Combating a Truly Collective Threat: Sino-American Military Cooperation against Avian Influenza

Andrew S. Erickson

This essay seeks to increase awareness among Western scholars, analysts, and policy makers concerning both the potential danger posed by an outbreak of avian influenza, and Sino-American efforts thus far to militate against such a contingency. Given the importance of cooperation between countries in combating a pandemic, the essay also explores the challenges and opportunities inherent in Sino-American cooperation to combat avian influenza. This may be a particularly productive area of cooperation for the U.S. and Chinese militaries, which possess significant resources and expertise, yet have historically had difficulty cooperating because of differences in political systems and national interests. The global threat of avian influenza may be one area in which Sino-American collective security interests are so great as to outweigh these competing concerns.

INTRODUCTION: CHINA AT THE CENTER

Avian influenza, poses a large and growing threat to international security. No nation is safe from the pandemic influenza threat, and every nation is essential to defense efforts. In one indication of the importance of such efforts to international economic stability, Robert R. Morse, Citicorp's Asia-Pacific head, has stated, "We do not view the possibility of avian flu as an Asian issue, we view it as a global issue."[1] In response to this world-wide challenge, important progress has been made already.[2] At a major international conference to combat avian influenza, China's Vice-Foreign Minister Qiao Zonghuai noted that "…our destinies are interconnected. In the fight against avian influenza, no country can stay safe by looking the other way."[3] Cooperation is vital to defend against pandemic influenza. Robust partnerships involving the U.S., Japan, South Korea, Australia, New Zealand, ASEAN nations, other Asia-Pacific allies, and nations around the world will be critical.[4] Indeed, important progress has been made already.

Several factors, however, make China worthy of particular focus for U.S. policy makers and medical experts. China will likely be at the center of a pandemic influenza crisis. It is home to some 800 million people who live in close contact with over 15 billion poultry, and thus possesses a potential reservoir for the incubation of avian influenza that is perhaps unequaled anywhere in the world.[5] China also has "1,332 species of migratory birds, over 13 per cent of the world's total."[6] The persistence of conditions analogous to those detailed above over decades explains why "most flu pandemics in recorded history originated in South China (e.g., 1918, 1957 and 1968)."[7] China's massive scale and vulnerable populations thus give it a unique importance in disease control measures. Despite continuing challenges in relations between the United States and China, therefore, no effort to stem the spread of infectious disease will be complete without cooperation between what are respectively the world's largest developed and developing nations.

As two Asia-Pacific nations potentially threatened by pandemic influenza, the United States and China have significant shared interests in the area of the prevention of large-scale

outbreaks of devastating infectious disease. The two nations also share a strategic interest in fighting other unconventional threats such as terrorism.[8] Thanks to its largely apolitical and non-religious nature, the combating of pandemics, even more than counter-terrorism, offers common ground upon which to build a basis for bilateral and multilateral cooperation. Given the important work that remains to be done before effective cooperation between the United States and China can be fully realized, however, this essay will be devoted to suggesting the extent to which the two great powers share an interest in combating avian influenza, and how robust collaboration toward this end can more fully be realized.

RELATED CHINESE CAPABILITIES AND ACHIEVEMENTS

China has already allocated $246.6 million for domestic measures to control avian influenza.[9] These include building a network of monitoring stations to track transmission of avian influenza by migratory birds[10] and its infection of humans.[11] Chinese officials are simultaneously working to raise awareness, coordinate domestic efforts,[12] and build a more efficient reporting system between provinces.[13] The last is an attempt to address the fact that, particularly in recent years, inter-province coordination has posed a particular challenge for Beijing. China has been similarly proactive in the international arena. In April 2006, Dr. David Nabarro, U.N. System Coordinator for Influenza, met with Chinese officials "to discuss China's role in the international control of avian influenza and preparation for dealing with any possible influenza pandemic."[14] During that same month, China hosted the "Asia-Pacific Economic Cooperation Symposium on Emerging Infectious Diseases."

Chinese universities, government research institutions and corporations have responded to the growing challenge of avian influenza by conducting what official Chinese media sources report to be cutting-edge research in the prevention and treatment of infectious diseases.[15] A wide variety of research is being conducted by students and faculty members at academic institutions all over China, apparently with particularly prolific contributions from the Chinese Academy of Agricultural Sciences, China Agricultural University, Shandong Agricultural University, and Yangzhou University.16 Academic conferences have been held periodically in China to disseminate research results.[17] In December 2005, China's Ministry of Agriculture announced that Harbin Veterinary Research Institute had developed the "world's first live vaccine against bird flu."[18] "A major advantage of China's research into the bird flu virus is our technical reserve and capacity to meet emergencies," Vice-Science Minister Liu Yanhua concludes. "They are powerful resources."[19]

Having played a significant role in the handling of the 2003 Sever Acute Respiratory Syndrome (SARS) crisis, China's People's Liberation Army (PLA) can claim valuable experience with regard to infectious disease control measures.[20] In 2004, the PLA published a practical pamphlet on techniques for dealing with avian influenza.[21] In fact, due to its large network of high-level hospitals and research facilities, the PLA holds jurisdiction over a crucial element of China's disease prevention responsibility and expertise. Academy of Military Medical Sciences researcher Li Song recently reported that his team had "completed clinical experiments" concerning a new Chinese drug similar to Tamiflu "and find it is more effective on humans than Tamiflu."[22] While little data is available in the West concerning the specifics of such achievements, the PLA is so central to China's medical infrastructure that it would probably be difficult to engage more deeply with China in the prevention of avian influenza without also engaging with elements of the PLA.

SINO-AMERICAN ACHIEVEMENTS THUS FAR

In domestic, bilateral and international forums, the U.S. and China have already made considerable, if preliminary, progress in combating avian influenza. In October 2005, for instance, Chinese Minister of Health Gao Qiang signed an agreement with the U.S. Department of Health and Human Services to enhance cooperation on avian influenza and other infectious diseases.[23] On November 19, 2005, the United States and China announced a "Joint Initiative on Avian Influenza," through which the countries' respective ministries of Health and Agriculture will "strengthen cooperation" concerning vaccines, detection, and planning.[24] Such bilateral measures could offer a model for U.S. cooperation with other nations.[25]

At the January 2006 "Ministerial Pledging Conference for Avian Influenza," attended by 700 representatives of over 100 nations, including the U.S.,[26] Chinese Premier Wen Jiabao stated that "China will continue to actively participate in international cooperation in avian influenza prevention and control, share our experience with related countries and help them fight avian influenza."[27] Paul Wolfowitz, president of the World Bank, emphasized, "By hosting this event in Beijing, the Chinese Government is sending a powerful message … that we urgently need a global commitment to share information quickly and openly, and to find ways to work together effectively."[28] Such information exchange has already been facilitated by a draft agreement signed on December 20, 2005, affirming China's intention to share "virus samples isolated from human H5N1 cases" with the WHO.[29] At the end of the conference, representatives matched their words with substantive actions. The World Bank agreed to contribute $500 million, the Asian Development Bank, $470 million, the U.S. $334 million and China $10 million.[30] As of October 2006, virtually all the $1.9 billion granted at the Pledging Conference had been committed.[31]

Other examples of Sino-American cooperation regarding pandemic preparedness include the Joint Science Academies' Statement on avian influenza and infectious diseases, whose signatories include Lu Yongxiang of the Chinese Academy of Sciences and Ralph Cicerone of the U.S. National Academy of Sciences. Noting that SARS caused as much as $30 billion in economic damage, and affirming the accomplishments of the Beijing ministerial pledging conference, the statement calls for "coordinated actions on a global scale by a whole spectrum of stakeholders including governments, scientists, public health experts, veterinary health experts, economists, representatives of the business community, and the general public."[32] In order to ensure that these recommendations are carried out, however, it is necessary to explore in depth the potential roles of the U.S. and Chinese militaries in combating avian influenza. No pandemic disease prevention efforts will be complete without the robust involvement of these two powerful and influential organizations. Given the U.S. military's strong presence throughout the Asia-Pacific region, as well as the abundance of relevant information thanks to its relative transparency, its potential role in such efforts will now be examined in detail.

THE ROLE OF THE U.S. PACIFIC COMMAND IN COMBATING AVIAN INFLUENZA

> … in today's interconnected world acting in the global interest is likely to mean acting in one's national interest as well. In other words, exercising sovereignty and contributing to global security are no longer mutually exclusive events.
>
> - Admiral Michael Mullen
> U.S. Chief of Naval Operations[33]

The U.S. and China share a tremendous interest in preventing outright if possible, or at least containing and mitigating the effects of, an outbreak of pandemic influenza. Like Beijing, Washington has a strong interest in maintaining a global environment that is safe for economic development and trade. In contrast to China, however, the U.S. in recent decades has had both the capability and the willingness to use its military to further such goals on a global scale. The U.S. military is thus often used to provide security for the benefit not only of American citizens but also those of other nations around the world, as when the U.S. Navy secures international sea lanes against piracy, terrorism, or even the actions of hostile states such as North Korea. One potential instrument for securing the global health environment in the event of a medical crisis, therefore, is the U.S. military. Yet in order to provide such public goods effectively, the U.S. military must first be able to protect its own personnel and equip them to perform their duties even under the most adverse conditions.

In light of the substantial global responsibilities of the U.S. armed forces, the U.S. military cannot afford to be immobilized by pandemic influenza. Yet the widespread deployment of U.S. forces and the sheer scope of U.S. military operations illustrate the challenges inherent in guarding against this contingency. Within the U.S. government, efforts to prepare for pandemic influenza are apportioned as follows: the Department of Homeland Security has overall responsibility, the Department of Health and Human Services oversees domestic efforts and medical issues, the Department of State manages public diplomacy (and most overseas issues), and the Department of Agriculture manages animal-related issues. The U.S. Pacific Command (PACOM), due to its scope of operations and interactions with regions in Asia known to be potential incubators of avian influenza, is also on the front lines of the pandemic influenza threat. Though not itself a lead agency in avian influenza prevention efforts, PACOM is preparing to support the U.S. government in its effort to combat domestic and international outbreaks of influenza.

In the event of pandemic influenza, PACOM must be prepared both to maintain the operational capabilities of U.S. forces and protect military troops, civilians, and dependents as well as PACOM's military bases and facilities. This will be a difficult task: PACOM's area of operation spans 169 million square kilometers over 16 time zones, and encompasses 43 nations that are collectively home to 60% of the world's population, the world's six largest armed forces, five of the seven U.S. mutual defense treaties, and 35% of U.S. trade (over $550 billion).[34] More than 300,000 U.S. troops are based in the region. The dimensions of PACOM's responsibilities are extended by the fact that while ten pandemics have erupted in the past three centuries, the eleventh will be the first to occur in an instantly interconnected world.[35]

Given the potential for pandemic influenza to spread rapidly and to inflict devastation on human societies, PACOM must develop coordinated capabilities that can rapidly respond to, address, and continue to ensure the function of relevant organizations during such an outbreak. Because this is a task that no nation can accomplish alone, proper prevention and treatment will hinge upon multilateral cooperation. Effective information sharing will thus be essential to the success of such a broad-based effort. Because of the potential need to actively involve law enforcement agencies and even militaries from many countries in the Asia-Pacific region and around the world, significant mutual trust is essential if preparation efforts are to succeed.

PREPARATIONS TO PROTECT U.S. TROOPS, DEPENDENTS, AND ASIAN NEIGHBORS

In order to assist U.S. forces, military dependents, and citizens of other countries to prepare for an influenza pandemic, PACOM has developed a set of planning goals to address all foreseeable contingencies. These goals involve regional cooperation, preparation and prevention, containment, and recovery.

PACOM is currently seeking to improve the regional security environment by cooperating with Asia-Pacific nations. PACOM is well aware that preparations for avian influenza have been more thoroughly tested in some Asian countries than in the U.S., which thus far has been fortunate not to have suffered from H5N1 avian influenza. The U.S. has much to learn from experts in the countries that have experienced clusters of H5N1 infection.[36] In order to facilitate this learning process, the U.S. plans to build a Pacific Region Coordination Center, which will "allow rapid communications, coordination, and information sharing among the 43 [Pacific] nations, their militaries, international organizations, and U.S. interagency representatives active in the Pacific."[37] It is hoped that this effort will forge a positive basis for collective health security.

Two additional aspects of current operations to shape the health security environment involve preparation and prevention.[38] Toward this end, in October 2005 PACOM sponsored a Public Health Emergency Officer Influenza Seminar that was held in Pearl Harbor, Hawaii.[39] Information awareness is an essential component of security maintenance. For this reason, the Military Medical Laboratories Syndromic Surveillance Network is actively monitoring over 30 sites in Southeast Asia for the eruption of infectious diseases. In the event of an actual outbreak, laboratories in Indonesia and Thailand will help both the host nation and the World Health Organization (WHO)'s Surveillance Network for Influenza to better track the spread and evolution of the disease so that appropriate countermeasures can be taken in a timely manner. In a recent issue of *Nature*, medical experts urged that this existing network of rapid response laboratories should be enhanced in collaboration with the WHO to emulate U.S. Naval Medical Research Units (NAMRU). NAMRUs were established after World War II to protect U.S. troops overseas.[40] In order to minimize the chances that U.S. forces and related personnel will contract and transmit avian influenza, the U.S. Department of Defense has been stockpiling the drug Tamiflu at PACOM bases. As of February 2006, six million doses had been stored.[41] In November 2005 PACOM held a "Tabletop Exercise" in order to test preparations for a pandemic. Finally, PACOM has used a variety of venues, including ASEAN, Chiefs of Defense (CHOD) meetings, and Noncombatant Evacuation Operations (NEO) planning meetings, to help provide forums for discussions on pandemic influenza and to share planning ideas with a number of foreign government and military leaders.

In the event of a pandemic, PACOM would support the relevant U.S. agencies as they worked with Asia-Pacific nations and the WHO to contain the outbreak. Given the potential of the United States to provide substantial aid, the U.S. government would also likely work to support any recovery efforts that might ensue as a result of the outbreak. Potential regional challenges stemming from an avian influenza outbreak in the Asia-Pacific region might include damage to the regional economy[42] and threats to domestic stability. Economic threats could involve the disruption of transnational supply chains, as well as reductions in foreign direct investment and local spending. During the 2003 SARS outbreak, for instance, 8,000 were infected and roughly 800 died. "International travel to affected areas fell by 50 to 70 percent, hotel occupancy dropped by more than 60 percent, and businesses in tourism-related areas

failed."[43] This caused between $50 and $100 billion in economic damage.[44] The Asia-Pacific region alone is estimated to have borne $40 billion of this cost.[45] Threats to domestic stability could occur in those Southeast Asian nations that rely heavily on poultry production as well as in those in Pacific island states that might be particularly vulnerable were a significant portion of their relatively small populations to be threatened with infectious disease. At a panel discussion at the Asia Society in New York City in 2006, Senior U.N. System Influenza Coordinator Dr. David Nabarro stated that the U.S. government had made commendable efforts to prepare for pandemic influenza, but that far more international cooperation was needed in order to address the threat.[46]

U.S.-CHINA MILITARY MEDICAL COOPERATION: CHALLENGES AND OPPORTUNITIES

The fight against avian influenza has proven fertile ground for enhanced levels of U.S.-China cooperation overall. There is now potential for both countries to build upon this success in the area of military information exchange. Military medical information and related technology lacks direct application to offensive warfare, and is abundantly available in both countries. China's substantial experience and expertise concerning avian influenza, particularly within its military, raises the possibility of both parties benefiting substantially. Concerns that such mutual benefit could not be achieved, in part because of differing conceptions of transparency, has frustrated previous military exchanges. Perhaps there is now a chance to bridge that gap. Admiral William J. Fallon, former commander of PACOM, has already extended an invitation to the Chinese military to engage in a discussion concerning avian influenza.[47] In March 2006, a PACOM medical team met with medical leaders in the PLA to discuss pandemic influenza planning efforts and opportunities for the U.S. military and the PLA to work together.

The potential for cooperation between the U.S. and Chinese militaries was further suggested by a search and rescue exercise (SAREX) held by their respective navies off San Diego on September 20, 2006. Though a series of port visits had previously occurred, and are scheduled to continue,[48] this was the first bilateral military exercise ever conducted between the two nations.[49] The two navies stationed observers on each other's ships as they practiced transmitting and receiving international communications signals. Led by North Sea Fleet deputy commander Rear Admiral Wang Fushan, China's guided missile destroyer *Qingdao* and refueling vessel *Hongze Hu* joined the new U.S. Arleigh Burke-class Aegis guided missile destroyer USS *Chung-Hoon* (DDG 93). Specifically selected to convey a positive connection, USS *Chung-Hoon* is the first U.S. Navy ship named for a Chinese-American.[50] The 2006 SAREX is envisioned to be "the first in a series of bilateral exercises."[51] If the U.S. and China can engage in such military exercises, surely they can cooperate to combat avian influenza, a mutual enemy that spares no one on the basis of nationality.

To be sure, progress must be made in several areas for this goal to be realized. Perhaps most importantly, the timely flow of information must be improved. Due to both the Chinese domestic political landscape and concerns that Chinese scientists receive proper credit for their research overseas,[52] some inherent challenges may accompany such exchanges. Aside from domestic politics, one major reason for the minimization of U.S.-China military contacts has been U.S. concern that military transparency and cooperative benefits will be asymmetric. This discrepancy might be partially addressed, however, by first determining which areas demand an absolute equality of exchange, and which disparities might be compensated for by alternative areas of comparative advantage and willingness to share information and other resources.

Cooperation undertaken in response to the mutual threat of avian influenza could be an excellent place to begin efforts to improve overall military relations between the U.S. and China.

During the 2003 SARS crisis, which has been described as "the most severe social or political crisis encountered by China's leadership since the 1989 Tiananmen crackdown," Premier Wen Jiabao told fellow officials that "the health and security of the people, overall state of reform, development, and stability, and China's national interest and image are at stake."[53] Yet there is a widespread perception, both inside and outside China, that Beijing's attempts to control information backfired, thereby hampering international response efforts and undermining domestic public confidence.[54] Recently, however, there appears to be growing official recognition that transparency is essential to good governance and public safety. An October 2005 *China Daily* opinion editorial underscores the importance of increasing transparency in furthering China's own national interests:

> Unlike the SARS … outbreak in 2003, when the nation was in panic… [and] the authorities' initial foot-dragging left the public nervous… we can see a substantial change in the government's response this time around. The response has been prompt…. More importantly, information sharing with international health institutions appears to be timely, smooth and comprehensive. These are some of the lessons learnt from the fight against the SARS epidemic. … A better-informed and thus better-prepared public is conducive to its own safety in the face of a life-threatening epidemic. …There is no harm if people are honestly informed about what is happening and what is at stake. And there obviously is room for improvements regarding transparency. Also, we find it imperative to upgrade our involvement in international efforts to cope with bird flu.[55]

Though the *China Daily* typically contains content that is different from official Chinese language media sources in order to influence a Western audience, the outlook expressed here is refreshingly realistic and positive, in marked contrast to previous silence or even questionable statements concerning this issue.

Furthermore, as unexpected challenges surrounding America's own Hurricane Katrina relief efforts in October 2005 demonstrate, responding to large-scale natural disasters is inherently difficult and requires substantial preparation, coordination, and learning from previous problems. Avian influenza, which has the potential to inflict far greater human suffering with far fewer warning signs, has the potential to challenge government response efforts unlike any other natural disaster. At the same time, however, preventative and emergency measures can drastically reduce the impact of a potential pandemic. As the policy measures and official leadership and media statements listed above suggest, Beijing is to be commended for its continued, and apparently improving, efforts in this regard.

A LOGICAL PLACE TO BEGIN

Cooperation against the threat of avian influenza could build mutual confidence and generate momentum for initiatives in other areas. In addition to enhancing communication, the building of bilateral contacts could give both sides a healthy respect for each other's capabilities, thereby reducing the chance of dangerous miscalculations. Ongoing tensions in U.S.-China relations are based in part upon differences in national interests that are likely to endure. A positive bilateral military relationship will not in and of itself resolve those tensions. But such a relationship could offer realistic first steps that might serve to outline and safeguard mutual interests and thereby

provide incentives to avoid unnecessary escalation and avert serious crises as the two nations seek to realize stable if competitive coexistence. China, situated at the potential epicenter of an avian influenza outbreak, has a particularly vital role to play in infectious disease control. China's efforts in this regard are apparently growing, and seem to be increasingly impressive. Already, according to Dr. David Nabarro, Asia as a whole has made substantial progress in preparation for an influenza pandemic.[56]

One way to increase mutual understanding and goodwill would be for Chinese and U.S. researchers to translate unclassified Chinese documents—starting with those concerning avian influenza and related public health threats—into English and to facilitate their wider distribution among Western experts. Such dissemination could increase Western knowledge of Chinese advances in disease prevention and control, which are reportedly numerous and rapid—particularly in specific technological areas. This might help to set the stage for follow-on medical research—perhaps with an innovative combination of government and private sector funding—that could exploit the synergy between U.S. technology and analysis and Chinese ability to conduct large scale experiments and biotechnological production in a cost effective manner. Moreover, Western analysts and scholars could use knowledge of China's disease prevention efforts and security challenges to augment their analysis and understanding of China from a broader perspective.

Here it must be emphasized that a more robust and nuanced spectrum of U.S. analyses of China, such as could be facilitated by greater transparency concerning Chinese military medical progress, is in China's own national interest. After all, like its foreign counterparts, the U.S. military is duty bound to anticipate and prepare for worst case scenarios. But more optimistic projections and positive-sum suggestions produced by other analysts who are free from such responsibilities are extremely important as well. Such analyses could further elucidate the great benefits that the U.S. and China might derive from effective cooperation in a wide range of areas. Otherwise, exclusive focus on the possibility of conflict could negatively influence U.S.-China relations by overshadowing these other vital areas.

At very least, the origins and purposes of military medical and other analyses should be made transparent where possible by their authors and kept in proper perspective by those who consume them. This can be facilitated by efforts on both sides of the Pacific, even in the absence of explicit inter-governmental cooperation. There is substantial room for improvement in both nations. American analysts would do well to understand important nuances of increasingly robust (though often still somewhat opaque) Chinese policy debates in order to differentiate between official government policy and opinionated reports from China's ever livelier media. This effort would be greatly facilitated if more Americans would develop their often inadequate language skills—Beijing can be surprisingly transparent *in Chinese*. Chinese analysts, who already tend to be quite sophisticated both linguistically and in their ability to trace political debates, would do well to document their assertions with ample specific references, such as footnotes, to where they obtained their information. While slowly improving, and already achieved by some highly advanced journals such as the Chinese Academy of Social Sciences' American Studies, the overall dearth of such citations in both Chinese scholarship and official government reports makes it extremely difficult even for foreigners fluent in Chinese to assess the quality of data being presented. This is particularly true in the exacting fields of science and medicine, where a vaccine's efficacy must be proven in a manner that is replicable by experts around the world, not simply announced without supporting evidence.

These significant challenges should not distract us from the larger issues at stake: a significant threat to humanity can and must be averted. This collective responsibility requires cooperation across national boundaries regardless of political differences. In this spirit, through translation and analysis of Chinese sources, I have endeavored to increase awareness among Western scholars, analysts, and policy makers of important Chinese developments and their potential relevance to Sino-American cooperation against avian influenza. The bottom line is that differences in other national interests should not prevent the United States and China—or, for that matter, all other nations—from recognizing their growing collective interests in combating emerging threats such as that of pandemic influenza. As a Chinese proverb cautions, "disasters know no boundaries" (*shuihuo wuqing*).

Dr. Andrew S. Erickson *is Assistant Professor in the Strategic Research Department at the U.S. Naval War College in Newport, Rhode Island and a founding member of the department's China Maritime Studies Institute (CMSI). Erickson recently completed his Ph.D. dissertation at Princeton University on Chinese aerospace development. He previously worked for Science Applications International Corporation (SAIC) as a Chinese translator and technical analyst. Erickson is proficient in Mandarin Chinese and Japanese. His research, which focuses on East Asian defense, foreign policy, and technology issues, has been published in* Comparative Strategy, Chinese Military Update, Space Policy, Journal of Strategic Studies *and* Naval War College Review.

The views expressed in this study are solely those of the author as a private individual. This study is based only on publicly available sources and does not represent the official position or analysis of the U.S. Navy or any other organization of the U.S. government.

[1] "Bird Flu Tops Agenda at APEC CEO Summit, "World News" page of *China Daily*, November 18, 2005, Available at: Http://www.chinadaily.com.cn /.

[2] See, for example, "Japan-WHO Joint Meeting on Early Response to Potential Influenza Pandemic," Tokyo, Japan, 12 - 13 January 2006,Available at: http://www.wpro.who.int/sites/csr/meetings/mtg_20050112-13.htm ; "Regional Director's Speech," Available at: http://www.wpro.who.int/NR/rdonlyres/2FFE9F2B-1369-44C4-9281-761747BF8A95/0/RDSpeech.pdf ; "Asian countries commit to an early response to the threat of an influenza pandemic," Manila, 16 January 2006, Available at http://www.wpro.who.int/media_centre/press_releases/pr_20060116.htm

[3] Zhao Huanxin, "World Meet Seeks Funds to Combat Epidemic," "Top News" page of *China Daily*, January 18, 2006, Available at http://www.chinadaily.com.cn/ . For an expression of similar sentiments, see "Nations Must Rally To Combat Avian Flu," "Opinion" page of *China Daily*, January 18, 2006, Available at http://www.chinadaily.com.cn ; Zhang Feng, "WHO Calls for Pandemic Preparation," "Home News" page of *China Daily*, January 18, 2006, Available at: http://www.chinadaily.com.cn

[4] See, for example, "Japan-WHO Joint Meeting on Early Response to Potential Influenza Pandemic," Tokyo, Japan, 12 - 13 January 2006,Available at: http://www.wpro.who.int/sites/csr/meetings/mtg_20050112-13.htm "Regional Director's Speech," Available at http://www.wpro.who.int/NR/rdonlyres/2FFE9F2B-1369-44C4-9281-761747BF8A95/0/RDSpeech.pdf "Asian countries commit to an early response to the threat of an influenza pandemic," Manila, 16 January 2006, Available at http://www.wpro.who.int/media_centre/press_releases/pr_20060116.htm.

[5] Jim Fisher-Thompson, "U.S. Officials Praise China for Efforts to Combat Bird Flu Prompt Investigation, Reporting of Suspected Cases Key to Preventing Epidemic," *Washington File*, Bureau of International Information Programs, U.S. Department of State, March 2, 2006.
[6] Liang Chao, "300 Stations To Prevent Epidemic," "Home News" page of *China Daily*, December 2, 2005, Available at http://www.chinadaily.com.cn/.
[7] Christine Loh, "Lessons for SARS: Spread of Virus Shows China and Hong Kong's Growing Pains," *Yale Global*, 9 April 2003, Available at http://yaleglobal.yale.edu/article.print?id=1308 .
[8] For further support of this assertion, see Jonathan D. Pollack, ed., *Strategic Surprise? U.S.-China Relations in the Early Twenty-First Century* (Newport, RI: Naval War College Press, 2003). Washington, however, does not accept Beijing's expansive definition of terrorism, which includes political activities.
[9] Zhao Huanxin, "2b Yuan Earmarked To Control Epidemic," "Top News" page of *China Daily*, November 3, 2005, Available at: http://www.chinadaily.com.cn/
[10] Liang Chao, "300 Stations To Prevent Epidemic," "Home News" page of *China Daily*, December 2, 2005, Available at http://www.chinadaily.com.cn/; Wu Jiao, "Network Built To Monitor Migrant Birds," "Home News" page of *China Daily*, March 2, 2006,Available at http://www.chinadaily.com.cn/.
[11] Zhang Feng and Zhao Huanxin, "Monitoring Increases To Fight Flu," "Home News" page of *China Daily*, November 21, 2005, Available at http://www.chinadaily.com.cn/. See also Zhang Feng, "Early Detection of Human Cases Vital in Treatment," "Top News" page of *China Daily*, November 18, 2005,Available at http://www.chinadaily.com.cn/.
[12] See, for example, Liu Li and Shao Xiaoyi, "Expert: Bird Flu To Affect More Regions Globally," "Home News" page of *China Daily*, March 6, 2006, Available at http://www.chinadaily.com.cn/; Bao Daozu, "Local Authorities Launch Awareness Campaign," "Home News" page of *China Daily*, February 28, 2006, Available at http://www.chinadaily.com.cn/; Wang Zhenghua, "Delays Over Treatment Blamed for Death Rate," "Top News" page of *China Daily*, February 11, 2006, Available at http://www.chinadaily.com.cn/; "Human Role in Spread of Flu Must Be Faced," "Opinion" page of *China Daily*, January 26, 2006, Available at http://www.chinadaily.com.cn/; "China Calls for Enhanced Efforts To Prevent Avian Flu in China," *Xinhua*, January 23, 2006; Zhang Feng, "Poor Surveillance Led To Human Infections," "Top News" page of *China Daily*, January 11 2006, Available at http://www.chinadaily.com.cn/; "China Demands Quick Action To Prevent, Control Human Infection of Bird Flu," *Xinhua*, November 7, 2005; Wang Zhenghua, "Local Authorities Step up Surveillance," "Top News" page of *China Daily*, October 31, 2005, Available at http://www.chinadaily.com.cn/; Zhao Huanxin, "Defences Prepared in Virus Battle," "Top News" page of *China Daily*, October 29, 2005, Available at http://www.chinadaily.com.cn/; "Nation Must Stand up To Bird Flu Threat," "Opinion" page of *China Daily*, October 26, 2005, Available at http://www.chinadaily.com.cn/; Guo Nei, "Beijing Steps up Efforts To Combat Spread of Bird Flu," "Home News" page of *China Daily*, October 24, 2005, Available at http://www.chinadaily.com.cn/; Wang Zhenghua, "Efforts Stepped up in Bird Flu Fight," "Top News" page of *China Daily*, October 21, 2005, Available at http://www.chinadaily.com.cn/.
[13] Dr. David Nabarro, "How Should Asia Prepare for the Next Great Pandemic?," Panel, Asia Society, New York, October 10, 2006.
[14] "China's Role in Tackling Avian Influenza Discussed With Senior UN Officials," United Nations Development Programme, April 4, 2006, Available at http://en.news2u.net/release.php?id=00000222 .
[15] Important Chinese governmental organizations in this field include Harbin Institute of Veterinary Medicine, www.hvri.ac.cn; Chinese Academy of Sciences (CAS) Shanghai Institute of Materia Medica, www.simm.ac.cn; CAS Biophysics Institute, www.ibp.ac.cn; CAS Shanghai Institute for Biological Sciences, www.sibs.ac.cn. Major private sector partners include Beijing Sinovac Biotech Co. Ltd., www.siNovemberac.com.cn. For more information on Sinovac's role in vaccine research and production, see Zhang Feng, "Vaccine Team Prepared If Virus Mutates," "Home News" page of *China Daily*, November 17, 2005, Available at http://www.chinadaily.com.cn/.
[16] Dissertations published in 2005 alone include the following: 薛霖莉 [Xue Linli], "禽流感病毒（H5N1）NA基因的克隆与序列分析" [Molecular Cloning and Sequencing of NA Gene of Avian Influenza Virus], dissertation, 山西农业大学 [Shanxi Agricultural University]; 袁建琴 [Yuan Jianqin], "H9（N2）型禽流感病毒HA基因的克隆与序列分析" [Cloning and Sequence Analysis of HA Gene of H9 (N2) Avian Influenza Virus], dissertation, 山西农业大学 [Shanxi Agricultural University]; 孙博兴 [Sun Boxing], "H9N2亚型禽流感非结构蛋白NS1A基因的克隆, 表达及其诱导Hela细胞凋亡的研究" [Study on Cloning and Expression of NS1A Protein of H9N2 Avian Influenza Virus and Inducing Apoptosis in Hela Cells], dissertation, 吉林大学 [Jilin University]; 余丹丹 [Yu Dandan], "两株H5N1亚型禽流感病毒诱导的细胞凋亡研究" [Apoptosis

Induced by Two H5N1 Avian Influenza Viruses], dissertation, 南京农业大学 [Nanjing Agricultural University]; 金英杰 [Jing Yingjie], "抗禽流感病毒H5亚型血凝素单克隆抗体的研制" [Preparation of Monoclonal Antibodies Against the H5 Haemagglutinin of Avian Influenza Virus], dissertation, 中国农业大学 [Chinese Agricultural University], June 1, 2005; 曹振 [Cao Zhen], "禽流感病毒H5亚型血凝素单克隆抗体的制备及捕获ELISA方法的建立" [Preparation of Monoclonal Antibodies Against Hemagglutinin of Subtype H5 Avian Influenza Virus and Establishment of Capture ELISA], dissertation, 中国农业大学 [Chinese Agricultural University], June 1, 2005; 李呈军 [Li Chengjun], "中国H9N2亚型禽流感病毒进化分析与H5N1亚型禽流感病毒标记疫苗的研究" [Evolution of H9N2 Influenza Viruses in China and Study on H5N1 Influenza Marker Vaccine], dissertation, 中国农业科学院 [Chinese Academy of Agriculture], June 1, 2005; 李宝全 [Li Baoquan], "H9亚型禽流感病毒抗独特型抗体的研制与其免疫原性的初步分析" [Preparation for Anti-idiotypic Antibodies to Avian Influenza Virus Subtype H9 and Primary Analysis to Their Immunogenicity], dissertation, 山东农业大学 [Shandong Agricultural University], June 1, 2005; 马仲彬 [Ma Zhongbin], "抗H9N2亚型禽流感病毒单克隆抗体杂交瘤细胞的建立及快速检测试纸条的研制"[Establishment of Hybridoma Cell Lines Secreting Monoclonal Antibodies Against H9 Subtype Avian Influenza and Application in the Rapid Diagnosis Strip], dissertation, 河南农业大学 [Henan Agricultural University], June 1, 2005; 陈素娟 [Chen Sujuan], "用不同鸡痘病毒载体构建单表达或双表达抗H5和H9亚型禽流感的重组疫苗及其免疫效力" [Development of Recombinant Vaccines Against H5 and/H9 Subtype AI with Different Fowlpox Virus Insertion Vectors and Their Protective Efficacies], dissertation, 扬州大学 [Yangzhou University], May 30, 2005; 郝贵杰 [Hao Guijie], "抗H5亚型禽流感病毒血凝素蛋白特异性单克隆抗体的研制及初步应用" [Development and Application of the Monoclonal Antibodies Against Hemagglutinin of H5 Subtype Avian Influenza Virus], dissertation, [Yangzhou University], May 1, 2005; 徐忠林 [Xu Zhonglin], "共表达NDV F 基因与H9亚型AIV HA基因的重组鸡痘病毒及其免疫效力" [A Recombinant Fowlpox Virus Co-expressing the F Gene of NDV and the HA Gene of H9 Subtype AIV and Its Protective Efficacy], dissertation, [Yangzhou University], May 1, 2005; 高璐 [Gao Lu], "MPAIV与较低致病性禽源E.coli的协同致病作用及不同感染途径对MPAIV致病性的影响" [Study on the Synergistic Pathogenesis between MPAIV and Avian E.coli with Low Pathogenicity and the Impact of Different Inoculation Routines on the Pathogenicity of MPAIV Evaluated in Chickens], dissertation, 扬州大学 [Yangzhou University], May 1, 2005; 孙学辉 [Sun Xuehui], "高效表达H5亚型禽流感病毒HA基因的重组鸡痘病毒的构建及其免疫效力" [Construction of Recombinant Fowlpox Virus Vaccines Expressing Hemagglutinin Gene of H5N1 Avian Influenza Virus and Their Protective Efficacy], dissertation, [Yangzhou University], May 1, 2005; 黄楷 [Huang Kai], "南宁H5N1型禽流感病毒分子流行病学研究" [Molecular Epidemiological Studies on H5N1 Influenza Viruses from Poultry in Nanning], dissertation, 广西医科大学 [Western Medicine University of Science & Technology], May 1, 2005; 周凯 [Zhou Kai], "禽流感H5N1病毒的RNAi研究" [RNA Interference Research on Avian Influenza H5N1 Virus], dissertation, 河北师范大学 [Hebei Normal University], May 1, 2005; 焦凤超 [Jiao Fengchao], "减毒沙门氏菌运送的H5亚型禽流感病毒口服DNA疫苗的免疫效力研究" [The Immune Efficacy of Oral DNA Vaccines Against H5 Subtype of Avian Influenza Virus Delivered by Attenuated Salmonella Typhimurium], dissertation, 扬州大学 [Yangzhou University], May 1, 2005; 刘丽平 [Liu Liping], "减毒沙门氏菌运送的H9亚型禽流感病毒DNA疫苗及其免疫效力" [DNA Vaccines Against H9N2 Subtype of Avian Influenza Virus Delivered by Attenuated Salmonella and Their Immune Efficacy], dissertation, 扬州大学 [Yangzhou University], May 1, 2005; 杨旭芹 [Yang Xuqin], "检测新城疫病毒和禽流感病毒的双重RT-PCR方法的建立" [Detection of Avian Influenza Virus and Newcastle Disease Virus by Duplex RT-PCR Technique], dissertation, [Yangzhou University], May 1, 2005; 李东燕 [Li Dongyan], "高致病性禽流感随进口禽类及其产品传入的风险 分析" [The Risk Analysis of Highly Pathogenic Avian Influenza Incidentally Introduced into China with Imported Bird and Its Products], dissertation, 中国农业大学 [Chinese Agricultural University], May 1, 2005; 胡青海 [Hu Qinghai], "鸡IL-2, IL-18, IFN-?和CpG DNA在减毒沙门氏菌运送H5亚型禽流感核酸疫苗中的佐剂作用及鸡CD4和CD8分子单克隆抗体的研制" [Effect of Co-expressing Chicken IL-2,IL-18, IFN-? or Built CpG DNA in the Plasmid Backbone as Adjuvants on DNA Vaccines Against H5 Subtype Avian Influenza Delivered by Attenuated Salmonella and Production of Anti-Chicken CD4 and CD8 Monoclonal Antibodies], dissertation, [Yangzhou University], May 1, 2005;

陈凤梅 [Chen Fengmei], "鸡常见呼吸道病诊断基因芯片的研制与应用" [Research and Application of Diagnostic Assay for Poultry Respiratory Syndrome with Macroarray Techniques], dissertation, 山东农业大学 [Shandong Agricultural University], May 18, 2005; 霍惠玲[Huo Huiling], "抗禽流感疫苗与野毒感染的抗体区分方法的初步建立" [Establishment of the Method to Distinguish the Anti-Avian Influenza Virus Antibody between Vaccinated and Infected Chicken], dissertation, 吉林大学 [Jilin University], April 25, 2005; 邱美珍 [Qiu Meizhen], "禽流感核酸疫苗免疫保护性研究" [Protection Against Avian Influenza Virus by Immunization with DNA Vaccines], dissertation, 湖南师范大学 [Hunan Normal University], April 1, 2005; 杨彩然 [Yang Cairan], "禽源H3, H4亚型流感病毒的序列分析及对鸡的致病性研究" [Studies on Sequence Analysis and Pathogenicity for Chickens of H3 and H4 Subtype Avian Influenza Viruses], dissertation, 内蒙古农业大学 [Inner Mongolian Agricultural University], April 1, 2005.

[17] Conferences held recently in China include: "国际实验动物专题研讨会" [International Experimental Animal Specialty Forum], 中国实验动物学会 [China Experimental Zoological Association], Beijing, China, 2005; "2005年浙江省呼吸系病学术年会" [Zhejiang Province Respiratory Illness Science 2005 Annual Meeting], 浙江省医学会呼吸系病分会 [Zhejiang Province Medical Science Respiratory Illness Branch], Jiaxiang, Zhejiang Province, China, 2005.

[18] Zhao Huanxin, "China Develops First Live Vaccine," "Top News" page of *China Daily*, December 26, 2005, Available at http://www.chinadaily.com.cn/ .

[19] Li Jiao, "Experts Step up Fight Against Bird Flu," "Feature" page of *China Daily*, December 2, 2005, Available at http://www.chinadaily.com.cn/.

[20] See, for example, 范顺良, 周猛 [Fan Shunliang and Zhou Meng], "全军防治禽流感工作电视电话会议召开" [Army-Wide Avian Flu Prevention and Control Work Television Teleconference Convenes], 解放军报 [*PLA Daily*], February 6, 2004; 陶智平 [Tao Zhiping], "群防群控坚决打好防治禽流感硬仗" [Group Defense and Crowd Control for Preventing and Curing Avian Flu],人民军队报 [*People's Armed Forces Daily*], February 7, 2004, 1; 殷飞 [Yin Fei], "依法做好高致病性禽流感防治工作" [Conduct Effective Avian Flu Prevention and Cure Work on the Basis of Law],解放军报 [*PLA Daily*], February 15, 2004.

[21] 金宁一 [Jin Ningyi], 禽流感白问白答 [Avian Influenza: 100 Questions and Answers], 人民军医出版社 [People's Military Medical Press], 2004. See also 杜新安 [Du Xinan], 曹务春 [Cao Wuchun], 生物恐怖的反对与处置 [Bioterrorism Countermeasures and Management], 人民军医出版社 [People's Military Medical Press], 2005.

[22] Yu Zhong, "Treatment for Human Infection Developed," "Top News" page of *China Daily*, December 27, 2005, Available at http://www.chinadaily.com.cn/. See also "China Develops Vaccine Against Human Infection," "Home News" page of *China Daily*, November 15, 2005, Available at http://www.chinadaily.com.cn/; Zhang Feng, Wu Yong and He Nan, "China Develops Vaccine Against Human Infection," "Top News" page of *China Daily*, November 15, 2005, Available at http://www.chinadaily.com.cn/.

[23] Jim Fisher-Thompson, "U.S. Officials Praise China for Efforts to Combat Bird Flu; Prompt Investigation, Reporting of Suspected Cases Key to Preventing Epidemic," *Washington File*, Bureau of International Information Programs, U.S. Department of State, March 2, 2006.

[24] U.S. Department of State, "United States-China Joint Initiative on Avian Influenza," November 19, 2005, Available at http://www.state.gov/r/pa/prs/ps/2005/57157.htm. See also Xing Zhigang: "Leaders Highlight Common Interests," "Top News" page of *China Daily*, November 21, 2005, Available at http://www.chinadaily.com.cn/.

[25] In fact, when I explained these measures to an audience at the Asia Society in New York City in October 2006, officials from several foreign consulates approached me and expressed interest in having their nation conclude a similar agreement with the U.S.

[26] Zhao Huanxin, "World Meet Seeks Funds To Combat Epidemic," "Top News" page of *China Daily*, January 18, 2006, Available at http://www.chinadaily.com.cn/.

[27] "Address by Premier Wen Jiabao at the Opening Session of the International Pledging Conference on Avian and Human Pandemic Influenza," Beijing, China, January 18, 2006, Available at http://www.undg.org/documents/7317-Premier_Wen_Jiabao_Opening_Speech.pdf. Wen had earlier convened a State Council executive meeting to assess China's strategy for dealing with avian influenza. See *Xinhua*, November 2, 2005.

[28] "Paul Wolfowitz Remarks to the International Pledging Conference on Avian and Human Influenza" (statement made via videoconference to the International Pledging Conference on Avian and Human Influenza, Beijing, China, January 18, 2006), Available at http://www.undg.org/documents/7327-Statement_by_Paul_Wolfowitz.doc.

[29] Zhang Feng and Zhao Huanxin, "China, WHO Sign Virus Co-Op Deal," "Home News" page of *China Daily*, December 21, 2005, Available at http://www.chinadaily.com.cn/.
[30] Zhao Huanxin, "Countries Show Sense of Urgency," "Top News" page of *China Daily*, January 19, 2006, Available at http://www.chinadaily.com.cn/.
[31] Dr. David Nabarro, "How Should Asia Prepare for the Next Great Pandemic?," Panel, Asia Society, New York, October 10, 2006.
[32] "Joint Science Academies' Statement: Avian influenza and infectious diseases," InterAcademy Council, Available at http://www.interacademycouncil.net/?id=10854.
[33] Admiral Michael Mullen, "Remarks as Delivered for the 17th International Seapower Symposium," Naval War College, Newport, RI, September 21, 2005, Available at http://www.navy.mil/palib/cno/speeches/mullen050921.txt.
[34] U.S. Pacific Command, "PACOM Facts," Available at http://www.pacom.mil/about/pacom.shtml.
[35] "An Analysis of the Potential Impact of the H5N1 Avian Flu Virus," Food Industry QRT Pandemic Analysis, August 2005, Available at http://www.cidrap.umn.edu/cidrap/files/47/panbusplan.pdf, pp. 3, 6.
[36] Bob Brewin, "Pacom Leads Military in Pandemic Planning," *Government Health IT*, February 8, 2006, Available at http://www.govhealthit.com/article91626-12-06-05-Web.
[37] Rear Admiral R. D. Hufstader, Command Surgeon, U.S. Pacific Command, Testimony to Joint House Committee Hearing of Hawaii State Legislature, "Avian Flu Preparations and Role with State of Hawaii Agencies," November 18, 2005, Available at http://www.pacom.mil/speeches/sst2005/051118hufstader-flu.shtml.
[38] "DoD's Pandemic Flu Web Site Goes Live," *American Forces Press Service*, Available at http://www.pentagon.mil/news/Nov2005/20051107_3264.html.
[39] Spc. Tim Meyer, "PACOM Sponsors Influenza Seminar," U.S. Pacific Command Public Affairs, Available at http://www.pacom.mil/articles/articles2005/051027story1.shtml.
[40] "'Military-style' Flu Network Call," *BBC News*, March 1, 2006, Available at http://news.bbc.co.uk/2/hi/health/4763224.stm; J. P. Chretien, J. C. Gaydos, J. L. Malone, and D. L. Blazes, "Global Network Could Avert Pandemics," *Nature*, vol. 440 (March 2, 2006): 25–26.
[41] Audrey McAvoy, "Hawai'i Forces Take Aim at Bird Flu," *Honolulu Advertiser*, November 13, 2005, Available at http://the.honoluluadvertiser.com/article/2005/Nov/13/ln/FP511130340.html/?print=on.
[42] U.S. Congressional Budget Office Report, "A Potential Influenza Pandemic: Possible Macroeconomic Effects and Policy Issues," December 8, 2005, Available at http://www.cbo.gov/ftpdocs/69xx/doc6946/12-08-BirdFlu.pdf.
[43] David L. Heymann, "The Sovereignty of Disease," *Yale Global*, 6 June 2006, Available at http://yaleglobal.yale.edu/article.print?id=7518.
[44] Dr. David Nabarro, "How Should Asia Prepare for the Next Great Pandemic?," Panel, Asia Society, New York, October 10, 2006; David L. Heymann, "The Sovereignty of Disease," *Yale Global*, 6 June 2006, Available at http://yaleglobal.yale.edu/article.print?id=7518.
[45] Michael T. Osterholm, "Preparing for the Next Pandemic," *Foreign Affairs*, July/August 2005, Available at http://www.foreignaffairs.org/20050701faessay84402/michael-t-osterholm/preparing-for-the-next-pandemic.html.
[46] "How Should Asia Prepare for the Next Great Pandemic?," Panel, Asia Society, New York, October 10, 2006.
[47] Keith Bradsher, "U.S. Seeks Cooperation with China," *New York Times*, September 12, 2005.
[48] "Chinese fleet visits San Diego," *People's Liberation Army Daily*, September 18, 2006, Available at http://english.pladaily.com.cn/site2/special-reports/2006-09/19/content_591087.htm; "Chinese fleet visits San Diego," *People's Daily*, September 19, 2006, Available at http://english.people.com.cn/200609/19/eng20060919_304115.html.; Steve Liewer, "'A touching moment': Hundreds greet 2 Chinese navy ships; last visit was more than 9 years ago," *San Diego Union-Tribune*, September 19, 2006, "Chinese, U.S. warships train off San Diego coast," *Mercury News*, September 20, 2006, Available at http://www.signonsandiego.com/uniontrib/20060919/news_1m19chinese.html.
[49] Vessels from the U.S. and Chinese navies have previously participated in search and rescue exercises in Hong Kong (e.g., in 2003), but did not directly interact in the exercise. "U.S., Chinese Navies Complete SAREX Together," *Navy Newsstand*, September 21, 2006, Available at http://www.navy.mil/search/display.asp?story_id=25702; Bonnie Glaser, "U.S.-China Relations: Promoting Cooperation, Managing Friction," *Comparative Connections*, *A Quarterly E-Journal on East Asian Bilateral Relations*, Available at se1.isn.ch/serviceengine/FileContent?serviceID=PublishingHouse&fileid=865DDC28-B012.
[50] Rear Admiral Gordon Pai'ea Chung-Hoon (1910-1979) served as commanding officer of USS *Sigsbee* (DD 502) from May 1944 to October 1945 and received the Navy Cross and Silver Star for "conspicuous gallantry and

extraordinary heroism." See "Rear Admiral Chung-Hoon," from the official Navy website of USS Chung-Hoon (DDG 93), Available at http://www.chung-hoon.navy.mil/historyandinfo/admchunghoon/admchunghoon.html.
[51] "U.S., Chinese Navies Complete SAREX Together," *Navy Newsstand*, September 21, 2006, Available at http://www.navy.mil/search/display.asp?story_id=25702; "Chinese, U.S. Sailors Meet, Make Friends," *Navy Newsstand*, September 20, 2006, Available at http://www.navy.mil/search/display.asp?story_id=25664.
[52] Nicholas Zamiska, "How Academic Flap Hurt World Effort on Chinese Bird Flu," *Wall Street Journal*, February 24, 2006, A1.
[53] Michael T. Osterholm, "Preparing for the Next Pandemic," *Foreign Affairs*, July/August 2005, Available at http://www.foreignaffairs.org/20050701faessay84402/michael-t-osterholm/preparing-for-the-next-pandemic.html.
[54] See, for example, 迟福林 [Chi Fulin], ed., 警钟--中国: SARS危机与制度变革, 中国改革发展研究院2003年转轨研究报告 [Alarm—China: SARS Crisis and System Reform, Transition Report 2003], (Beijing: China Institute for Reform and Development (CIRD), 2003); 尹萍 [Yin Ping], "信息公开与法治政府--从'非典'到'禽流感'的启示" [Information Publication and Government by Law—Inspiration from "SARS" to "Bird Flu"], 河北法学 [*Hebei Law Science*] 22, no. 11 (November 2004): 147–50.
[55] "Bird Flu Requires Better Global Response," "Opinion" page of *China Daily*, October 29, 2005, Available at http://www.chinadaily.com.cn/.
[56] Dr. David Nabarro, "How Should Asia Prepare for the Next Great Pandemic?," Panel, Asia Society, New York, October 10, 2006.