sources, but from foreign-based organizations trying to influence Cuban politics and U.S. policy toward Cuba. Cuban exile groups call for political change on

their web sites, human rights organizations post critical reports on-line, and sites like Cubanet publish stories from independent Cuban journalists (transcribed from international telephone calls). Cuban authorities consider all of this activity to be an unwelcome and potentially subversive intrusion in its internal affairs, but the regime has no control over Internet use outside of the country. Nonetheless, this type of international Internet use has arguably strengthened the position of the regime's hard-liners with respect to the Internet and encouraged a stronger reactive response to the medium. As it has shown with crackdowns on independent journalists and the jamming of Radio Martí, Cuba will place much greater restrictions on anything it considers a tool of U.S. aggression.

Proactive State Response

Much of Cuba's Internet control strategy has entailed reactive state responses to the challenges outlined above. In addition to its strategy of access restriction, however, the state has also promoted Internet development in areas it considers priorities. According to its "plan for informatization of Cuban society," the regime seeks to guide and channel the growth of the Internet so that like other media its primary impact is to serve the political goals of the revolution. Since these goals include continued control by the current regime, Cuba's proactive approach toward the Internet also serves to strengthen and extend state authority.

Part of this strategy involves Internet propaganda. Since the establishment of Cubaweb in 1996, Cuba's leadership has taken a keen interest in using the Internet to counter the regime's negative image in international media. Various government-affiliated portals offer official perspectives on current events, with frequent criticism of the United States. The recently established site cubavsbloqueo.cu (Cuba versus the blockade), for instance, rallies opposition to the U.S. embargo of Cuba. A number of state publications are available on-line, including the international edition of the Communist Party's newspaper *Granma*, which can be read in six languages. The web editions of foreign publications often link to Cuba's on-line media when they wish to reference the Cuban perspective on a current issue, which can generate significant traffic—*Granma*'s site received over one million hits in one week at the height of the Elian Gonzalez crisis.[73]

Much of the Cuban government's on-line propaganda is oriented toward a foreign audience, but computer networking may come to play a greater role in domestic propaganda as Cuba moves forward with its plans for a national Intranet, where it can channel discourse and exercise editorial control over content. In the future, the regime may also incorporate the Intranet into its long-standing strategy of using the mass media for top-down political mobilization.

Cuba has also taken an active interest in promoting Internet development in export-oriented industries that can generate hard currency. Since the establishment of Cubaweb in 1996, state tourism corporations have made significant gains in Internet advertising to an international audience. Most are now on-line, offering extensive information on hotels, excursions, rental cars, and other services, including some on-line reservations.[74] In addition, several Cuban web sites offer information for potential foreign investors.[75] Recently, a handful of foreign entrepreneurs have entered into joint ventures with the Cuban government to offer e-commerce services for

international consumers. Several have set up Internet travel agencies; others have introduced on-line stores that sell Cuban compact discs and other merchandise. There are even Internet services oriented toward Cuban exiles, who can send money on-line to their relatives in Cuba or purchase consumer goods as gifts to be delivered.[76] The state is heavily involved in all of these initiatives and undoubtedly benefits from the economic stimulation they provide. As for the increased presence of foreign investors, most have found it wise to ignore politics in their dealings with the Cuban government.

Finally, the Cuban government has endeavored to leverage the capabilities of the Internet to improve the social conditions of the Cuban people. Its principal effort in this area involves Infomed, a medical information network operated by the Ministry of Public Health. Since its inception in the early 1990s, Infomed has connected medical centers around the country to such services as electronic journals and searchable databases. The system has been a boon for Cuba's otherwise struggling health system, which is plagued by shortages of paper and difficulty in distributing information. Infomed has featured an international e-mail link since its beginnings, and with its connection to the Internet it helps to promote Cuba's health system abroad and facilitate relations between Cuban doctors and their foreign counterparts.[77] Undoubtedly, the system provides a social benefit to the Cuban people, but it also serves to extend the reach of the state and improve its legitimacy by facilitating the provision of public services.

CONCLUSION

The cases of China and Cuba illustrate how authoritarian regimes can counter the many challenges posed by Internet development. Much is different about the history and current state of the Internet in each country, as well as their governments' reactive strategies for controlling the Internet's use and development. Nonetheless, the two regimes also have much in common, principally in the proactive strategies that they have employed for guiding Internet development to serve state interests. Comparing and contrasting their experiences can help us understand the Internet's political impact in different types of authoritarian regimes—a particularly relevant exercise when one considers the numbers of authoritarian countries in Asia, the Middle East, and elsewhere engaging with the technology.

The principal difference between China's and Cuba's approaches to the Internet concerns their reactive measures of control. Cuba's strategy hinges on control of access to the Internet, including a prohibition on individual public access and the careful selection of institutions that are allowed to connect to the Internet. In contrast, China has promoted more widespread access to the Internet and has tried to limit the medium's potential challenges through a combination of content filtering, monitoring, deterrence, and the promotion of self-censorship.

In general, these choices of strategy reflect a more fundamental difference between the two regimes—their respective levels of economic liberalization. While both have retained a closed, authoritarian political system, China has enthusiastically embraced market reforms throughout its economy. To capitalize on the economic potential of a booming information sector and technologically savvy workforce, China needs to promote widespread Internet access while

maintaining control through other means. Cuba, on the other hand, has introduced economic reform only where absolutely necessary, and it has generally confined market mechanisms to the dollar-denominated, export sector of the economy. As a regime less committed to the development of a market-oriented information economy, it has been willing to forgo the potential economic benefits of widespread Internet access and adopt a more defensive measure of control.

Despite differences in their reactive strategies for controlling the Internet, both China and Cuba have effectively limited use of the medium to challenge the government. In response to the potential threats posed by public use of the Internet, Cuba has restricted individual access to the medium, thus damping the possibility that Internet use will have a significant impact on mass public opinion. China, while allowing and even encouraging widespread access to the Internet, has shaped the boundaries of acceptable discourse through a combination of harsh regulations, censorship, monitoring, select arrests, and other scare tactics. Moreover, the penetration of foreign ideas and norms is hampered by a simple logistical reality: most of the Internet's content is still in English, rendering it inaccessible by much of the mass public in both countries.

The two regimes also try to limit the potential challenges of Internet use by CSOs. Cuba does this largely by denying access to those deemed politically dangerous, thus preventing potentially subversive CSOs from using the Internet. It also relies on the widespread support of the regime among those select groups to which it grants access. For its part, China quickly cracks down on unsanctioned domestic groups that begin to use the Internet for logistical purposes. The Chinese government has also employed top-down directives, harsh regulations, and punitive measures to send a lesson to others that might use the Internet for political organization or the dissemination of forbidden messages.

Although China and Cuba both seek—in differing degrees—to modernize their economies through the use of information technology, this strategy brings with it inherent challenges. Internet-driven economic development may encourage entrepreneurship in a developing economy, leading to the emergence of a new domestic business elite that places political demands on the regime. Yet China has met this challenge by blanketing this new business class with regulations and scaring them into political compliance, while allowing them a certain measure of economic freedom. In Cuba, the few Internet entrepreneurs who have emerged still depend completely on the government for their Internet access, and they are hampered by widespread restrictions on employment outside of the state sector. In both countries, those involved in the Internet industry are acutely aware that their continued success depends largely on remaining in the good graces of the government.

It is widely believed that international actors may use Internet-enabled forms of organization and communication to challenge authoritarian states. In the cases of both Cuba and China, a number of externally based dissidents, human rights organizations, and others have used the Internet to press for political change and an end to authoritarian rule. Neither regime has any real control over Internet use outside of its borders, so each has been forced to accept this activity, although China has occasionally tried to disable foreign web sites with hacker attacks. But Internet use for international pressure on authoritarian regimes is often effective only in a roundabout way, through its impact on the policy of other governments. It is still unclear

whether such pressure can significantly influence an authoritarian state's policy decisions. In some cases, it may provoke a backlash from the regime, encouraging authorities to maintain tighter control over the Internet than would otherwise be the case.

Although Cuba and China have pursued different reactive strategies for controlling the Internet, they have taken a more similar approach in their proactive attempts to guide and channel the development of the medium. Both states have made extensive use of the Internet for propagandistic purposes, setting up and promoting their own web sites to disseminate the official government line. Both are developing plans for national Intranets that will allow access only to officially approved material, although Cuba's plan seems more likely to materialize. In the economic sphere, Cuba has promoted Internet development in areas that can generate hard currency and shore up the regime economically. China has embraced the economic potential of the Internet more comprehensively, seeking to build a booming information economy in the hopes that Internet-driven economic growth will both advance development and ensure political legitimacy for the regime. Both regimes, through promoting Internet use within the government, endeavor to strengthen state legitimacy and power through improving bureaucratic efficiency and the provision of social services. In addition, China's e-government initiatives seek to increase transparency and target corruption, a problem that is more immediate and challenging to the regime than the possibility of freer information flows.

Taken together, the cases of China and Cuba should illustrate that the diffusion of the Internet does not necessarily spell the demise of authoritarian rule. Although conventional wisdom often suggests that the Internet is an inherently democratizing technology, many authoritarian regimes have translated a long and successful history of control over previous ICTs into effective control of the Internet. Through reactive strategies that range from the restriction of access to the promotion of self-censorship, authoritarian regimes can successfully restrain the potential challenges posed by various types of Internet use. In addition, these governments can proactively guide the development of the Internet so that the medium extends and consolidates state power. While much is different about the specific strategies employed in the cases of China and Cuba, these differences suggest that their individual success in controlling the medium is no fluke.

Moreover, the experiences of China and Cuba are likely to shed light on other authoritarian and semi-authoritarian regimes' strategies regarding the Internet. In the Middle East, several governments have begun to promote widespread Internet access but remain even more committed than the Chinese to censoring content available on the World Wide Web. In Asia, the strictest regimes have mimicked Cuba in selectively granting access to the medium. Almost all of these regimes are attempting to benefit from proactive approaches toward the Internet, harnessing technology for economic development, e-government, and other purposes. Singapore and the United Arab Emirates stand out in their respective regions as success stories of proactive Internet strategy, and many of their neighbors are looking to them as examples to emulate. Ongoing research at the Carnegie Endowment for International Peace will place Cuba and China in comparative perspective with a wider variety of authoritarian and semi-authoritarian regimes in Asia and the Middle East. In doing so we hope to reach more generalizable conclusions about the impact of the Internet on authoritarian rule.

In the long term, of course, we can only speculate about the continued viability of state strategies for controlling the Internet. Internet technology will continue to evolve over time, as will the myriad nontechnological factors that shape the environment in which Internet use takes place; as such, our observations act as snapshots of moving targets. Authoritarian regimes will have to continually adapt their measures of control if they want to counter effectively the challenges of future variations in information and communication technologies. It is quite possible that this task will prove too difficult and that use of ICTs will eventually play a role in the democratic revolution that has been so widely predicted. Over time, however, authoritarian regimes have weathered innumerable challenges posed by changing technologies, and they may prove up to the current challenge as well.

NOTES

[1] Daniel C. Lynch, *After the Propaganda State: Media, Politics and "Thought Work" in Reformed China* (Stanford, CA: Stanford University Press, 1999), p. 227.

[2] See Samuel P. Huntington, *The Third Wave: Democratization in the Late Twentieth Century* (Norman, OK: University of Oklahoma Press, 1991); Larry Diamond, "The Globalization of Democracy: Trends, Types, Causes, and Prospects," in Robert Slater et al., *Global Transformation and the Third World* (Boulder, CO: Lynne Rienner, 1992); Philippe C. Schmitter, "The Influence of the International Context upon the Choice of National Institutions and Policies in Neo-Democracies," in Laurence Whitehead, ed., *The International Dimensions of Democratization: Europe and the Americas* (New York: Oxford University Press, 1996); Juan J. Linz and Alfred Stepan, *Problems of Democratic Transition and Consolidation: Southern Europe, South America, and Post-Communist Europe* (Baltimore, MD: Johns Hopkins University Press, 1996).

[3] See Edward Schwartz, *Netactivism: How Citizens Use the Internet* (Sebastopol, CA: Songline Studios, 1996); Wayne Rash, Jr., *Politics on the Nets: Wiring the Political Process* (New York: W. H. Freeman, 1997); Rosa Tsagarouisanou, Damian Tambini, and Cathy Bryan, *Cyberdemocracy* (London: Routledge, 1998); Lawrence Grossman, *The Electronic Commonwealth* (New York: Penguin, 1995); Ian Budge, *The New Challenge of Direct Democracy* (Oxford, UK: Polity Press, 1996); and Richard Davis, *The Web of Politics* (New York: Oxford University Press, 1999).

[4] Christopher R. Kedzie, *Communication and Democracy: Coincident Revolutions and the Emergent Dictator's Dilemma* (Santa Monica, CA: RAND, 1997).

[5] Pippa Norris, *Digital Divide? Civic Engagement, Information Poverty and the Internet Worldwide* (New York: Cambridge University Press, forthcoming October 2001).

[6] Kevin A. Hill and John E. Hughes, "Is the Internet an Instrument of Global Democratization?" in Hill and Hughes, *Cyberpolitics: Citizen Activism in the Age of the Internet* (Lanham, MD: Rowman and Littlefield, 1998). Also published in *Democratization*, vol. 6, no. 2 (Summer 1999), pp. 99–127.

[7] See Garry Rodan, "The Internet and Political Control in Singapore," *Political Science Quarterly,* vol. 13, no. 1, pp. 63–89. See also Peng Hwa Ang, "How Countries Are Regulating Internet Content," paper presented at the 1997 Annual Meeting of the Internet Society, Kuala Lumpur, Malaysia, June 25–27, 1997.

[8] Shanthi Kalathil, "The Internet in Asia: Broadband or Broad Bans?" *Foreign Service Journal,* vol. 78, no. 2 (February 2001).

[9] See Human Rights Watch, *The Internet in the Middle East and North Africa: Free Expression and Censorship* (New York: Human Rights Watch, 1999); Mosaic Group, "The Global Diffusion of the Internet Project: An Initial Inductive Study," <http://mosaic.unomaha.edu/GDI1998/GDI1998.html>; and Mosaic Group, "An Update: The Internet in the Kingdom of Saudi Arabia," <http://mosaic.unomaha.edu/SaudiArabia_1999.pdf>.

[10] David T. Hill and Krishna Sen, "The Internet in Indonesia's New Democracy," *Democratization*, vol. 7, no. 1 (Spring 2000), pp. 119–36.

[11] See Huntington, *The Third Wave;* Diamond, "The Globalization of Democracy"; Schmitter, "The Influence of the International Context"; Linz and Stepan, *Problems of Democratic Transition and Consolidation.*

[12] Lynch, *After the Propaganda State;* Geoffry Taubman, "A Not-So World Wide Web: The Internet, China, and the Challenges to Nondemocratic Rule," *Political Communication,* vol. 15 (1998), pp. 255–72.

[13] Terry Lynn Karl and Philippe C. Schmitter, "Modes of Transition in Latin America, Southern and Eastern Europe," *International Social Science Journal,* no. 128 (May 1991), pp. 269–84.

[14] Guillermo O'Donnell and Philippe C. Schmitter, *Transitions from Authoritarian Rule: Tentative Conclusions about Uncertain Democracies* (Baltimore, MD: Johns Hopkins University Press, 1986).

[15] For discussions of the role of communications and/or economic development in spurring political change, see Lucian Pye, ed., *Communications and Political Development* (Princeton, NJ: Princeton University Press, 1963); Daniel Lerner, *The Passing of Traditional Society: Modernizing the Middle East* (Glencoe, IL: Free Press, 1958); and Seymour Martin Lipset, *Political Man: The Social Bases of Politics* (Garden City, NY: Doubleday, 1960).

[16] Schmitter, "The Influence of the International Context"; and Laurence Whitehead, "Three International Dimensions of Democratization," in Laurence Whitehead, ed., *The International Dimensions of Democratization: Europe and the Americas* (New York: Oxford University Press, 1996).

[17] Margaret Keck and Kathryn Sikkink, *Activists beyond Borders: Advocacy Networks in International Politics* (Ithaca, NY: Cornell University Press, 1998); John Arquilla and David Ronfeldt, *The Advent of Netwar* (Santa Monica, CA: RAND, 1996).

[18] "A Real Puzzler: Are there 15.2M,16.9M, or 22.5M China netizens?" *China On-line,* Feb. 7, 2001, <http://www.chinaon-line.com/topstories/010207/1/B101020601.asp>.

[19] "China to Rival Japan in Internet Users by 2004," Reuters, February 7, 2001.

[20] See Simon Cartledge and Peter Lovelock, "Special Subject: E-China," *China Economic Quarterly,* vol. 3, no. 1 (1999), pp. 19–35. See also Thomas Lum, "China's Internet Industry," Congressional Research Service Report for Congress, August 14, 2000, for projected user and web site growth in 2000.

[21] There is a substantial body of literature on media, telecommunications reform, and ICT development in China. Although we cannot address the bulk of it in this paper, we will note a few points as a backdrop to the present discussion.

[22] Chin-Chuan Lee, ed., *Voices of China: The Interplay of Politics and Journalism* (New York: Guilford Press, 1990), p. 5.

[23] Lynch, *After the Propaganda State.*

[24] Lee, *Voices of China.*

[25] Cartledge and Lovelock, "Special Subject: E-China."

[26] William Foster and Seymour E. Goodman, *The Diffusion of the Internet in China* (Stanford, CA: Center for International Security and Cooperation, Stanford University, November 2000).

[27] Ibid.

[28] The regulatory problems faced by many countries when dealing with the "convergence" of many forms of ICT were amplified in China, where the necessity of inculcating revolutionary values meant that propaganda or "thought work" was allotted its own specific, and powerful, ministry. While the media, including radio, television, and newspapers, were all traditionally seen as propaganda tools, telecommunications was classified bureaucratically under the division of finance and economy, and policing of telecom networks was the responsibility of the public security apparatus. For more on this, see Lynch, *After the Propaganda State.*

[29] In 1995, for example, China sent a top minister to Singapore—which has over the years developed sophisticated measures to contain political expression and communication—to study exactly how it was dealing with the potential for political expression on the Internet. Two months later, the Chinese government began to use telecommunications technology to prevent access to external web sites, mimicking Singapore's measures. For details, see Lynch, *After the Propaganda State.*

[30] See Taubman, "A Not-So World Wide Web."

[31] Following the Jiangxi schoolhouse blast in February, Chinese Internet users contradicted the government explanation that a sole madman was responsible for the explosion, suggesting instead that schoolchildren had been forced illegally to construct firecrackers. The groundswell of public outrage eventually precipitated an unprecedented apology from Chinese Premier Zhu Rongji, marking the first time that the government was forced to respond to what was in part an Internet-facilitated outpouring of public opinion. For more details, see Philip P. Pan, "Chinese Officials Blame Suicidal Man for School Explosion," *Washington Post,* March 9, 2001; and Craig S. Smith, "Chinese Premier Apologizes for Schoolhouse Explosion," *New York Times*, March 15, 2001. During the U.S. spy plane incident, Chinese Internet users expressed strong sentiments of nationalism and anti-Americanism that ultimately challenged the Chinese leadership. For further discussion, see endnote 50.

[32] In contrast, Lynch argues that, far from creating an independent sphere of ideas and activity, the Internet and other ICTs are helping create a chaotic space filled with apolitical content and atomized individuals—a space that ultimately will not help contribute to the formation of an independent civil society. See Lynch, *After the Propaganda State.*

[33] See Joanne Lee-Young, "Beijing Cracks Down on Firecracker Scandal," *Industry Standard*, March 15, 2001; and "Top Chinese Website Shuts Chatroom over School Blast Anger," *Agence France-Presse*, March 9, 2001.

[34] Liu Yuan, "Café Crackdown: China Enlists the Public in Its Ongoing Campaign to Censor the Internet," *Asiaweek*, February 2, 2001.

[35] It must also be remembered that Internet dial-up costs are for the most part still prohibitively high for the average Chinese citizen. Despite China's sanctioning of competition in the sector, the country's privately owned Internet service providers must lease telephone lines at high cost from China Telecom, although this situation is changing.

[36] There is considerable debate about whether such organizations as the Falun Gong spiritual movement or the semi-autonomous All China Women's Federation constitute the foundation for a truly independent civil society, but we will refer to them as such for the purposes of this paper.

[37] Maggie Farley, "Hactivists Besiege China," *Los Angeles Times,* January 4, 1999; Jasper Becker, "Review of Dissidents, Human Rights Issues," *South China Morning Post*, January 12, 1999.

[38] Shanthi Kalathil, "Between the Lines: China's Dot-Communism," *Foreign Policy*, no. 122 (January–February 2001), pp. 74–5; and interviews with Falun Gong spokespeople, Washington, D.C., February 7, 2001.

[39] D. A. Bell, David Brown, Kanishka Jayasuriya, and D. M. Jones, *Toward Illiberal Democracy in Pacific Asia* (New York: St. Martin's Press, 1995).

[40] Although proponents of foreign investment suggest that the influence of overseas capital will help reduce domestic "crony capitalist" practices, the development of a cozy relationship between Internet entrepreneurs and the government may actually encourage rather than reduce reliance on "guanxi" (informal personal connections), which can often shade over into graft or other corrupt practices.

[41] The newest regulations stipulate that Internet companies must maintain records of all information posted on their web sites and all users who have connected with their servers within 60 days. In addition, they bluntly state that news carried on domestic web sites must be from official sources. Despite causing an outcry among human rights and press freedom activists overseas, the regulations have been accepted by domestic and foreign investors, who have shown a propensity to self-regulate and self-censor. The regulations may also serve to discourage newcomers who seek to provide objective news and information in the sector. See Craig S. Smith, "Little Anxiety over China Web Rules," *New York Times*, October 3, 2000; and Kalathil, "Between the Lines."

[42] Bell et al., *Toward Illiberal Democracy in Pacific Asia.* For examples of investor unwillingness to cross the government, see "Top Chinese Website Shuts Chatroom over School Blast Anger," *Agence France-Presse*, March 9, 2001; and Lee-Young, "Beijing Cracks Down."

[43] Tom Malinowski, "China's Willing Censors," *Washington Post*, April 20, 2001; and Shanthi Kalathil, "The C-Word," *Dangerous Assignments*, Summer 2000, pp. 10–3.

[44] After businessman Huang Qi was recently tried for posting articles about the Tiananmen massacre on his web site, New York-based Human Rights Watch posted a statement on its web site urging Western governments and Internet corporations to come to Huang's defense. (U.S. Internet corporations were silent when Human Rights Watch raised the same plea shortly after Huang's arrest.) See "Subversion Trial Set for Web Site Creator," *South China Morning Post*, February 10, 2001; and Michael Dorgan, "U.S. Firms Silent over Chinese Net Arrest," *San Jose Mercury News*, July 6, 2000.

[45] Although some international groups do rely on e-mail to contact supporters in China, this is perhaps less widespread than popularly perceived. The *China Labour Bulletin,* a newsletter run out of Hong Kong by exiled labor activist and dissident Han Dongfang, is dependent on e-mail to keep in touch with external supporters, but contacts within China are primarily done by telephone and through a regular radio program (e-mail correspondence with *China Labour Bulletin* webmaster, May 5, 2000).

[46] For example, Canadian Prime Minister Jean Chretien voiced concern about the crackdown on Falun Gong in recent talks with China's Premier Zhu Rongji. See "China Vows War against Falun Gong," *South China Morning Post*, February 12, 2001.

[47] Interviews with Falun Gong spokespeople, Washington, D.C., February 7, 2001.

[48] For instance, both the Ministry of Information Industry and the State Administration for Radio, Film, and Television see the development of broadband capabilities as their domain. For more, see Foster and Goodman, *The Diffusion of the Internet.*

[49] For instance, in August of last year, the Shanghai Foreign Investment Committee licensed a wholly foreign-owned company to operate as an Internet Content Provider (ICP), an act expressly forbidden by national rules. See Karen Mazurkewich, "Making a Play: Global Portals Prepare to Move into China as Beijing Appears to Relax its Internet Rules," *Far Eastern Economic Review*, August 31, 2000.

[50] Ironically, although the government did foment nationalism following the U.S. spy plane incident, this nationalism threatened to overwhelm state control. The Chinese government is still trying to finesse the delicate division between a state-massaged nationalism and a groundswell of militant public opinion that may turn against the regime. In 2001, this groundswell proved particularly potent, in part because of Internet-enabled discussions and information exchange.

[51] Michael Ma, "China Wants Net to Spread Propaganda," *South China Morning Post*, February 10, 2001.

[52] Tyler Marshall and Anthony Kuhn, "China Goes One-on-One with the Net," *Los Angeles Times*, January 29, 2000.

[53] "China to Build Own 'Superhighway'," Associated Press, January 8, 2001.

[54] Yi Feng, "Democracy, Political Stability and Economic Growth," *British Journal of Political Science,* vol. 27 (1997), pp. 391–418.

[55] See Bell et al., *Toward Illiberal Democracy in Pacific Asia,* for further discussion of preemptive liberalization in authoritarian and semi-authoritarian regimes.

[56] John Markoff, "Silicon Valley's Primal Spirit Lives, in a Part of Beijing," *New York Times*, August 4, 2000.

[57] Ming Zhang, "War without Rules," *Bulletin of the Atomic Scientists*, vol. 55, no. 6 (November–December 1999), pp. 16–8.

[58] Timothy L. Thomas, "Like Adding Wings to the Tiger: Chinese Information War Theory and Practice," Foreign Military Studies Office, Fort Leavenworth, KS, <http://www.iwar.org.uk/iwar/resources/china/iw/chinaiw.htm>.

[59] Reliable figures on the Internet in Cuba are hard to come by, and no outside estimates are available to compare with government statistics. The numbers above are based upon the following sources: Jesús Martínez, "The Net in Cuba," *Matrix News,* vol. 1, no. 9 (January 1999), <http://www.matrix.net/publications/mn/mn0901.pdf>; Patricia Grogg, "Communcations—Cuba: Government to Set Up Public Internet Terminals," Inter Press Service, October 18, 2000; and figures released at a March 2001 press conference, most reliably reported in "Limitaciones técnicas y no políticas impiden acceso masivo de cubanos a Internet," *Agence France-Presse*, March 3, 2001.

As for the numbers with full access to the World Wide Web, a government official clearly stated that as of June 2000 there were 3,625 computers connected to the Internet. At the March 2001 press conference, a second official suggested that 12,000 of the 60,000 e-mail accounts include the capacity to browse the Internet, although it is unclear whether he meant full access to the Internet or access to Cuba's limited Intranet.

[60] See John Spicer Nichols and Alicia M. Torres, "Cuba," in Eli M. Noam, ed., *Telecommunications in Latin America* (New York: Oxford University Press, 1998); John Spicer Nichols, "Cuban Mass Media: Organization, Control, and Functions," *Journalism Monographs*, no. 78 (November 1982), pp. 1–35; and Carlos Ripoll, "The Press in Cuba, 1952-1960: Autocratic and Totalitarian Censorship," in William E. Ratliff, ed., *The Selling of Fidel Castro: The Media and the Cuban Revolution* (New Brunswick, NJ: Transaction Publishers, 1987).

[61] In the mid-1990s, the state-owned telephone company was partially privatized, but the Cuban government still retains effective control. Modernization of telephone equipment and access to advanced services have proceeded according to government priorities, and dissidents and independent journalists routinely have their calls monitored and cut off by state security.

[62] Nichols, "Cuban Mass Media."

[63] "International Community Reacts to Cuban Crackdown," *CubaInfo*, vol. 11, no. 4 (March 15, 1999), pp. 7–8.

[64] See Nelson Valdés, "Cuba, the Internet, and U.S. Policy," Cuba Briefing Paper Series no. 13 (Washington, D.C.: Georgetown University Caribbean Project, March 1997); Bill Hinchberger, "Netting Fidel," *Industry Standard*, April 10, 2000; "InCUBAdora," *Punto-Com,* February 2001, pp. 26–33.

[65] Even Cuba's Internet café may fit with the government's pattern of granting Internet access to Cubans only through the workplace. Several reports suggest that to gain access to the Capitolio cybercafé, Cubans require a letter of permission from an employer stating that their need to use the Internet is work-related. A second cybercafé, El Aleph, opened in Havana in November 2000, but it is restricted to members of the official Writers' and Artists' Union and does not provide direct access to the Internet.

[66] For a discussion of the importance of political trustworthiness in the granting of Internet access, see Ann C. Seror and Juan Miguel Fach Arteaga, "Telecommunications Technology Transfer and the Development of Institutional Infrastructure: The Case of Cuba," *Telecommunications Policy*, vol. 24 (2000), pp. 203–21.

[67] Grogg, "Communications—Cuba."

[68] Indeed, the head of Cuba's e-commerce commission has suggested that selecting appropriate Internet sites for inclusion on the Cuban Intranet might be a good business opportunity for foreign investors. See Bill Hinchberger, "The New E-Man," *Industry Standard,* April 10, 2000.

[69] See Taubman, "A Not-So World Wide Web."

[70] See Gillian Gunn, "Cuba's NGOs: Government Puppets or Seeds of Civil Society?" Cuba Briefing Paper Series no. 7 (Washington, D.C.: Georgetown University Caribbean Project, February 1995).

[71] Taylor C. Boas, "The Dictator's Dilemma? The Internet and U.S. Policy toward Cuba," *Washington Quarterly,* vol. 23, no. 3 (Summer 2000), pp. 57–67, <http://www.twq.com/summer00/boas.pdf>.

[72] See "InCUBAdora."

[73] "Granma International On-line Sets New 'Hit' Record," *Granma International*, April 1, 2000.

[74] Links to a variety of tourism sites are available through several Cuban portals such as <http://www.cubaweb.cu>.

[75] See <http://www.cubatips.com> and <http://www.camaracuba.com>.

[76] See Hinchberger, "Netting Fidel"; "InCUBAdora"; Brett Sokol, "e-Cuba: One Guess Who'll Control Access to the Internet," *Miami New Times,* July 27, 2000.

[77] See "InCUBAdora."

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