Foreign and Domestic Influences on China's Arms Control and Nonproliferation Policies*

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Over the course of the 1990s, China's arms control and nonproliferation policies have undergone a remarkable evolution. Since 1992, China has signed three major, international arms control treaties – the Nuclear Nonproliferation Treaty, the Chemical Weapons Convention and the Comprehensive Test Ban Treaty – which it had previously lambasted for years. In addition, Beijing has continued to improve on and clarify many of its previous nonproliferation commitments as well as to adopt a legally based export control system covering a variety of sensitive materials, equipment and technologies. These developments are mirrored by the expanding roles and growing influence of a number of new bureaucratic actors in China devoted to examining its participation in the international arms control and nonproliferation regime. Most notably, in 1997 China's Foreign Ministry established a department exclusively devoted to arms control and disarmament issues. Yet despite these broad trends, little is known about the actors and influences (external and internal) affecting Beijing's arms control and nonproliferation decision-making.[1] Chinese writings on arms control, while growing in number, tend to be descriptive rather than analytical and usually provide little insight into China's policy-making on arms control and nonproliferation.[2]

*This article draws in part from Bates Gill, "Two steps forward, one step back: the dynamics of Chinese nonproliferation and arms control decision-making," in David M. Lampton (ed.), *Chinese Foreign and Security Policy Decision-making in an Era of Reform* (forthcoming).

1. The majority of the current literature on China and arms control is devoted to documenting and characterizing the shifts in China's arms control and nonproliferation practices. A small number of sources explicitly discuss the various institutions involved in arms control and nonproliferation policy-making and the influences on their decisions. See Bates Gill and Mathew Stephenson, "Search for common ground: breaking the Sino-U.S. non-proliferation stalemate," *Arms Control Today*, September 1996; Alastair Iain Johnson, "Learning versus adaptation: explaining change in Chinese arms control policy in the 1980s and 1990s," *The China Journal*, January 1996; *Individuals, Institutions, and Policies in the Chinese Nonproliferation and Arms Control Community*, Conference Report, East Asia Nonproliferation Project (Monterey, CA: Center for Nonproliferation Studies, 1997); Evan S. Medeiros and Bates Gill, *Chinese Arms Exports: Policy, Players and Process*, unpublished manuscript, 2000; John W. Lewis, Hua Di, and Xue Litai, "Beijing's defense establishment: solving the arms-export enigma," *International Security*, Spring 1991.

2. Some key Chinese sources include: Chen Xiaogong (ed.), *Junbei kongzhi yu guoji anquan shouce* (*Arms Control and International Security Handbook*); Pan Zhenqiang *et al.* (eds.), *Guoji caijun yu junbei kongzhi* (*International Disarmament and Arms Control*) (Beijing: Guofang daxue chubanshe, 1996); Du Xiangwan (ed.), *Hejunbei kongzhi de kexue jishu* (*Foundations of Nuclear Arms Control Science and Technology*) (Beijing: Guofang gongye chubanshe, 1996); Wang Deli *et al.* (eds.), *Junbei kongzhi lunwen xuanji* (*Arms Control Collected Works*) (Beijing: Kexue yu guojia anquan yanjiu jihua, 1995); Zhu Mingquan, *Hekuosan: weixian yu fangzhi* (*Nuclear Proliferation: Danger and Prevention*) (Shanghai: Shanghai kexue jishu wenxian chubanshe, 1995); Zhu Mingquan, "The evolution of China's nuclear nonproliferation policy," *The Nonproliferation Review* (Winter 1997); Weixing Hu, "Nuclear nonproliferation," in Yong Deng and Fe-Ling Wang (eds.), *In the Eyes of the Dragon* (Lanham, MD: Rowman and Littlefield, 1999); Wu Yun, "China's policies

This article aims to help narrow this informational gap by analysing the foreign and domestic influences on Chinese decision-making related to arms control and nonproliferation. This analysis can, in turn, be used to assist in the development of policy-oriented approaches to engage more constructively with China on arms control and nonproliferation issues. A better understanding of China's decision-making on these critical security issues will help international actors co-operate with China to achieve more progress on the increasingly complex international arms control and nonproliferation agenda.

In conducting this analysis, the article considers several, specific questions. What are the various foreign and domestic factors influencing Chinese arms control and nonproliferation policy? When and to what extent do these factors account for changes to China's official positions? In terms of foreign influences, are multilateral, bilateral or unilateral pressures more (or less) effective in influencing China's decision makers? On the domestic front, do military, economic or bureaucratic factors best explain the shifts and changes in China's policies? In addition, the article addresses the myriad of questions surrounding the growing institutionalization of China's arms control community. What are the respective functions of individuals and institutions in this decision-making process, and how are these roles evolving as China reforms its economy and restructures its bureaucracy? What new domestic constituencies and bureaucracies are influencing arms control in China today? In what specific ways has this influence been exercised?

The article addresses these questions in two principal parts. The first considers various foreign influences on China. This section specifically examines the multilateral and unilateral pressures on China to adhere to international norms and agreements on arms control and nonproliferation over the past decade. A second section explores the domestic context of Chinese decision-making on arms control and nonproliferation policy by analysing the multiple and often competing institutional pressures affecting such decisions. This analysis draws exclusively from three case studies: China's negotiation of and participation in the Comprehensive Test Ban Treaty (CTBT), China's military technology exports to Iran, and China's views on military transparency as mainly expressed in its publication of white papers in 1995 and 1998. These three examples are relatively recent, have been the subject of significant debate within China's policy-making circles, broadly represent the range of arms control and nonproliferation issues relevant to China, and best illustrate the multiplicity of external and internal forces influencing China's arms control and nonproliferation policies.

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towards arms control and disarmament: from passive responding to active leading," *Pacific Review*, Vol. 9, No. 4 (1996); Lu Ning, *The Dynamics of Foreign-Policy Decision-making in China* (Boulder, CO: Westview Press, 1997), pp. 113–17.

Foreign Influences

International pressure on China to adhere to global norms and agreements increasingly influences Beijing's arms control and nonproliferation policies. It is no coincidence that much of China's more constructive approach to nonproliferation, such as the signing of the Nuclear Nonproliferation Treaty (NPT), occurred during Beijing's post-Tiananmen, post-Cold War diplomatic offensive in the early to mid-1990s. As China sought to remake its international image and to assume a greater role in global economic and political affairs, it has also become more susceptible to external influences when making foreign policy decisions. While globalization has provided China with many opportunities to gain wealth and influence, it has also further bound it to the international community and thereby constrains its choices. Some of China's recent steps on arms control and nonproliferation represent just one manifestation of this broader trend.

Multilateral pressure: China and the Comprehensive Test Ban Treaty. China's agreement to sign the CTBT in 1996 marked the first time it agreed multilaterally to cap its own weapons capabilities under verifiable conditions (its ratification of the Chemical Weapons Convention in 1997 marked a second time it chose to do so). The CTBT decision is particularly significant given the importance China attaches to its nuclear arsenal as a symbol of its great power status and as the ultimate guarantor of Chinese sovereignty against "nuclear blackmail and hegemony." While China has signed on to a number of nuclear non-armament agreements, including the Outer Space Treaty, the Seabed Arms Control Treaty, the Antarctic Treaty and the relevant protocols of a number of regional nuclear weapon free zone (NWFZ) agreements, these treaties and agreements do not represent a genuine limitation upon China's nuclear arsenal or deployment practices. China has consistently refused to take part in real disarmament negotiations (such as the Strategic Arms Reduction Talks (START) between the United States and Russia) which would quantitatively reduce its nuclear arsenal.[3]

Faced with the possibility of opposing an arms control achievement which had near universal support in the developing world and among the other nuclear powers, China was compelled to go along on the CTBT – in spite of deep reservations on the part of its military-scientific community – and live up to its decades of disarmament rhetoric. This critical Chinese decision appeared to be driven largely by international pressures and a fractious internal debate (analysed in the second section) which in

3. In fact, since the early 1980s, China has changed its position on when it would enter into strategic arms control discussions with the other nuclear powers. In the early 1980s, China initially stated that it would consider such a step when the U.S. and Soviet Union achieved a 50% reduction in their nuclear arsenals. However, by 1988 China stated that the United States and Soviet Union would have to achieve "drastic" or "substantial" reductions in their nuclear arsenals before China would be willing to enter multilateral arms reduction negotiations. It now appears China may place qualitative as well quantitative conditions on any future decision to join multilateral strategic reductions talks.

the end favoured – for the sake of China's international image and some possible relative, long-term gains in Chinese security – a decision to sign on to the treaty, in spite of deep misgivings and difficult constraints it posed on China's future nuclear weapons modernization.

The CTBT negotiations, lasting from January 1994 to August 1996, unfolded in the context of growing international opprobrium directed at nuclear proliferation and nuclear testing. This pressure came to focus increasingly on China. Normative pressure not to test had built up both in the developing world and, importantly, among several nuclear weapon states. An informal testing moratorium among four of the nuclear weapon states – the Soviet Union/Russia, the United States, France and the United Kingdom – had been in effect for several years.[4] By the end of 1995, in the midst of the international CTBT negotiations, China felt compelled to oppose a United Nations General Assembly disarmament resolution urging the halt of nuclear testing.[5] After France's last test in January 1996, China stood alone as the only country testing even as the CTBT negotiations drew to their concluding stages.

China was also pressured by several of its neighbours in Asia. Following the Chinese test in May 1995, Japan suspended the grant portion of its foreign aid programme to China in protest. In August 1995, the Japanese Diet passed a resolution protesting against China's testing, and later that month Japan froze government grants for the remainder of 1995. Some analysts suggested that China actually called off a planned test in autumn 1995 to avoid a further cut-off in Japanese aid and to quell the rising tide of concern among China's neighbours over its testing; concern over testing especially gathered momentum in the Asia-Pacific with the resumption of French testing in September 1995.[6] After China's July 1996 test, Japan considered extending the ban to include official soft loans (the majority of Japan's official funding for China), but in the end took no action. Instead, once China announced its testing moratorium and signed the CTBT, the two sides began negotiations on the fourth yen loan package to China for 1996–98 (about $5.3 billion) in late 1996. On 28 March 1997, Japan's foreign minister stated that Japan would restore grant aid to China.

To China's west, countries near its Lop Nor test site – Kazakstan, Kyrgyzstan and Uzbekistan – were vocal in their criticism of Chinese

4. The Soviet Union last tested in October 1990; Russia has not since tested; the last U.S. test was in September 1992; the last UK test was in November 1991. France had participated in the moratorium for nearly four years, from late 1991 until late 1995, when it resumed its final series of six tests which ran from September 1995 to January 1996. Also during this period, the international community reached the decision to extend indefinitely the Nuclear Nonproliferation Treaty (in May 1995), which was achieved in large measure by a commitment on the part of the nuclear powers to engage earnestly in meaningful disarmament efforts, such as the CTBT.

5. Michael Littlejohns, "UN votes against N-testing," *The Financial Times*, 14 December 1995, p. 6.

6. "Sources indicate plans for nuclear test halted," *Itar-Tass*, in Foreign Broadcast Information Service, *Daily Report: China*, FBIS-CHI-95–211, 31 October 1995; "Intention to grant yen loans to PRC firms up," *Yomiuri Shimbun*, in Foreign Broadcast Information Service, *Daily Report: East Asia*, FBIS-EAS-95–208, 26 October 1995.

testing in 1994–96, both at official and unofficial levels. Protests were staged at Chinese embassies in the capitals of these Central Asian republics, and officials from the three countries lodged formal diplomatic protests and raised concerns over the environmental damage caused by testing at the Lop Nor site. The protests were enough to have Chinese President Jiang Zemin acknowledge the problems, stating that "China fully understands the concerns of Central Asian states over the possible negative impact of atomic testing on the environment," but added that there was no evidence that there were negative effects.[7]

When it officially announced its adherence to the testing moratorium after its last test in July 1996, the Chinese government recognized the pressures from the international community, especially those from the developing world. The statement noted that the decision to halt nuclear testing was in part "a response to the appeal of the vast number of non-nuclear-weapon states" while also a positive step toward disarmament.[8] These developments point to the important influence of foreign opinion in China's decision to go forward with the CTBT.

Multilateral pressure: China and military transparency. In recent years China has given more favourable consideration to military transparency as a form of arms control confidence-building. Its recent steps in this area, as in the CTBT case, have resulted partially from external pressure from a mix of governments with direct interest in the continued stability of the Asia-Pacific region. According to views held predominantly in the West, transparency contributes to arms control and security by alleviating suspicions and clarifying intentions and capabilities among potential adversaries. As a result, since the early to mid-1990s, Washington and China's Asian neighbours have persistently urged the Chinese to be more open and forthcoming in disclosing information about the People's Liberation Army (PLA), including information on budgets, defence capabilities, threat perceptions, doctrine and strategies. To date, however, China has not complied to the degree that others would like.

Chinese views on military transparency measures typically run counter to these of the West and emphasize the potential destabilizing effects that transparency can generate under certain conditions. Sha Zukang, when serving as China's ambassador to the Conference on Disarmament, argued that it is "impossible to have absolute military transparency" and that the PRC "opposes the pursuit of military transparency that disregards a nation's real condition."[9] Nevertheless simple transparency measures – such as port visits, officer exchanges and more regularized military-to-military meetings – have developed quickly in the last few years as the PLA has expanded its military diplomacy. Yet, during downturns in relations, such as in U.S.–China ties following the May 1999

7. Douglas Busvine, "China's Jiang calls for nuclear test ban treaty," *Reuters*, 5 July 1996.

8. *Statement of the Government of the People's Republic of China*, 29 July 1996; Conference on Disarmament document CD/1410, 29 July 1996.

9. Sha Zukang quoted in the *Jiefangjun bao* (*Liberation Army Daily*), 16 November 1996, p. 4, and reprinted by the *NAPSNet Daily Report*, Nautilus Institute, 21 November 1996.

bombing of the Chinese embassy in Belgrade, these simple transparency measures are the first to be cut off. Such reactions indicate Beijing's general wariness toward military transparency, regardless how of benign and innocuous.

In spite of its continued reluctance, the Chinese government has taken some steps to open the door on various aspects of its military-industrial establishment, a process which has accelerated since the early 1990s and will need to continue if China is to take part in several arms control verification regimes expected in years ahead. Some recent examples include its voluntary agreements with the International Atomic Energy Agency (IAEA) to report imports and exports of all nuclear materials as well as all exports of nuclear equipment and related non-nuclear materials. In the area of conventional arms, China has contributed to the United Nations Register of Conventional Arms (UNROCA), both in the form of annual submissions of its arms imports and exports and as a participant in negotiating the original register and in subsequent reviews of the process.[10] China's participation in the UNROCA has recently been called into question, however. It failed to submit in 1999 and 1998 an accounting of its arms exports and imports for 1998 and 1997, breaking its previous record of annual submission since the register's inception. The official explanation for Beijing's move was to protest against the American listing of military exports to Taiwan because Taiwan is not a UN member state (or a sovereign country in China's eyes) and thus has no business being listed. Other problems with Beijing's role in the UNROCA include its omission of Chinese transfers which appear in other nation's submissions or in the open source literature, and its lack of support for additional measures to expand the scope of the register.

Another important, albeit ambiguous, Chinese gesture occurred during the visit of U.S. Secretary of Defense William Cohen to China in January 1998 when the *China Daily* released a government report on the country's exports of military products produced by military enterprises, which were valued at approximately US$3.5 billion for 1997.[11] Overall, these developments suggest that in the case of widespread international practice and norms, China might be more forthcoming in terms of military-related transparency but within conservative limits.

Moreover, the issuance of two white papers by China – one in 1995 on arms control and disarmament and a second in 1998 on national

10. The UNROCA was established by United Nations General Assembly resolution 46/36L in December 1991. The register first began recording submissions from United Nations members in 1993 for their imports and exports of major conventional weapons in calendar year 1992. China's 1998 defence white paper compiles and presents all of its UNROCA submissions. The register can be accessed via the internet at: http://domino.un.org/REGISTER.nsf.

11. Gao Wei, "Military shines in civilian sector," *China Daily*, 19 January 1998. According to this source, "exports by 1,400 military firms and research institutes in 1997 are expected to add up to US$7 billion, half of which were civilian products." The Congressional Research Service (CRS) estimates that China exported US$1 billion in 1997 to developing countries and the Stockholm International Peace Research Institute (SIPRI) estimates that the volume of Chinese arms exports in 1997 approximated US$338 million.

defence – resulted in part from multinational calls by the United States and China's Asian neighbours for a concrete transparency measure. In November 1995, China issued a 34-page document entitled *China: Arms Control and Disarmament*.[12] Most of the information in the document was intended to promote and publicize Chinese positions on these issues and was already known from other open sources; as a form of military transparency the document did not have much utility. Yet, it had an important symbolic meaning in indicating a limited Chinese appreciation of transparency as a worthwhile arms control and confidence-building measure. What factors motivated the Chinese leadership to issue the white paper?

As in the case of the CTBT, it appears that China's concern with its image, particularly among its neighbours in the Asia-Pacific region, played an important role. In 1994–95, in the intersessional preparations for the ASEAN Regional Forum (ARF) meeting, it became apparent that the group would urge its members to issue defence policy papers, or white papers, as a regional confidence-building measure. Many members of the ARF – including Australia, Canada, Japan, New Zealand, Singapore, South Korea and the United States – had issued defence white papers for many years. Thailand issued its first one in 1994, and Malaysia issued a glossy hard-cover report on its armed forces the same year. Indonesia followed suit in 1995, and the Philippines and Vietnam were said to be contemplating the publication of defence white papers.[13]

At the conclusion of the ARF meeting in August 1995, the Chairman's statement clearly reflected the group's consensus view to promote greater transparency in the region, including the issuance of defence white papers. Participating ministers at the meeting decided to encourage the enhancement of dialogue and consultations on political and security co-operation; to note increased participation in the UNROCA and to encourage those not participating to do so; to support high level exchanges between military academies and staff colleges; and to call on ARF countries to submit, on a voluntary basis, an annual statement of their defence policy.[14] The Chinese white paper on arms control appeared some three months later.

The United States was also vocal in encouraging China to be more transparent in its military affairs and urged it to release a defence white paper. The American position on this is most closely associated with former Secretary of Defense William Perry who, beginning with his November 1994 visit to China, launched an ambitious effort to engage the Chinese military. It is interesting to note that China's issuance of its white

12. *China: Arms Control and Disarmament* (Beijing: Information Office of the State Council of the People's Republic of China, November 1995).

13. See Kang Choi and Panitan Wattanayagorn, "Development of defence white papers in the Asia-Pacific Region," in Bates Gill and J.N. Mak (eds.), *Arms, Transparency and Security in South-East Asia* (Oxford: Oxford University Press, 1997), pp. 79–92.

14. *Chairman's Statement of the Second ASEAN Regional Forum*, Bandar Seri Begawan, Brunei Darussalam, 1 August 1995, reprinted by *NAPSNet*, Nautilus Institute, 11 September 1995.

paper in mid-November 1995 coincided with the arrival in China of U.S. Assistant Secretary of Defense Joseph Nye, who is also a strong advocate of greater transparency as an arms control and confidence-building measure. Taken together, the external pressures on China – especially those in the ARF – were probably significant factors in moving China towards the publication of its white paper on arms control and disarmament.

China's release in July 1998 of its second white paper on national defence may have resulted from similar external pressures.[15] In contrast to the 1995 publication, the 1998 white paper covers a wide range of issues, including the international security situation, national defence policy, national defence construction, international security co-operation, and arms control and disarmament. Most of the information in this document can be found in Beijing's previous official statements and documents on these issues. In this vein, the white paper's real value may lie in that it provides so many of Beijing's official positions on international security, national defence and arms control "under one roof." Interestingly, the document was compiled by a team of some six to seven experts from the General Staff Department (GSD), the Academy of Military Sciences (AMS), the Foreign Ministry's new arms control department, and the Information Office in the State Council. This "inter-agency" drafting team was led by the military participants from GSD and AMS who prepared the initial outline of the document and co-ordinated all the meetings of the group. The PLA's leadership of this drafting process may indicate a growing acceptance within military circles of transparency as a security enhancing mechanism.[16]

One of the possible pressures on China's leaders to issue this second white paper may have been the fact it had been expected for some time. In January 1996, during the third set of bilateral security talks between China and Japan, the Chinese side noted the country's intention to issue the first white paper on the PLA. This followed a previous statement of intention to "issue a report on Army buildup at a proper time."[17] Discussions with Chinese military officials in 1996 also suggested that a second white paper expressly focusing on military issues, more in line with defence white papers as traditionally understood, was in the works. However, while it allegedly made the rounds of Beijing specialists in draft form in 1996 and 1997, it did not appear until July 1998.[18]

Another probable motivation for the issuing of the second white paper was the positive reaction to the release of the first one. Current and former PLA officials have remarked that the initial response in capitals all

15. *China's National Defense* (Beijing: Information Office of the State Council, July 1998). For an English version see: www.chinanews.org; for a Chinese version see www.peopledaily.com.cn/9807/28/current/newfiles/a1010.html.

16. Interviews with Foreign Ministry officials, Beijing, September 1998; Monterey, CA, April 1999.

17. Noriyoshi Itokawa, "Sino-Japanese security talks discussed," *Asahi Shimbun*, in Foreign Broadcast Information Service, *Daily Report: China*, FBIS-CHI-96–013, 16 January 1996.

18. Interviews, Beijing, November 1996.

over the world to the 1995 white paper was more positive and optimistic than many Chinese officials expected. As a result, many Chinese diplomats began calling for the issuance of a second, more comprehensive version more in line with other nations' defence white papers. In fact, according to one Foreign Ministry official, the impetus for the second white paper came directly from China's participation in the ARF and movement in that organization towards the release of annual white papers on defence. Thus, with the PLA in the lead role, the 1998 white paper was drafted according to a schedule to allow for its release at the fifth ARF meeting in Manila in July of that year.[19]

Because of the nature of this document, it must be assumed that it had been approved at the highest levels of power in China. While the white paper presents little new information, the data and perspectives provided should be seen as authoritative and the result of significant deliberation. Indeed, the substantive "thinness" of this document may be indicative of certain trends within Chinese military circles. It may reaffirm, for example, that many of China's internal views on military transparency remain conservative. In line with the PLA's historical emphasis on the importance of shrouding capabilities as a form of deterrence, China's military leaders persist in their reluctance to share information for fear of what it might reveal about PLA strengths and weaknesses. Despite these conservative views, the fact that a second transparency document was issued at all was also probably a result of recent leadership changes in China. The ascension of younger military officials to key posts within the GSD pushed along the completion of the white paper, which was finally issued in 1998. Thus, as China's next generation of military and political leaders comes to power, some greater openness may be expected, but progress will be slow.

China's approach to military-related transparency will have important implications for the success of certain arms control and nonproliferation regimes which are expected in the years ahead. Treaties such as the Chemical Weapons Convention and the CTBT, which China has signed, have intrusive verification measures which require differing forms of invasive on-site inspections to ensure treaty compliance. Over the coming months and years, Chinese approaches to implementation of these treaties and ongoing arms control negotiations (such as a fissile material production ban) will provide a good indication of China's attitude toward military-related transparency measures.

Unilateral pressure: military technology sales to Iran. The foreign pressures on China in response to expected or completed transfers of military technology to Iran differ from the two previous case studies. As argued above, pressures to sign the CTBT and improve military transparency were multilateral, coming from a host of governments. In the case of military exports to Iran, the pressures were mainly unilateral and came almost exclusively from the U.S. government. At different times and to

19. Conversations with current and former PLA officials, Beijing, September 1998.

differing degrees since the early 1990s, the United States has used a mix of positive and negative incentives to curtail Beijing's military exports to Iran.

China's military technology transfers have been extensive and have ranged from ballistic and cruise missiles to nuclear technologies and an array of major conventional weapons. Given the American view of Iran as a "rogue state" coupled with the large American stake in Persian Gulf stability, the United States has exerted strong pressure on China to stem its military technology relations with Iran. These pressures have principally resulted in the curtailment and suspension of nuclear trade and cruise missile exports from China to Iran. Since the early 1990s and particularly in the run-up to the U.S.–China summit in October 1997, the two sides were able to hammer out a number of nonproliferation agreements. American pressure has also been a significant source of irritation and outright recalcitrance within the Chinese nonproliferation and arms control decision-making structure and uppermost political leadership. The public record indicates that China went along with these agreements grudgingly at best and did not meet full American expectations, and that subsequent interpretations of Chinese pledges by Beijing often fall short of U.S. interpretations. The extensive nature of China's past nuclear- and missile-related assistance to Iran also raises questions about its future compliance with these recent nonproliferation assurances. The continued existence of political and some financial incentives in China for military technology trade with Iran, coupled with established relationships between Chinese and Iranian companies, suggest the possibility of continued Sino-Iranian co-operation in the military technical area.[20]

Formal American action against China related to military-technical exports began with the Reagan administration's decision on 22 October 1987 to freeze the further liberalization of technology sales to China in response to China's HY-2 "Silkworm" anti-ship cruise missile exports to Iran.[21] American pressure did not at first result in a public admission of the sale in spite of overwhelming intelligence evidence, which included satellite photographs of Silkworm missiles being loaded on to Chinese ships at Chinese ports and arriving on the same ships in an Iranian port. Beijing did offer a pledge to prevent the diversion of Silkworms from other countries to Iran, and by March 1988, in return for the lifting of the high-tech embargo, China gave private assurances to the United States that it would stop exporting Silkworm missiles to Iran.

The cruise missile issue then re-emerged almost a decade later when in January 1996, Iran first test-fired its more advanced Chinese C-802

20. Bates Gill, *Silkworms and Summitry: Chinese Arms Exports to Iran and U.S.–China Relations* (Washington, D.C.: Asia Pacific Rim Institute, December, 1997.)

21. On U.S.–China relations and the silkworm missile deal see R. Bates Gill, *Chinese Arms Transfers: Purposes, Patterns and Prospects in the New World Order* (Wesport: Praeger Publishers, 1992), pp. 99–100, 110; see also Nayan Chanda, "Technology cocooned: U.S. retaliates against China's sale of Silkworm missiles," *Far Eastern Economic Review*, November 1987, p. 27.

anti-ship cruise missile. At that time, the United States began publicly pressuring Beijing to halt these shipments as well because the C-802 was China's most advanced sea-skimming cruise missile that could threaten large American naval ships operating in the Gulf. The Clinton administration considered the imposition of sanctions against China under the provisions of the 1992 Iran–Iraq Arms Nonproliferation Act.[22] Chinese Foreign Ministry spokesman Cui Tiankai defended transfers of missiles and other weapons to Iran, stating that China's "engagement with other countries, including Iran, in small amounts of conventional weapons is totally appropriate and legal." Cui added, "regarding the transfer of conventional weapons, including missiles, China has adopted a long-standing attitude of prudence and responsibility."[23]

The Clinton administration declined the imposition of sanctions and instead sought to convince the Chinese that exports of advanced weapons to Iran ran contrary to China's security interests and to improved U.S.–China relations. American officials cited China's growing need for access to Persian Gulf oil supplies and U.S. concerns about Iran's ability to threaten United States naval ships stationed in the Gulf. Chinese Minister of Defence General Chi Haotian noted that China "would consider these points," and "would refrain from doing things that are detrimental to peace and stability." But he also maintained that reports of Chinese weapons sales to Iran had been grossly exaggerated by the West.[24] With reports in June 1997 – a few months before the U.S.–China summit in October 1997 – that Iran was for the first time able to fire Chinese anti-ship cruise missiles from fighter aircraft, even greater pressure was brought to bear on the Chinese to halt its sales of such weapons to Iran.[25]

American and Chinese negotiators apparently reached an agreement on China's sales of anti-ship cruise missiles to Iran during a meeting in New York between Secretary of State Madeleine Albright and Chinese Foreign Minister Qian Qichen on 23 September 1997. According to press reports, Qian gave Albright a private, verbal pledge that China would halt the future sales of C-801 and C-802 anti-ship cruise missiles to Iran. The pledge also reportedly covered the provision of missile production technologies.[26] In an 18 October statement, a White House spokesman confirmed that Secretary Albright had raised U.S. concerns with her

22. This act, also known as the Gore-McCain Act, is targeted at countries that transfer "destabilizing numbers and types" of conventional weapons to either Iran or Iraq.

23. Benjamin Lim, "Beijing defends selling Iran arms," *The Washington Times*, 4 June 1997, p. A4.

24. Warren P. Strobel and Bill Gertz, "Chinese general hits arms reports," *The Washington Times*, 10 December 1996, p. A1; "Perry tells Chinese that sales of arms to Iran could backfire," *Associated Press*, 10 December 1996; "Chi says Chinese arms proliferation 'exaggerated'," *Reuters*, 9 December 1996.

25. Bill Gertz, "Senate asks for sanctions on China," *The Washington Times*, 18 June 1997, p. 13.

26. Barton Gellman, "Reappraisal led to new China policy," *The Washington Post*, 22 June 1988, p. 1; Barton Gellman, "U.S. and China nearly came to blows in 1996," *The Washington Post*, 21 June 1998, p. 1.

Chinese counterpart but the spokesman would not comment on the Chinese response; Beijing did not make a public statement on the issue.[27]

However, questions remain as to the exact nature of the Chinese commitment on halting exports of anti-ship cruise missiles. Did it cover only C-801 and C-802 missiles and related technologies or all cruise missiles that China produces? More broadly, does the American understanding of that commitment match China's interpretation and, if so, can Chinese officials enforce the pledge? After China offered its verbal pledges not to provide anti-ship cruise missiles to Iran in the future, a White House statement issued at the end of October 1997 ambiguously noted that during the Bill Clinton–Jiang Zemin summit: "The U.S. and China discussed the danger posed by the provision of advanced conventional weapons to Iran which threaten maritime activities and regional stability. China has agreed to take steps to address U.S. concerns. The United States will continue to monitor this issue."[28] President Jiang Zemin and Defence Minister Chi Haotian provided further assurances on this issue to U.S. Secretary of Defense William Cohen during his visit to China in January 1998. According to former U.S. Defense Department officials, the exact scope and content of the Chinese commitment to Cohen was somewhat unclear. Since then, the CIA verified in an unclassified 1998 report to Congress that China "apparently halted C-801/C-802 anti-ship cruise missiles to Iran as promised in late 1997."[29] However, as of mid-1999, discussions with American officials and recent allegations of Chinese exports of cruise missile technology to Iran suggest American and Chinese interpretations of the nature of Beijing's cruise missile pledge may in fact differ. An August 1999 press report based on leaked U.S. intelligence documents said that China signed a contract for the provision of cruise missile technology to upgrade Iran's FL-10 short-range, anti-ship cruise missiles.[30]

Regarding ballistic missile assistance to Iran, American pressure had a limiting effect. It may have prevented the transfer of certain, complete Chinese ballistic missile systems to Iran. While some evidence suggests that China and Iran had discussed the sale of complete M-9 and M-11 missiles and that transfers were imminent in late 1991 and again in late 1992, it is more likely that China at most provided technical assistance for Iran's indigenous development of similar systems. However, in the case of another M-series missile, the M-7 (180 km range), it appears

27. Steve Erlanger, "U.S. says Chinese will stop sending missiles to Iran," *The New York Times*, 11 October 1997, p. 1.

28. The White House, Office of the Press Secretary, "Fact sheet: accomplishments of the U.S.–China summit," 30 October 1997.

29. *Report of Proliferation-Related Acquisition in 1997*, U.S. Central Intelligence Agency (Washington, D.C.: U.S. Central Intelligence Agency, July 1998). This report was submitted by the CIA Director to Congress as required by Section 721 of the FY 1997 Intelligence Authorization Act. This report is unclassified and can be found on the internet at http://www.cia.goy/cia/publications/acq 1997.html.

30. Bill Gertz, "China agrees to deal with Iran on missiles," *The Washington Times*, 19 August 1999, p. 1.

somewhat more credible that China made direct transfers of complete missiles and related production technologies to Iran.

China's decision to curb its M-11 and M-9 co-operation with Iran was probably a direct result of American pressure, especially in the period from 1989 to 1991 when the Chinese initiated discussions with the Iranians on these deals. In 1991 alone, the United States sent six high-level officials to China to discuss the issue of M-series missile exports.[31] In late 1991 and again in early 1992 China provided senior U.S. officials with verbal and written pledges to curb its missile sales and to adhere to the Missile Technology Control Regime (MTCR) guidelines and parameters in return for the lifting of U.S. sanctions. With these promises in mind, it was far more difficult for China to go forward with exports of complete M-9 and M-11 missiles to Iran.

However, in spite of these pledges and American pressures, China has continued to assist the indigenous development of Iran's ballistic missile programmes through technology transfers, scientific advice and assistance in the construction of a missile production facility.[32] Much of this assistance, the Chinese argue, has related to the M-7/8610 missile which is an MTCR compliant system given its 180 km range and based on China's commitment to the original 1987 MTCR guidelines.[33] Chinese companies, for example, reportedly sold computerized machine tools, gyroscopes, accelerometers and test equipment which could be used to build and test missile guidance systems.[34] The MTCR also explicitly bans the sale of production technologies for longer-range systems and the extensive nature of China's production assistance for the M-7/8610 raises serious questions about its applicability to the longer-range, non-MTCR compliant systems which Iran is developing. Most notably, some Chinese companies are reported to have directly supplied Iran with some production technologies (and testing jigs) for the guidance/control components and the propulsion systems that were applied to the medium-range Shahab-3 missile Iran tested in 1997. China entities may have also transferred telemetry equipment for use when test launching these missiles.[35] Thus, China has been using certain loopholes in the current formulation of its participation of the MTCR to continue its missile

31. Timothy V. McCarthy, *A Chronology of PRC Missile Trade and Developments* (Monterey: Monterey Institute of International Studies, February 1992).

32. On Chinese ballistic missile-related assistance to Iran, see Director of Central Intelligence, *The Acquisition of Technology Relating to Weapons of Mass Destruction and Advanced Conventional Munitions – July–December 1996*, June 1997. A more detailed account is in Gill, *Silkworms and Summitry*.

33. China only agreed to adhere to the original 1987 guidelines and parameters of the MTCR which ban the export of missiles which are inherently capable of delivering a 300 km payload over 500 km. If China agrees to the 1993 revisions of the MTCR, which ban the exports of any delivery vehicles intended for the delivery of weapons of mass destruction, then China's exports of the 8610 may no longer be permissible.

34. See Shirley A. Kan, *Chinese Proliferation of Weapons of Mass Destruction: Background and Analysis*, Congressional Research Service (Washington, D.C.: Library of Congress, 1996).

35. Testimony of Dr Gordon Oehler, Hearing on Proliferation of Chinese Missiles, Senate Foreign Relations Committee, U.S. Senate, 11 June 1998; Bill Gertz, "China assists Iran, Libya on missile," *The Washington Times*, 16 June 1998, pp. 1–3.

technology exports to Iran which could be used to build longer-range missile systems.[36] In short, Chinese companies seem to be aggressively selling missile-related equipment and materials to Iranian entities while not technically violating any of China's nonproliferation commitments.

Unilateral American pressure, in the form of both positive and negative incentives, has been most effective in curbing Sino-Iranian nuclear trade. In recent years, the United States has placed great pressure on the Chinese not to provide Iran with nuclear-related equipment and technologies. China and Iran have since 1992 argued that Chinese transfers of nuclear technology are fully legal and consistent with the provisions of Article 4 of the NPT which allows for peaceful nuclear co-operation as long as Iran remains compliant with the NPT and all its nuclear facilities are under IAEA safeguards.[37] To date, based on its full-scope safeguards agreement with Iran, the IAEA finds that Tehran is in full compliance with its NPT obligation not to develop nuclear weapons. Indeed, Iran even allowed the IAEA to conduct two "special visits" to several *undeclared* nuclear facilities in 1992 and 1993 which found no improper activity.[38] Nevertheless, the United States has strongly urged China (and other countries) to halt ongoing nuclear co-operation with Iran, arguing that virtually any form of nuclear assistance would contribute to Iran's clandestine nuclear weapons programme. The principal lever in the 1990s to gain Chinese compliance with this policy was the Clinton administration's offer to implement the previously dormant 1985 U.S.–China Peaceful Nuclear Co-operation Agreement (NCA); to a lesser extent, the United States (as well as China) tied the Iranian nuclear issue to the general improvement of U.S.–China relations and this latter factor grew in importance during the run-up to the first Clinton–Jiang summit in 1997.

This strategy of pressures and inducements appears to have succeeded in limiting and perhaps ending Chinese nuclear-related transfers to Iran. Specifically, in order for Congress to allow the NCA to go forward, President Clinton had to certify that China was not engaging in any nuclear proliferation. To do this, the White House pointed to a number of concessions and agreements from China. First, in May 1996, following the sale of Chinese ring magnets to an unsafeguarded nuclear facility in Pakistan and the threat of sanctions, the United States gained a pledge from China that it would not in the future provide any assistance to

36. The largest MTCR loophole for China is the fact that Beijing has not agreed to accept the MTCR's annex which outlines all the missile sub-systems and related missile technologies controlled by the MTCR. Chinese officials claim to have an internal control list but have refused to show it to U.S. officials during negotiations. Without acceptance of the MTCR annex, Chinese companies can export certain missile technologies – especially dual-use ones like titanium stabilized duplex stainless steel – while maintaining that China is in compliance with the MTCR.

37. A comprehensive discussion of Iran's nuclear-related imports is found in Andrew Koch and Jeanette Wolf, "Iran's nuclear procurement program: how close to the bomb?" *Nonproliferation Review*, Fall 1997, pp. 123–135.

38. Mark Hibbs, "IAEA explores Iran's intentions, minus evidence of weapons drive," *Nucleonics Week*, 13 February 1992, p. 12; Mark Hibbs, "IAEA says it found no non-peaceful activity during recent Iran visit," *Nucleonics Week*, 16 December 1993, p. 11.

unsafeguarded nuclear facilities in any country. According to the Clinton administration, China has since complied with this pledge. Secondly, China was urged to publish and implement nuclear export control regulations, a process initiated by the promulgation of new nuclear export controls by China in September 1997.[39] China further expanded on this pledge with the June 1998 publication of detailed export control regulations covering *dual-use* nuclear items.[40] Thirdly, the United States strongly encouraged China to join the Zangger Committee, a multilateral body concerned with nuclear export controls, which it did on 16 October 1997.

Finally, and perhaps most importantly, for the certification process to go forward the Chinese were required to provide written assurances that it would engage in no new nuclear co-operation with Iran. American pressure had already stalled other China–Iran nuclear-related transactions. For example, although a 20-megawatt research reactor project was reportedly already under way in the autumn of 1992, China cancelled the deal in October 1992, citing "technical reasons." However, observers believe that American opposition had a direct impact on China's decision, and some have suggested that China cancelled the sale in order to maintain Most-Favoured Nation (MFN) trading status with the U.S.[41]

Beginning in 1992, the United States also pressured China to cancel its proposed sale of two 300-megawatt Qinshan civil nuclear power reactors to Iran. Sino-Iranian discussions and preparations continued for the reactor sale, with the United States stepping up pressure, using the possible implementation of the NCA as leverage. On 27 September 1995, Chinese Foreign Minister Qian Qichen told U.S. Secretary of State Warren Christopher that China had unilaterally decided to cancel the Qinshan reactor sales.[42] Some hold that the Chinese and Iranian explanation for the cancellation – that the two sides differed over technical and financial issues – was basically accurate. But American pressure may have in fact played a significant role. According to one U.S. official involved in negotiations with China, after Washington asked Beijing to terminate the sale, discussions were held over a face-saving mechanism to allow China to back out of its agreement with Iran. During the U.S.–China summit in October 1997 – on the day of the actual formal meeting between the two presidents – "authoritative, written communications" were provided confidentially to the United States by China stating that China would provide no new nuclear assistance to Iran. American

39. *Zhonghua renmin gongheguo he chukou guanzhi tiaoli* (*Regulations of the People's Republic of China on the Control of Nuclear Exports*) (Beijing: Guowuyuan, September 1997.) Also see "Regulations on nuclear export control," Xinhua, in FBIS-CHI-97–256, 11 September 1997; Jiang Wandi, "Tighter export controls on nuclear exports," *Beijing Review*, 1–7 December 1997, pp. 21–23.

40. "Nuclear product controls issued," Xinhua, in FBIS-CHI-98–170, 19 June 1998.

41. Mark Hibbs, "Sensitive Iran reactor deal may hinge on MFN for China," *Nucleonics Week*, 1 October 1992, pp. 5–6; Steve Coll, "U.S. halted nuclear bid by Iran," *The Washington Post*, 17 November 1992, p. A1.

42. Elaine Sciolino, "China cancels deal for selling Iran two reactors," *The New York Times*, 28 September 1995, p. A1.

national security advisor Sandy Berger stated: "We have received assurances from the Chinese that they will not engage in any new nuclear cooperation with Iran and that the existing cooperation – there are two projects in particular – will end. That is the assurance we have received."[43]

Under the summit agreement, China would complete two existing projects which are not of proliferation concern to the United States, and China also agreed not to provide new assistance to Iran. Specifically, China agreed to halt two projects the United States considered worrying. First, it would not provide the 300-megawatt power reactors mentioned above.[44] Secondly, it agreed to cancel the construction of a uranium hexafloride (UF6) production facility which would have provided a crucial, missing link to Iran's alleged development of a uranium enrichment capability. Interestingly, several Chinese officials have indicated that the main incentive for senior leaders to cancel these two deals was political and for the sake of improving Sino-U.S. relations; China's nuclear industry was not a major advocate of the NCA because they already have access to nuclear power technology of a number of countries like Russia, France, and Canada.[45]

Despite these developments in the nuclear and missile areas, China's past behaviour raises questions about future compliance. In several past instances, China sought to reinterpret and circumvent the spirit and letter of its commitments with the United States. For example, following its 1988 pledge to stop exporting Silkworm missiles to Iran, China continued to provide technologies and assistance to help Iran develop and deploy its own version of the missile, and, closely following the Chinese path of cruise missile development, to develop and deploy more advanced follow-on models.[46] Similarly, owing to the degree of Chinese assistance with Iran's indigenous cruise missile programmes, it is not clear whether China's September 1997 and January 1998 pledges on halting cruise missile exports carry much meaning. Press reports in 1999 suggest that China's commitment may be more limited in scope than the United States originally understood.[47] In terms of ballistic missiles, China's export of technologies and production assistance for short-range missiles may provide "spill-over" benefits for longer-range missiles under development, raising questions about the level of China's commitment to missile nonproliferation.

43. The White House, Office of the Press Secretary, "Press briefing by Secretary of State Madeleine Albright and National Security Advisor Sandy Berger," 29 October 1997; R. Jeffrey Smith, "China's pledge to end Iran nuclear aid yields U.S. help," *The Washington Post*, 30 October 1997, p. 1.

44. "China agrees to end nuclear trade with Iran when two projects completed," *Nuclear Fuel*, 3 November 1997, pp. 3–4.

45. Interviews, Beijing, September 1999.

46. Xie Guang *et al*. (eds.), *Dangdai Zhongguo de guotang keji shiye* (*Contemporary China's Defence Science and Technology Undertakings*) (Beijing: Dangdai Zhongguo chubanshe, 1992), pp. 73–81. On Chinese cruise missile-related assistance to Iran, see Gordon Jacobs and Tim McCarthy, "China's missile sales – few changes for the future," *Jane's Intelligence Review*, December 1992, p. 561.

47. Bill Gertz, "China agrees to deal with Iran on missiles," *The Washington Times*, 11 August 1999, p. 1.

With regard to nuclear-related assistance, the official Chinese line on the Qinshan reactor deal is that it is "suspended," not halted, as Washington states. A subsequent discussion with an authoritative Ministry of Foreign Affairs (MFA) official in late 1997 implied that China had not agreed to halt all future nuclear exports to Iran, but had in fact retained the option to restart this type of trade in the future.[48] In addition, given the tacit linkage between Sino-U.S. relations and China's ban on nuclear exports to Iran, if bilateral ties sour significantly then Sino-Iranian nuclear co-operation may be restarted. Thus, while the most obvious manifestations of Chinese transfers of weapons and technology to Iran have halted or slowed, the issue is apparently still debated within China.

Domestic Influences

In addition to the growing influence of external factors in China's decision-making on arms control and nonproliferation issues, the domestic context for making such decisions has become equally complex.

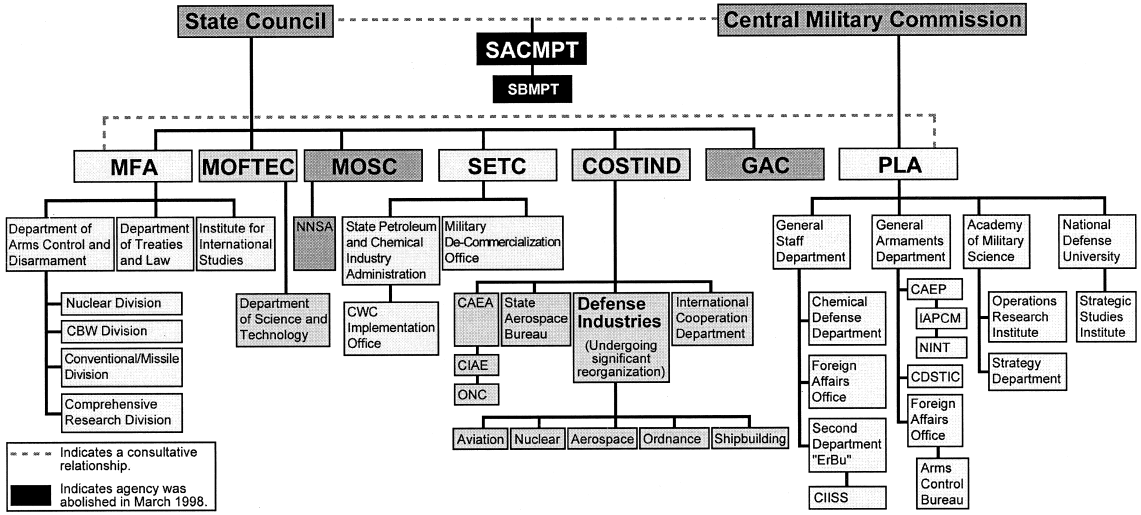
Institutional change. In China today, bureaucratic entities, scientific institutions and strategic research organizations are broadening their engagement in nonproliferation and arms control research and policy implementation (see Figure 1). These internal developments are marked by greater openness to change and outside opinion, less ideological rhetoric, the establishment and strengthening of agencies concerned with nonproliferation and arms control, a diffusion of expertise, and more sophisticated and pragmatic assessments and policies. Several prominent manifestations of this more open atmosphere are evident: a more obvious degree of intra- and inter-agency bargaining; the nascent formation of like-minded cohorts which cut across organizational lines; and an increased willingness to solicit and accept advice from outside institutional structures, including from foreigners.

Indeed, the very need for China to be more active in the increasingly dynamic and complex global nonproliferation and arms control agenda of the post-Cold War era has created a basic demand for more institutions, individuals and sources of expertise. While certainly necessary to protect and to promote Chinese interests, this diffusion of expertise within the Chinese government has also contributed to the pluralization and opening of the decision-making process inside China and the exposure of a growing cadre of specialists and specialized institutions to the international community.

Most prominent among these is the MFA's Department of Arms Control and Disarmament, established in autumn 1997. Led by Ambassador Sha Zukang, this new organization is most active in the areas of internationally-negotiated treaties and regimes and, to a lesser extent, is involved in the implementation of domestic nonproliferation export con-

48. Interview, Beijing, December 1997.

Figure 1: **China's Arms Control and Nonproliferation Community**



Other organizations involved in arms control and nonproliferation research:

Beijing Institute of Nuclear Engineering; Beijing Institute of Systems Engineering; China Institute of Atomic Energy; China Institute of Contemporary International Relations; Chinese People's Association for Peace and Disarmament; Institute of American Studies: Center for Arms Control and Nonproliferation Studies; Institute for World Economics and Politics; National Defense Science Technology University; Program in Arms Control and Regional Security (Fudan University); Program in Arms Control and Disarmament (Peking University); Scientists Group on Arms Control.

Acronyms:

AMS, Academy of Military Sciences; CAEA, Chinese Atomic Energy Agency; CAEP, China Academy of Engineering Physics; CDSTIC, China Defense Science and Technology Information Center; CIAE, China Institute of Atomic Energy; CIISS, China Institute for International Strategic Studies; COSTIND, Commission on Science, Technology and Industry; GAC, General Admistration of Customs; IAPCM, Institute of Applied Mathematics and Computational Physics; MFA, Ministry of Foreign Affairs; MOFTEC, Ministry of Foreign Trade and Economic Cooperation; MOSC, Ministry of Science and Technology; NDU, National Defense University; NINT, Northwest Institute of Nuclear Technology; NNSA, National Nuclear Safety Administration; ONC, Office for the Control of Nuclear Materials; PLA, People's Liberation Army; SACMPT, State Administrative Committee on Military Products Trade; SBMPT, State Bureau of Military Products Trade; SETC, State Economic and Trade Commission.

trols; the MFA appears to have little role in promoting military-related transparency measures. The new department consists of four divisions. The "first division" covers nuclear issues such as the nuclear testing, nuclear nonproliferation, fissile material issues and nuclear export controls; the "second division" covers chemical and biological issues such as China's compliance with the CWC and chemical export controls; the "third division" is devoted to covering conventional weapons and missile issues such as China's position on anti-personnel land mines, missile exports and the MTCR, and China's position on the UNROCA; the "fourth division" (also called the "comprehensive division") is principally devoted to meeting the research needs of the department but has also covered South-East Asian security issues. The creation and subsequent expansion of this new department has occurred at a time of downsizing of both the Foreign Ministry and the overall government bureaucracy, a further testament to Beijing's growing interest in arms control and nonproliferation issues.

The PLA and bodies associated with it are other key players in the nonproliferation and arms control decision-making process. The precise scope of that influence is not well understood but appears to derive from the military's technical expertise, its traditionally powerful political position within the Chinese decision-making structure, the influence of certain high-ranking officers, and the PLA's obvious concern with arms control issues which might limit Chinese military capabilities. A significant number of organizations within the PLA or with close ties to it – such as the China Institute for International Strategic Studies, the Institute for Strategic Studies of the National Defence University, the new State Commission on Science, Technology, and Industry for National Defence (COSTIND), the Academy of Military Sciences, the PLA General Staff Department (military intelligence), and the newly-established PLA General Armaments Department (*Zong zhuangbei bu*)[49] – conduct research and provide technical and policy advice to the civilian nonproliferation and arms control decision-making establishment.

Two military-related organizations in particular are going through considerable reorganization and reform, which will affect their roles in arms control and nonproliferation decision-making. These organizations are COSTIND and the General Armaments Department (GAD). COSTIND was formally abolished and then reconstituted as part of the government organizational reforms announced at the National People's Congress in March 1998. It used to oversee the defence industrial base and was headed by military personnel, but was "civilianized" under the reforms; the new COSTIND is headed by civilian leaders, and appears to be tasked with implementing defence production directives and continuing to oversee the civilian production output of the defence plants.

49. The Chinese translation of the General Armaments Department is *Zong zhuangbei bu*. Although the term "zhuangbei" is often translated as "equipment," Chinese officials and scholars normally refer to this new organization as the General Armaments Department and not the General Equipment Department.

With this reorganization, COSTIND lost some of its former prominence in arms control policy-making. The Arms Control Division within the former COSTIND's Foreign Affairs office was moved to the GAD and is now staffed exclusively by military personnel. COSTIND's role in arms control and nonproliferation appears to be limited to the realm of assisting the export control process. The new COSTIND now controls two subsidiary bureaus, the State Aerospace Bureau and the State Atomic Energy Agency, whose principal role is to regulate the aerospace and nuclear industries, respectively. These organizations were previously part of former defence industrial enterprises (*jungong qiye*) such as the China Aerospace Corporation (CASC) and the China National Nuclear Corporation (CNNC). As part of their responsibilities, these bureaus are expected to vet applications for export licences. Indeed, this development is particularly positive for nonproliferation because the placement of these regulatory bodies within the new COSTIND has separated them from corporate interests which rank exports among their principal goals. Moreover, the new COSTIND may assume responsibility for overseeing and vetting all of China's exports of conventional military goods and missiles; this move apparently comes in the wake of the dissolution in March 1998 of the State Administrative Committee on Military Products Trade (SACMPT) which used to co-ordinate military exports.

The GAD, formed in spring 1998, draws together the uniformed military from COSTIND with the General Staff Department's Equipment Directorate, as well as with other military equipment-related offices from other parts of the General Staff system. The GAD's main responsibilities encompass determining the PLA's arms procurement needs, overseeing the life-cycle management of the military's weapons, advising export control decisions, and having a voice in arms control negotiations affecting the PLA. Specifically, the GAD's role in arms control and nonproliferation policy-making results from three main activities. First, as mentioned above, it now controls the "old" COSTIND's arms control division which conducts research on the full spectrum of arms control and nonproliferation issues including nuclear, chemical and biological weapons proliferation, exports controls, and nuclear testing issues. In addition, the China Defence Science and Technology Information Centre (CDSTIC), which among other tasks conducts research on arms control and nonproliferation topics, now reports to the GAD. The results of this research are presumably furnished to the office of the Chief of the General Staff for use in inter-agency discussions and to PLA representatives in the field at overseas embassies and at multilateral disarmament organizations such as within the United Nations.

Secondly, the GAD plays a limited role in the export control review process. In the nuclear realm, for example, it is responsible for controlling exports of nuclear *materials*; it is also expected to have a hand in vetting exports of certain military items along with other agencies such as the MFA. According to one American export control expert, the Ministry of Foreign Trade and Economic Co-operation (MOFTEC) is in constant

contact with GAD officials over the telephone when reviewing licence applications for military products, missiles and missile technologies.[50]

Lastly, the GAD will have key inputs into Chinese arms control and nonproliferation policies owing to the influence of certain individuals. It is headed by General Cao Gangchuan, who was the head of the former COSTIND until its "civilianization" in March 1998. Cao was previously deputy chief of the General Staff, and has played an important role in some of China's more well-known arms export cases, such as the transfer of DF-3 intermediate range ballistic missiles to Saudi Arabia. He was also appointed to the Central Military Commission in October 1998, the military's highest policy-making body. Zhu Guangya, an influential nuclear physicist closely associated with China's nuclear weapons programme, continues to head the Science and Technology Committee which formerly served as the chief advisory body to COSTIND, but which has now been transferred to advise the GAD; General Qian Shaojun, another physicist and also a member of the GAD's Science and Technology Committee, is the military's leading voice on arms control issues.

With these recent changes, it is difficult to ascertain the precise channels of authority within the PLA on arms control and nonproliferation decision-making. However, as the decision-making structure diversifies and demand for expertise grows, the sheer number of PLA-related specialists will be likely to assure those organizations a continuing strong influence in the decision-making process, especially on questions of proliferation and military transparency.

On the specific issue of export controls – formulating, implementing and enforcing control over the export of sensitive materials – the situation in China is also in flux. This situation has resulted in greater diffusion of decision-making authority. According to a Chinese arms control official, under the planned economy, a centralized system of "executive decrees" sufficed to implement export controls effectively. However, under the conditions of "reform and opening to the outside world and the rapid development of the socialist market economy," the Chinese government has had to implement a new system which is more authoritative, comprehensive and consistent with international practice (including licensing procedures and export control lists).

Both of these steps involve the delegation of authority to various government ministries. According to past regulations (and depending on the export), the responsibilities for licensing the export of sensitive materials and military products fell to such organizations as the Chinese Atomic Energy Authority (CAEA), MOFTEC, SACMPT, the Ministry of Chemical Industry (MCI), the Foreign Ministry and the State Customs Administration. Effectively implementing these export controls was made

50. Draft version of Richard T. Cupitt and Yuzo Murayama, *Export Controls of the People's Republic of China 1998*, Center for International Trade and Security, University of Georgia, p. 17.

even more complex with the March 1998 bureaucratic reorganization, especially in the defence industry. Most notably, China's five defence industries (nuclear, aerospace, aviation, ordnance and shipbuilding) were broken up in 1999 into ten related corporations with responsibilities being distributed among the new entities. This decision, which was intended to draw clearer lines between the military and civilian production activities and further to separate the state from enterprise operation, abolished some of the main entities such as the SACMPT and the MCI involved in administering export controls. In other cases where complete organizations were not abolished and responsibilities shifted, the lines of authority among various organizations are murky, possibly complicating their ability to co-ordinate on export control decisions.[51] Personal interviews have revealed that these changes have created uncertainties in the lines of authority among these organizations, many of which produce sensitive military goods.

These multiple changes raise several questions about the effective control over China's military technology exports. Some recent conversations with Chinese officials suggest they are considering these very same issues, albeit with few answers so far. At a minimum, however, the unclear lines of authority wrought by these changes raise the risk that illicit exports of WMD-related items could fall through the cracks as China seeks to reform and rebuild its defence industrial complex and relevant bureaucracies.

Beyond these specific organizational shifts lies the broader trend of the growth and pluralization of China's community of nonproliferation and arms control specialists; these changes have influenced policy decisions at different times and to varying degrees in the last few years. A few such cases of internal debates are provided below.

Internal debates over the CTBT. The Chinese decision to sign the CTBT generated fractious debate within the arms control policy-making community in China. The debate split roughly along "political" and "military" lines, though in practice the division was not so elegant. On one side were those associated with the PLA and the defence industrial community, particularly the nuclear weapons research and development complex. While not opposing the treaty *per se*, they argued that China was "not technically ready" to sign.[52]

According to these views, more tests were necessary to strengthen China's nuclear weapons capability, especially in the face of the vastly more extensive and technologically more sophisticated programme of testing which the other nuclear powers had conducted. Of particular concern was the high degree of confidence the United States has in

51. Interviews and discussions with Chinese officials and nonproliferation specialists, Beijing, April and May 1998.

52. Xiangli Sun, *Implications of a Comprehensive Test Ban for China's Security Policy*, Center for International Security and Arms Control, Stanford University, June 1997, p. 8. Dr Sun is a physicist working for the Arms Control Research Division of the Institute of Applied Physics and Computational Mathematics within the Chinese strategic weapons research and development complex.

assuring the safety, security and reliability of its nuclear weapons without further testing, owing to the extensive financial and technical support given to the U.S. stockpile stewardship programme. In the face of the technological superiority of the American nuclear weapons programme and the possibility that the United States would deploy effective missile defences in the future – thereby extending even wider the technological gap between the U.S. and Chinese strategic arsenals – deep concerns arose among Chinese strategists and nuclear scientists tasked with assuring that the country could credibly maintain a basic countervalue retaliatory capability.

But "military-technical" voices were not the only ones questioning China's interest in signing the treaty. Wu Xueqian, former Chinese foreign minister, when vice-chairman of the Chinese People's Political Consultative Conference in early 1996, stated that China would not sign a CTBT unconditionally, saying that the American demand for a CTBT banning all nuclear explosions was "unreasonable."[53]

In announcing its moratorium on nuclear testing in July 1996, the Chinese government went to extra lengths to assuage the concerns of the military-technical community:

> Over the past three decades and more since its first nuclear test on 16 October 1964, China has established a capable and effective nuclear self-defence force. In a pioneering spirit of self-reliance, sustaining hardships and personal sacrifices, a large number of Chinese workers, scientific and technical personnel, officers and soldiers of the People's Liberation Army, as well as all the staff working on the front of national defence have made strenuous efforts under extremely difficult conditions in the research, manufacture and development of China's nuclear weapons. Their indelible historical feats have greatly boosted the morale of the Chinese people and enhanced China's capability to safeguard peace. The Chinese government and people wish to extend cordial greetings and pay high respect to them.[54]

The importance and intensity of the military and strategic scientists' position is indicated by several developments. First, as noted above, China continued testing throughout the negotiation of the CTBT in the face of enormous international pressure and condemnation. Secondly, the pace of China's testing over 1994–96 was one of the most ambitious and sustained in its nuclear testing history. Six tests over a 25-month period (June 1994 to July 1996) more than doubled its average testing pace. It was also the only time in Chinese history that nuclear weapons were tested twice a year for three successive years.[55] In addition, this period marked the only time in Chinese testing history that blasts occurred in either July or August – outside the typical Chinese testing "season" –

53. "China still balks at total test ban," *The Washington Times*, 12 January 1996, p. A13.

54. *Statement of the Government of the People's Republic of China*, 29 July 1996; Conference on Disarmament document CD/1410, 29 July 1996.

55. With 45 tests over a period of 381 months (October 1964 to July 1996), China averaged about 0.118 tests every month, or 2.95 tests over a 25-month period. Comparably intensive testing occurred over the period October 1975 to December 1978, when China tested nine times over a 38-month period, and four times in 1976 alone.

which may also indicate some sense of urgency on the part of the military and nuclear scientific communities.[56] Finally, it seems likely that the initial bargaining positions put forth by China – especially on peaceful nuclear explosions and on verification and inspection procedures – both offered the military the possibility of further testing and succeeded in stalling the negotiation process to grant China's testing programme more time. Shortly after the Chinese announced in early June 1996 that it would end its testing programme following one more test, China backed away from its principal objections with the treaty and made a number of key concessions allowing the negotiations to go forward.

Nevertheless, subsequent American and Chinese information about the extent of China's nuclear modernization programme suggests a possible contributing factor to China's eventual willingness to sign the CTBT: China may have been farther along in its nuclear modernization than was generally accepted in the West. The report by the Select Committee on U.S. National Security and Military/Commercial Concerns with the People's Republic of China (commonly known as the Cox Report) maintains that China stole classified information related to several U.S. nuclear weapons designs, mostly notably its most advanced W-88 nuclear warhead. While it remains unclear – and the subject of significant debate – what information and how much of it was actually stolen, these data may have provided the Chinese with additional confidence about the operational reliability of its new warhead designs. Furthermore, in response to the Cox Report's allegations, China's State Council issued a lengthy and detailed rebuttal which vehemently rejected the claim that China needed to steal nuclear design information. Specifically, the Chinese rebuttal revealed – for the first time – details about the extent of China's own nuclear weapon modernization programme; it stated that in the 1970s and 1980s China had alone "master[ed] in succession the neutron bomb design technology and the nuclear weapon miniaturization technology."[57] If true, this information would suggest that China had a high degree of confidence in its nuclear arsenal which may have eased the political leadership's security concerns about signing the CTBT.

On the other side of the CTBT debate, the MFA appeared to take the lead in support of signing on to the CTBT in spite of the problems it may pose to China's nuclear deterrent. But not only MFA officials held this view. For example, a serving PLA military officer and leading arms controller presciently recognized in 1994 that a CTBT was to be "an inevitable development."[58] From the outset of CTBT negotiations, top Chinese leaders and officials consistently maintained their desire to

56. Thirty-two of China's 45 tests – more than 70% – took place in either May–June or September–October.

57. This statement was made in a report released by Zhao Qizheng, Minister of Information of the State Council. "Facts speak louder than words and lies will collapse by themselves – further refutation of the Cox Report," Information Office of the State Council, 15 July 1999. This report can be found on the internet at http://www.china.org.cn/.

58. Zou Yunhua in *Guoji wenti yanjiu* (*International Studies*), No. 1 (January 1994). Sr. Col. Zou is posted to the Arms Control Group of the GAD (formerly COSTIND) and served in Geneva with the Chinese delegation to the CD during the CTBT negotiations.

conclude a treaty by the end of 1996, which suggests that a political decision to sign the treaty in principle had been made by 1993 or earlier. It is possible that this decision was made on the understanding that China might be able to continue testing after 1996 until the treaty's entry-into-force or within the parameters of a PNE exception. Also, as suggested above, recent Chinese and American information on China's nuclear modernization efforts indicates that China may have been further along in its nuclear modernization programme than Western analysts assumed.

According to interview data, the MFA argued that China's international stature and image as a responsible great power were at stake, and that China's political and diplomatic manoeuvrability and progress required a constructive position on the CTBT. In addition, it was argued that China would gain certain concrete benefits from signing the treaty: specifically, that supporting the CTBT would not only be beneficial to China's great power image but would promote the goals of the nonproliferation regime by demonstrating good faith in Article VI of the NPT (that the nuclear powers would work towards general and complete disarmament), create more favourable and peaceful international conditions for Chinese economic development, and contribute to further disarmament on the part of the major nuclear powers, the United States and Russia – all of which are in China's long-term interests.[59] In the end, the Chinese leadership was convinced by the MFA argument, and decided against the military's recommendation for continued testing. But it is important to note that the public record suggests the reasons for this decision were couched in the language of Chinese national interests, not as a result of a more "internationalist" or "co-operative security" perspective on the part of the Chinese leadership.

The internal politics of military technology sales. Although significantly less information is known about the intra-governmental debates regarding military technology sales, the available information suggests a broad divide between the MFA on the one hand, and China's defence-industrial community (including trading companies formerly linked to the PLA) on the other. The MFA gains little from arms exports and is often forced to deal with their negative consequences on China's broader diplomatic objectives, especially with the United States. By contrast, the defence industries and PLA trading companies (prior to July 1998), have clear incentives to sell arms because in the face of government cutbacks they can generate hard currency while continuing to demonstrate their technical prowess. One of the best-known cases of this bureaucratic divide is China's sale of some 35 DF-3 medium-range ballistic missiles to Saudi Arabia in 1988. While the MFA's exact role in the negotiation and implementation of this deal is unclear, the Ministry

59. These points are made by Sun, "Implications of a comprehensive test ban," p. 11. Sha Zukang, who served as the Chinese ambassador to the CD during CTBT talks, was especially active in presenting the Ministry's case to the military leadership. Interviews, Beijing, April 1997.

appears – at a minimum – to have served as a moderating voice against military interests. John Lewis, Hua Di and Xue Litai argued that the MFA opposed the deal for diplomatic reasons[60] whereas another, more recent account by Lu Ning, a former MFA official, claims the MFA supported the sale but expressed particular concern about its potentially harmful effect on Sino-U.S. and Sino-Soviet relations. In the latter account, the MFA attempted to alter the deal slightly to address its concerns but such suggestions were overruled by high-level officials who feared losing such a lucrative opportunity.[61]

On a formal level, the MFA participates to a limited extent in decisions on exports of controlled items (such as nuclear, chemical, missile and military goods), but its role in this process has changed in the last decade as China's export control system became more formalized and institutionalized. Beginning in the mid-1980s when *military* exports were a controversial issue for China, all military transfers to "sensitive" regions or involving sophisticated weapons required policy clearance from the MFA. As this situation became more complex, in mid-1989 Beijing set up a high-level administrative body, with MFA and PLA involvement, to co-ordinate decisions on arms exports.[62] Under this system, the PLA's General Staff Department, COSTIND, MOFTEC and the MFA were expected jointly to review possible arms deals, with special concern for potentially controversial transfers such as missile exports; when foreign opposition was expected the MFA was tasked with writing a justification.[63] This overall authority was first publicly outlined in China's 1995 white paper which designated the SAMCPT as the lead co-ordinating body.[64] More recently, China's new export control laws covering sensitive nuclear and chemical items reaffirmed the MFA's input into the export review process;[65] the most recent regulations covering dual-use nuclear exports appear to have even strengthened the MFA's role.[66] Yet recent changes in the organization of China's defence industries and the allocation of new responsibilities among the GAD and COSTIND appear to have limited the MFA role in vetting exports of missile and conventional military items.[67] Overall, the concentration of expertise on nuclear, chemical, missile and conventional weapons issues within the Foreign Ministry's arms control department will lend it additional credibility in inter-agency debates on exports of controlled items.

However, the MFA's direct involvement in decision-making on military technology exports is by no means absolute. One of the difficulties with sensitive arms deals such as the Saudi missile deal is that they are

60. Lewis *et al.*, "Beijing's defense establishment," p. 95.
61. Lu Ning, *The Dynamics of Foreign-Policy Decisionmaking in China*, pp. 113–17.
62. *Ibid*.
63. Lewis et al., "Beijing's defense establishment" p. 95.
64. *China: Arms Control and Disarmament*, section 5.
65. "Regulations on nuclear export control," Xinhua, FBIS-CHI-97–256, 11 September 1997.
66. "Nuclear product controls issued," Xinhua, FBIS-CHI-98–170, 19 June 1998.
67. Medeiros and Gill, *Chinese Arms Exports: Policy, Process and Players*, pp. 33–41.

often negotiated in secrecy and, as a result, their formal approval occurs at the highest levels of the Central Military Commission. This procedure by-passes normal channels and leaves many bureaucrats, who are not directly involved, uninformed. In some cases, the right hand of the bureaucracy does not know what the left is doing. According to one account of the Saudi missile case, while the MFA's American Affairs Department was aware of the MTCR's formation after having been given a draft text of the regime's guidelines, it had no idea that another MFA division was negotiating with Saudi officials a missile export that ran counter to the MTCR guidelines.[68] However, many of these concerns are based on examinations of cases that occurred in the 1980s; at that time the PLA and its companies operated much more independently and decision-making over arms control and nonproliferation was not as formalized and institutionalized as it is today.

Even when the MFA is kept informed of potentially sensitive arms deals, its concerns about its impact on China's broader relations may fall on deaf ears. According to one authoritative report, officials of Polytechnologies, a large arms export firm formerly under the PLA's General Staff Department, have responded to MFA concerns by arguing:

> We are determined to devote ourselves to raising funds for promoting the four modernizations of China. This is a glorious mission that should claim precedence over all others. Right now the Ministry of Foreign Affairs should review how to serve this mission … It is wrong to sacrifice the number one mission for the sake of foreign affairs.[69]

This remark, although dated, highlights the kinds of financial incentives which may drive China's military interests to sell weapons abroad. Since the initiation of China's economic reform effort in the early 1980s, China's military forces under the Central Military Commission and its defence industries controlled by the State Council have been forced to seek external funding in the face of budget restraints. The government demobilized the PLA by over 25 per cent beginning in the early 1980s and its equipment procurement declined accordingly. In order to survive in this austere environment, some defence industries pursued military-to-civilian conversion efforts while others turned to arms exports to generate funds. For example, during the 1980s, China's M-family of medium and short-range missiles were developed by three different research academies that were starved of funds and felt marginalized within China's sprawling aerospace bureaucracy. These academies, which were linked to the aerospace ministry, developed the M-9, the M-11 and the M-7/8610 missile; each system was designed especially for export as a hard currency earner.[70] The design and construction of each of these

68. Lu Ning, *The Dynamics of Foreign-Policy Decisionmaking in China*, pp. 113–17.
69. 1989 interview with COSTIND official as cited in Lewis *et al*., "Beijing's defense establishment," p. 95.
70. These missiles' names are derived from the English word "missile," indicating their explicit export orientation. Once the M-9 and M-11 were completed and tested, the PLA purchased some and gave them the designations DF-15 and DF-11 respectively.

missiles also served to validate the scientific and technical achievements of these institutes which, during times of austerity and contraction, distinguished them within China's defence industrial base. More recently, in late 1997 some Chinese companies which produce cruise missiles and related technologies disagreed with and opposed the government's decision to ban all cruise missile exports to Iran in the wake of the first Clinton–Jiang summit. The adoption of this policy resulted in significant lost revenue for them. Beyond these specific examples, however, lies the broader point that strong and pervasive financial and technical motives for arms exports persist and they will continue to complicate the MFA's involvement in arms export decisions in the future.

In addition to these internal political debates, there are other domestic factors which broadly influence Beijing's export control behaviour. The ongoing reform and restructuring of China's economy since the early 1980s has often resulted in large, systemic changes which, although positive for the economy, greatly complicate effective implementation of China's arms control and nonproliferation policies. For example, China's initial efforts at trade liberalization led to the massive proliferation of thousands of small and medium-sized corporations trading with the outside world which, in turn, vastly complicated Beijing's ability to implement and enforce its various commitments not to sell military equipment, materials and technologies.[71] Beijing's main problem in this regard is a lack of sufficient resources to inform all the relevant commercial entities about the new export control regulations and their need to comply with them. While the ultimate effectiveness of these new regulations is still unclear, ensuring their implementation raises a second domestic issue which affects China's arms control policy-making: an underdeveloped appreciation for the rule of law in China. Significant questions remain about how companies interpret and implement these new export control regulations. A central concern is that these laws are viewed in the classic communist fashion as general policy "directives" that do not require strict adherence but merely provide overall guidance and suggested behaviour. Under these conditions, various controlled exports could slip through a nascent export system.

Conclusion

The above analysis of the foreign and domestic influences on China's arms control and nonproliferation decision-making suggests a number of important findings. First, and most importantly, Chinese nonproliferation and arms control policy-making is undergoing a critical period of transition at home, characterized by debates, tensions, pluralization and organizational change. This situation explains in part the appearance of

71. Nicholas R. Lardy, *Foreign Trade and Economic Reform in China 1978–1990* (Cambridge: Cambridge University Press, 1992), pp. 16–36; Nicholas R. Lardy, "Chinese foreign trade," in Robert Ash *et al.* (eds.), *The Chinese Economy Under Deng Xiaoping* (Oxford: Clarendon Press 1996), pp. 217–246.

disjointed and contradictory Chinese decisions regarding arms control and nonproliferation. Secondly, in terms of foreign influences, the most constructive developments in Chinese nonproliferation and arms control policies closely coincide with Beijing's post-Tiananmen diplomatic offensive of the early to mid-1990s to break out of its self-imposed isolation and establish itself as regional, if not global, power. This trend suggests the growing influence of external factors in shaping China's more constructive approaches to arms control and nonproliferation.

Thirdly, the Chinese approach towards nonproliferation and arms control is far less inclined towards co-operation in the absence of international consensus or pressures and, specifically, the desire to maintain a relatively good U.S.–China relationship is a key input variable in explaining Chinese policy-making choices in a number of cases. Overall, China's approach to arms control and nonproliferation is increasingly constrained and shaped by the web of international commitments, dependencies, status relationships and security realities which it faces. A more co-operative Chinese position often results from calculations hemmed in by the very processes and benefits of international integration and acceptance.

Fourthly, this analysis of the role of domestic influences suggests that politics and economics – rather than strictly technical or military considerations – increasingly carry weight in the nonproliferation and arms control decisions taken by China's top leaders. Indeed, the concentration of arms control expertise and clout of the new arms control department within the Foreign Ministry will further entrench the role of politics and foreign policy in China's arms control policy-making. In addition, the recent restructuring of China's government bureaucracy and the defence industry and the problems this creates for effective policy implementation further highlights the influence of economic and political factors in arms control and nonproliferation decision-making. However, by dint of their technical expertise, bureaucratic influence and entrenched interests, the PLA and associated military bodies will retain a strong influence.

In looking ahead, the above conclusions underscore the need to develop a balanced approach to viewing the various external and internal factors influencing China's arms control and nonproliferation policies. If it is true that concerns over prestige, image and relative rather than absolute gains in security can prevail in certain cases over narrow military and technical considerations, then this suggests new paths toward constructive dialogue with China on nonproliferation and arms control. More interaction between the international community and China's community of arms control specialists will further expand the expertise of Chinese policy makers, while helping to diversify policy options for the international community as well.