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# The Sixteen Fears: China's Strategic Psychology

**Michael Pillsbury**

During the Cold War, an influential group of American defence planners sought to understand Soviet defence decisions by grasping the Soviet mind, including exploring how the Soviet generals thought about war and their opponents. This was achieved only through intensive intelligence collection and intellectual analysis, including extensive use of open sources. It was a process which, as George Kennan put it in his analysis of Soviet thinking, 'would require living with contradictions'.<sup>1</sup>

A similar effort to understand the Chinese mind has not been undertaken by modern strategists. The advocates of various China policies have been largely unable to access the materials that would provide them insight into how the Chinese might react, not just because of linguistic barriers and restricted circulation, but because, to forecast Chinese defence decision-making over the long term, psycho-cultural factors may be as important as rational or cognitive considerations. Understanding Chinese military fears and concerns can provide insights into their military planning while enabling American policymakers to assess the most successful strategic choices. Yet understanding Chinese psycho-cultural factors promises to be more difficult than studying the Soviets. Nathan Leites, for one, has suggested that China might be more difficult to understand than the Russian language and culture.<sup>2</sup>

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Many observers have noted China's lack of transparency about the future size, scope and long-range goals of its military-modernisation plans. Looking back, there have been forecasts that either overestimated or underestimated Chinese military progress. Many policy opportunities depend in part on understanding the choices China has already made, as well as future decisions that other nations may be able to influence. Drawing on limited available open-source evidence and a review of Chinese internal writings,<sup>3</sup> 16 psychological factors – military fears or vulnerabilities – can be identified that illustrate why China has designed the forces it has and that reveal those factors likely to influence Chinese military policy in the future.

### **US policy and Chinese fears**

Broad calls for engagement with China have long been the currency of American policymakers. Advocates of engagement attack non-existent straw men who purportedly want war with or aggressive containment of China. Yet in a review of US writings from the past decade, not a single author could be found who promoted containment or predicted inevitable war with China.<sup>4</sup> Rather, the authors largely ignored the problems presented by China's rise and minimised the fearful hostility of the Chinese military under the assumption that successful US–China engagement would make serious military concerns irrelevant. This view was dominant until about 2009, causing intelligence and defence officials to greatly underestimate the pace of Chinese military development during more than a decade of rapid Chinese advancement.<sup>5</sup> As Henry Kissinger noted in a recent article, 'enough material exists in China's quasi-official press and research institutes to lend some support to the theory that relations are heading for confrontation rather than cooperation'.<sup>6</sup> Faced with such rapid military advancement and an assertive China over the past few years, the notion that unconditional US–China engagement is the way forward has declined in prominence.

A second view among American analysts of how best to deal with China might be described as the 'meet-force-with-force' approach.<sup>7</sup> Among the advocates of this approach are leading proponents of new weapons-system acquisitions, who claim they merely want to maintain the traditional force balance that has been disrupted by China's military advancement. While

there are valid arguments to be made for certain systems, these proposals and the related analysis of military hardware concerns mainly technical and budgetary issues, such as doubling the American shipbuilding rate and the US Air–Sea Battle Office, that are outside the scope of this article.<sup>8</sup>

Instead, this article focuses on a third set of proposals, which might be thought of as the work of ‘strategists’. Proponents are cognisant of the limits on future US defence spending and know the importance of wise resource allocation. These thinkers are inspired by traditional geopolitical strategists dating to Richelieu and draw lessons from the US approach to the Soviet Union.

The policy proposals they have developed vis-à-vis China revolve around three concepts: reassurance, cost imposition and dissuasion.<sup>9</sup> Regarding reassurance, one set of policies is intended to convince the Chinese leaders that their military expansion is excessive and that they should limit their build-up. It may be possible to blend or combine this set of reassurance proposals with a second set of policies that use cost-imposition strategies to influence future Chinese decisions. As in a game of chess, each US policy move can elicit a counter-move, with the goal being to steer Chinese military investments away from disruptive weapons systems and power projection toward more conventional, domestic self-defence systems. Finally, dissuasion policies are aimed at countering China’s forces in such a way that they find disruptive military investments unproductive.

One way of evaluating the potential effectiveness of these policies should be to apply the principle of ‘first, do no harm’, which requires any policy approach that pursues these techniques to have a good idea of China’s likely response. How might a strategy be designed for the United States and China’s neighbours to limit disruptive features of the Chinese military build-up? It seems intuitively obvious that any effort by the United States or China’s major neighbours (Russia, India, Japan, Vietnam and Central Asia) to either reassure China or steer it away from disruptive weapons investments and force deployments will be decisively affected by the Chinese leadership’s decision-making process and military ‘mind’.

Unfortunately, the decision-making process is obscure. It is difficult for non-Chinese to assess the unique cultural environment of Chinese military

strategists when considering which of these policies to pursue. In many historic confrontations, strategists have sought to understand the thinking and motivations of their adversaries so as to better anticipate their actions. While notionally governed by rational analysis, the behaviour of most strategic actors is highly influenced by their psychological peculiarities: factors such as emotions, culture and fears.<sup>10</sup>

### The sixteen fears

These 16 fears explain why Beijing sees specific strategic needs and has focused China's defence build-up over the past decade on certain systems. There is no way to know if this list is complete, nor is it possible to rank order the intensity of these fears, but all are likely to continue to influence Chinese defence decision-making in the long term.

1. **Fear of an island blockade** – Many in the Chinese military fear that China could be easily blockaded by a foreign power because of the maritime geography of an island chain stretching from Japan to the Philippines that is perceived to be vulnerable to fortification.<sup>11</sup> The islands are seen as a natural geographical obstacle blocking China's access to the open ocean that is actively being exploited by surrounding countries.<sup>12</sup> Indeed, a former Japanese naval chief of staff has boasted that Chinese submarines would be unable to slip into the deep waters of the Pacific through the Ryukyu island chain, to the north or south of Taiwan, or through the Bashi (Luzon) Strait without being detected by US and Japanese anti-submarine forces.<sup>13</sup> Chinese military authors frequently discuss the need for training, exercises and a military campaign plan to break out of an island blockade.<sup>14</sup> One operations-research analysis describes seven lines of enemy capabilities that Chinese submarines would have to overcome to break a blockade.<sup>15</sup> The opponent is assumed to have an anti-China blockade system of anti-submarine nets, hydro-acoustic systems, underwater mines, surface warships, anti-submarine aircraft, submarines and reconnaissance satellites.<sup>16</sup> The Chinese officers who wrote this analysis cited ten earlier studies from 1997 to 2004

that also assessed how to estimate the force required for breaking out of an island-chain blockade.<sup>17</sup>

2. **Fear of a loss of maritime resources** – Another maritime fear that concerns Chinese authors is that valuable resources within China's maritime territorial boundaries are being plundered by foreign powers because of China's naval weakness, threatening the country's future development.<sup>18</sup> Various proposals have been advocated to improve the situation. Zhang Wenmu, a former researcher at a Ministry of State Security think tank, goes so far as to say: 'The navy is concerned with China's sea power, and sea power is concerned with China's future development. As I see it, if a nation lacks sea power, its development has no future.'<sup>19</sup> An article published in the military journal *Military Economic Research (Junshi Jingji Yanjiu)* in 2005 states that China's external-facing economy, foreign trade and overseas markets 'all require having a powerful military force as a guarantee, otherwise China will be possibly caught being passive'.<sup>20</sup>
  
3. **Fear of the choking-off of sea lines of communication** – Many Chinese writings touch on the vulnerability of China's sea lines of communication (SLOCs), especially the petroleum 'lifeline' in the Strait of Malacca.<sup>21</sup> Advocates of a blue-water navy cite the insecurity of China's energy imports.<sup>22</sup> According to one Chinese observer, US, Japanese and Indian fleets together 'constitute overwhelming pressure on China's oil supply',<sup>23</sup> though another study concludes that 'only the U.S. has the power and the nerve to blockade China's oil transport routes'.<sup>24</sup> Similarly, *Campaign Theory Study Guide*, a 2001 textbook written by scholars at China's National Defense University (NDU), raises several potential scenarios for the interdiction and defence of sea lines of communication.<sup>25</sup> The *Science of Campaigns*, an important text also published by the NDU, discusses SLOC defence in its 2006 edition.<sup>26</sup> Some authors express urgency: 'Regarding the problems ... of sea embargo or oil lanes being cut off ... China must .... "repair the house before

it rains”.’ These advocates seem to want to quickly shift priorities away from a submarine-centric navy to one with aircraft carriers as the ‘centerpiece’. The most ambitious advocates of emphasising the security of sea lines of communication call for a global Chinese force presence.<sup>27</sup>

4. **Fear of a land invasion or territorial dismemberment** – China has outlined campaign plans against various invasion scenarios in a training manual intended for military use only;<sup>28</sup> and an influential 2005 study conducted by researchers from the NDU, the Academy of Military Science and other top strategy think tanks assessed the vulnerabilities of each of China’s seven military regions, examining the various routes that an invading force could take.<sup>29</sup> They used the military geography of each region and the frequency of historical invasion by foreign forces to forecast future vulnerabilities to land attack, even identifying neighbours as potential invaders.<sup>30</sup> Recent changes to the structure of the People’s Liberation Army appear to be directed at improving the country’s resistance to land invasion.<sup>31</sup>
5. **Fear of an armoured or airborne attack** – The three military regions along the northern border with Russia, including the Beijing military region, are said to be vulnerable to armoured attacks and to airborne landings, as expressed in the 2005 study *China’s Theater Military Geography*.<sup>32</sup> The *Northern Sword* exercise in Inner Mongolia in 2005 involved elements of two armoured divisions: over 2,800 tanks and other vehicles performed China’s ‘largest field maneuver’ involving armoured troops and an airlift over 2,000km that simulated an attack on terrorists who were receiving foreign military support.<sup>33</sup> One can infer from press reporting that the exercise was intended to counter a putative armoured invasion.
6. **Fear of internal instability, riots, civil war or terrorism** – Constant Chinese proclamations against ‘splittists’ in Taiwan, Tibet and

Xinjiang have become accepted as part of ordinary Chinese rhetoric, but these statements reflect a deep concern about China's territorial integrity.<sup>34</sup> A researcher with the Central Party International Liaison Department placed internal threats from 'splittists' and the Falun Gong religious movement on the same level as the threat posed by US hegemony.<sup>35</sup> This overlaps with Beijing's concern over terrorism, with many authors chronicling evidence of violent incidents and warning that more must be done. By September 2003, Chinese media were reporting that ten counter-terrorism exercises a month were taking place throughout the country, a frequency that the Communist Party mouthpiece, *Renmin Ribao*, characterised as 'rarely seen before'.<sup>36</sup> Scenarios practiced during such exercises have involved hostage-taking, bank robberies, armed attacks on government facilities and athletic events, simulated attacks with chemical and biological weapons, the collapse of tall buildings, explosions at shopping centres and the theft of biological agents.<sup>37</sup>

7. **Fear of attacks on pipelines** – China's press has reported on annual exercises for pipeline defence (called the *Great Wall* exercises) since at least 2001.<sup>38</sup> It is unclear whether the threat against pipelines is perceived as mainly related to domestic terrorism or seen as part of a potential foreign land invasion as well. The fear may be indicated in part by both campaign plans for training and China's forces designed for counter-terrorism.
8. **Fear of aircraft-carrier strikes** – For at least a decade, Chinese military authors have assessed the threats from US aircraft carriers and analysed how best to counteract them.<sup>39</sup> Operations-research analysis has suggested how Chinese forces should be used to deal with the vulnerabilities of US aircraft carriers,<sup>40</sup> while other research cites specific weapons systems that China should develop.<sup>41</sup> The Chinese 'anti-carrier missile' is one of the responses to this fear of carrier strikes.<sup>42</sup>

9. **Fear of major air-strikes** – For much of its history, the People’s Liberation Army Air Force was underdeveloped, and regarded as unimportant by the dominant ground forces.<sup>43</sup> Since 2004, however, the air force has received a much larger mission and equal footing with the other service branches.<sup>44</sup> As it has sought to redefine its mission, the air force has retired nearly 3,000 aircraft since 1990, shrinking its combat inventory from roughly 5,000 to approximately 2,000 combat aircraft that are better able to defend China’s territory.<sup>45</sup> The army continues to increase its role in air defence as well. Half of China’s group armies now have air-defence brigades. In addition, the army has received large quantities of equipment over the past decade, including anti-aircraft artillery (AAA) guns, surface-to-air missiles and logistics-support equipment. Fully one-third of the army reserve divisions are AAA units, evidence of the fear of air attack.<sup>46</sup>
10. **Fear of Taiwanese independence** – An independent Taiwan would not only be a political catastrophe for regime legitimacy, but its loss would be viewed by the People’s Liberation Army as a military vulnerability as well, given the shipping traffic around the island and Taiwan’s possible use by a foreign power for bases to contain China and fortify the island chain.<sup>47</sup> Extensive Chinese writings about Taiwan leave the impression that Beijing fears its forces are not yet sufficient to prevent independence. China has invested heavily in capabilities intended to address the Taiwan contingency, including a joint logistics system, improved command and control for multi-service operations, naval capabilities to challenge and delay the US Navy in key areas, and the development of air-power and precision-strike capabilities for localised conflict. Yet the fear remains.
11. **Fear of insufficient forces to ‘liberate’ Taiwan** – Since at least 1992, the People’s Liberation Army has focused heavily on its lack of capabilities to deal with potential Taiwan conflicts.<sup>48</sup>

Army training over the past 15 years has been heavily focused on amphibious operations, with both the navy and the air force focused on their respective missions to support Taiwanese contingencies. As a result, over the past few years the armed forces have demonstrated a number of improvements in the complexity and quality of such training. Recently, emphasis has also been placed on improved command and control, joint operations and electronic warfare.<sup>49</sup> The navy is now fielding large numbers of *Houbei* guided-missile patrol boats, while construction on modern destroyers and diesel submarines has apparently slowed. Chinese expenditures in recent years have been dedicated to closing gaps in infrastructure development, particularly logistics facilities, transportation routes and naval bases.

12. **Fear of attacks on strategic missile forces by commandos, jamming or precision strikes** – The fears of the Second Artillery Corps, China's strategic missile force, are revealed in reports published by China's *Rocket Force News* that training exercises have emphasised strategies to counter air attacks, attacks by special forces, electromagnetic jamming, live-troop reconnaissance, and network attacks using hackers and computer viruses.<sup>50</sup> Electronic warfare and cyber attacks on China's missile forces are also a growing concern.<sup>51</sup> In mid-April 2006, a unit (*bu*) located in a mountainous region in southern China held a military-training evaluation during which 'enemy forces' successfully employed electromagnetic jamming against the command post.<sup>52</sup>
  
13. **Fear of escalation and loss of control** – Chinese military authors express concern about 'war control' and 'containment of war', by which they appear to mean avoiding loss of control and escalation. Chinese views of information warfare stress the need to maintain control;<sup>53</sup> and discussions of the Second Artillery have stressed command and control issues.<sup>54</sup> A principal concern is that if a crisis did escalate, China would be unable to maintain control over its

forces even for the duration of the first battle, which is often decisive. Means of maintaining control include deploying unexpected ‘assassin’s mace’ weapons and throwing the opponent off balance at a critical point, or accelerating the seizure of key objectives before the situation stabilises.<sup>55</sup> By 2001, the problem of ‘war control’ was seen as of sufficient importance to merit a chapter in *The Science of Military Strategy*,<sup>56</sup> but the most in-depth treatment of the subject can be found in a 2001 NDU doctoral dissertation by Colonel Xiao Tianliang, an assistant professor in the university’s Teaching and Research Institute.<sup>57</sup> The recommended approaches are either military intimidation (*weishe xing*) or bargaining (*jiaoyi xing*). In the extreme, as other authors note, the military approach may include ‘fighting a small war to prevent a large war’.<sup>58</sup> Recent investments to achieve these goals include the theatre-level automated command and control capability embodied in the *Qu Dian* system, described by Colorado Congressman Bob Schaffer as ‘a major force multiplier’. Speaking in the House of Representatives, he compared the system to the US Joint Tactical Information Distribution System (JTIDS), noting that it featured ‘a secure, jam-resistant, high-capacity data-link communications system for use in tactical combat’.<sup>59</sup> Meanwhile, China’s *Sovremenny*-class destroyers have been described by *Jane’s Fighting Ships* as ‘the first Chinese warships to have a data systems link’, which Jane’s analysts believe is a Chinese version of the NATO-designated *Squeeze Box*.<sup>60</sup> According to Larry Wortzel, the Chinese military has made significant strides in less than two decades in transforming itself into a force that can engage in a modern war along its periphery out to a range of about 1,500 miles.<sup>61</sup>

14. **Fear of cyber attack** – Chinese military authors highlight numerous risks to Chinese networks, including network leakage, failure to construct secure systems and covert channels. According to one study, China’s military information system faces ‘serious threats’ in a modern information war;<sup>62</sup> while four additional studies express

similar concerns with the current state of the People's Liberation Army's cyber defences.<sup>63</sup> In a study by Ding Xiaofeng and Xue Zhi, the authors assess the danger of distributed denial-of-service network attacks, using game theory to show the dangers of this kind of attack.<sup>64</sup> Other authors are concerned with the potential for information leakage from Chinese military networks.<sup>65</sup> Many security evaluation criteria have corresponding requirements for the analysis and processing of covert channels in highly secure systems, including the field of steganography which conceals messages in plain sight.<sup>66</sup> To address these concerns, a proposal was drawn up for new hardware that would make internal networks more secure.<sup>67</sup> This system passed the technical validation of the State Password Management Committee in October 2004.<sup>68</sup> Finally, Chinese authorities are concerned that the Internet could turn the population against them, and consequently feel a need to protect 'China's psychological space'.<sup>69</sup>

15. **Fear of attacks on anti-satellite capabilities** – For nearly a decade, Chinese authors have been touting the advantages for China of developing anti-satellite weapons capabilities, but only if deployed covertly.<sup>70</sup> One Chinese colonel has argued that from 2015, China should develop space deterrence and 'assassin's mace' space weapons, while simultaneously maintaining a 'low profile' to protect China's international image.<sup>71</sup> The international uproar following China's unannounced anti-satellite test in January 2007 may have underscored the importance of maintaining secrecy.<sup>72</sup> It is possible that China's military never intended to disclose the destruction of the aging *Fengyun-1* weather satellite, even to other parts of the Chinese government.<sup>73</sup> Only after the impact destroyed the satellite and generated the worst debris field ever seen in low-Earth orbit was the Chinese government forced to issue an explanation. The intense reaction to the test may have affected Chinese military views on the possibility that US forces might, in the event of a military encounter with China, find it necessary to target launch sites located

deep in the country's interior.<sup>74</sup> Addressing this fear would call for more secure anti-satellite launch platforms, such as submarines, a possibility that has been raised in the Chinese literature.<sup>75</sup>

#### 16. Fear of regional neighbours India, Japan, Vietnam and Russia –

While Chinese military authors conspicuously avoid public discussion of the dangers presented by their neighbours, the People's Liberation Army is clearly very wary of threats from all directions. Chinese authors pay close attention to relative force levels and military activities in South Asia,<sup>76</sup> and take notice of Indian joint military exercises (such as *Operation Checkerboard* in 2001).<sup>77</sup> One expert has claimed that US strategic goals for the Western Pacific include restricting the navigation space for Chinese nuclear-powered submarines with help from India.<sup>78</sup> As for Japan, while US officials may see a pacifist country, many Chinese scholars harbour a deep distrust of Japan's military intent. Multiple authors have raised concerns about Japanese nationalism and the country's potential to deploy nuclear weapons.<sup>79</sup> Researchers at China's Academy of Military Science have also raised concerns about Japanese military transformation.<sup>80</sup> Even Russia, which may be considered a Chinese ally, is not immune from scrutiny: Chinese are wary of what a Fudan University professor describes as Russia's 'imperial' psychology.<sup>81</sup>

These fears are intensive and extensive. All of them could influence Chinese responses to American policies, and should be taken into account by American policymakers in determining which China strategy would be most effective.

#### \$1 trillion to spend and fearful of the United States

Before examining some of the strategies that American policymakers might choose to pursue, it is worth detailing the overall military context that has created the need for a new policy approach in the first place. Since at least December 2004, China has been debating the next phase of its military development, which will extend over the coming 20–30 years. There are

many debates within the Chinese military community over precisely what direction to take, and it is difficult to evaluate the relative influence of those officers who champion efforts to develop an overseas, power-projecting Chinese military. According to former US Director of National Intelligence Dennis Blair, Chinese national security policy, like that of India and Japan, is not dominated by intense nationalist sentiment. 'All three of these countries have political parties or factions that favor [nationalist] policies', he writes, 'but they are currently small – if often vocal – minorities that demonstrate little likelihood of coming to power'.<sup>82</sup> In a similar spirit, Cortez Cooper, a senior policy analyst at RAND, has testified that US leaders can potentially channel Chinese military capacity 'away from a decision to build increasingly formidable maritime power-projection capabilities'.<sup>83</sup> But a reading of Chinese military sources presents a strong argument from the Chinese themselves that they are extremely wary of foreign military threats and likely see a strong need for aggressive military development, without which they cannot feel confident about their own national security. Strong counter-arguments to the many vocal Chinese hawks are virtually non-existent.

Furthermore, the financial resources available to the Chinese military are significant. The RAND Corporation's high-end (but still conservative) projections of future Chinese military expenditures rise from an estimated \$75.6 billion in 2003 to \$403bn in 2025.<sup>84</sup> The lower estimate has expenditures rising from \$68.6bn in 2003 to \$185bn in 2025.<sup>85</sup> RAND also assessed the potential resources that China might devote to purchasing military assets in the coming two decades. Chinese military procurement from 2003 to 2025 in RAND's high-end case was about half of what the United States spent on military procurement and research and development (R&D) between 1981 and 2003. By 2025, under this scenario, no other country besides the United States would rival China in terms of weapon stocks. In arriving at these findings, RAND assumed the Chinese Air Force's share of the total defence budget was about the same as the US Air Force's share of the Defense Department budget. In RAND's view, the maximum likely expenditures that China would make on air force R&D and on procuring weapons and equipment for the air force between 2003 and 2025 would be

on the order of \$490bn. RAND did not perform this calculation for the US Navy. However, using the same assumptions, the Chinese funds available cumulatively for the Chinese navy would be about the same, in the range of \$500bn to spend on R&D and procurement of naval weapons from 2003 to 2025. Compounding this potential \$1tr spending binge, RAND admitted to using very conservative assumptions about Chinese economic growth rates from 2003–25. Specifically, it was assumed that China would average no more than 5% growth over this period. At the same time, RAND assumed an optimistic US economic growth rate of 3% from 2003–25. Adjusting China's projected growth rate upward to the country's currently claimed rate of 10% would greatly add to the \$500bn that the Chinese navy and air force will each have to spend on future weapons and R&D.

### **Soothing Beijing's fears**

As noted, the concept of reassurance figures prominently in the policy proposals that have emerged as a result of China's military build-up. Reassurance policies seek to persuade Chinese leaders that they face no real threats and therefore increased military spending is unnecessary. Policies based on these concepts have prominent advocates – Henry Kissinger, for one, believes that 'China can find reassurance in its own record of endurance and in the fact that no U.S. administration has ever sought to alter the reality of China as one of the world's major states, economies, and civilizations'.<sup>86</sup> However, Kissinger may gravely underestimate the extent of China's fears and distrust of the United States. Because of China's distinctive world view, relying on reassurance may be insufficient. Moreover, efforts to shape or balance the disruptive elements of China's future armed forces may lead to unexpected consequences.

That said, there is one form of reassurance that, curiously, has never been fully attempted, yet could prove effective. The United States has held dialogues about arms control with China for years, but never formally proposed a single measure of bilateral arms control, conventional or nuclear.<sup>87</sup> What kinds of bilateral arms control might work?

Christopher Twomey has suggested that quick ratification of the Comprehensive Nuclear Test-Ban Treaty could send a positive signal to China,<sup>88</sup> as could reinvigorated diplomacy on a treaty cutting off the

production of fissile material for weapons. On the latter issue, however, China's objections need to be taken seriously. China's stockpile of fissile material represents a miniscule fraction of the US stockpile. Freezing that ratio indefinitely is something China would only concede to in response to other inducements. These should be discussed frankly, including the need for verification. Beyond these small-scale steps, a new non-proliferation architecture is also needed. China must be integrally involved in its design.

Bilateral confidence measures between China and the United States could be discussed, particularly in the area of declaratory policy. The Chinese have often asked why the United States is unwilling to offer a no-first-use pledge. A blanket pledge might undermine US credibility in other regions, but a no-first-use policy confined to the US-China arena would seem to have fewer costs. Some of the questions surrounding such a policy remained unanswered, however, including what benefits the United States would receive from Beijing in exchange for such a pledge. It is also unclear whether Beijing would view positively a definitive statement that the United States accepts the existence of a Chinese secure second-strike capability, and what the United States might hope for in return.

Another approach to reassurance would be to engage in quantitative, binding arms-reductions negotiations with China.<sup>89</sup> The time may someday be ripe for traditional bilateral arms-control negotiations aimed at legally binding, verifiable agreements between Beijing and Washington, or even trilateral negotiations involving Moscow. At present, however, this seems unlikely, as US officials may be absorbed with negotiating a follow-on to START, and Chinese officials continue to assert that the United States and Russia bear the immediate burden for nuclear disarmament, while opposing the type of nuclear transparency needed for formal treaty negotiations.

The Chinese are not currently interested in discussing traditional bilateral arms-control agreements for two reasons: in their eyes, doing so suggests equating the contemporary US-China relationship with the Cold War stand-off between the Soviet Union and the United States; and the US arsenal remains much larger than China's. Yet, it is wrong to expect such views to hold in perpetuity. Christopher Twomey has argued that Beijing's emphasis on ambiguity about its arsenal, which is incompatible with serious

negotiations over arms control, is not a cultural predisposition toward 'strategic deception' any more than was the Soviet Union's early Cold War emphasis on secrecy. Instead, these are rational strategies when nuclear arsenals are small.<sup>90</sup> He argues that unilateral US nuclear restraint could influence Chinese defence decision-making; American restraint in deploying highly accurate guidance systems on *Trident* II warheads, for example, might bring in exchange tacit restraint in other areas from Beijing. Precisely these sorts of trades were at the heart of important arms-control agreements between the Soviets and the United States during the Cold War. Although

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## *The Chinese are in a difficult position*

such steps are premature today, understanding the possible parameters of such exchanges is useful for laying the groundwork for future discussions.

A unilateral no-first-use pledge could encourage China to reign in numerous aspects of its arsenal, with necessary verification measures. Management of the Chinese threat in particular will be easier without their fearing a disarming first strike.<sup>91</sup> The Chinese are in the difficult position of currently seeing such a threat from both the United States and the Russians. Encouraging Chinese restraint on missile numbers and payload, for example, might be easier if Washington were to offer unilateral targeting changes in the hopes of spurring Chinese arms reductions.

Some Americans worry that China might choose the course that the Soviets chose in the 1960s: to build massive, counterforce war-fighting forces in pursuit of overwhelming nuclear advantages over the United States and the West. But, as Brad Roberts noted before he joined the Pentagon, there seems to be no voice for this option in China.<sup>92</sup> According to Roberts, it is difficult to find 'even a hint of Chinese interest in nuclear counterforce war fighting strategies' similar to the large force deployments by the United States and the Soviet Union during the Cold War. China seems unmotivated to compete with the United States, with its thousands of deployed inter-continental strike forces. Of course, very deep cuts in the US arsenal could have the effect of motivating Chinese thinking down this route. Still, Roberts concludes that today's China is not the Soviet Union of 1984, bent on seeking parity or even a nuclear advantage over the United States.

Several other approaches to shaping the future of China's military forces have been publicly proposed both by scholars and current US officials. At one end of the spectrum, there are pessimistic voices who caution that it will be very difficult, if not impossible, for US policy to influence the future size or shape of Chinese military forces. Mark Cozad, formerly of the Defense Intelligence Agency, put this view best when he wrote that China's decisions will be largely outside of US control, making 'it extremely difficult, at best, to influence China's decisions on military strategy and modernization'.<sup>93</sup>

On the more optimistic side of the spectrum, some officials and scholars foresee significant opportunities to shape Chinese future forces. These optimists have proposed at least three different approaches. Firstly, some believe a long-term effort to emphasise that Washington wants only to cooperate with China will reduce future Chinese defence acquisitions that otherwise might be aimed at dealing with an American threat to China. This approach would undertake to soothe possible Chinese anxieties that the United States intends to limit China's rise. Others propose to go beyond reassurance to accommodation in order to limit disruptive Chinese defence efforts. A second, closely related approach offered by several analysts would be to take steps to channel Chinese defence spending away from creating a global, blue-water navy or long-range power-projection forces, or any increase in long-range nuclear forces. One example American authors have proposed is for Washington to assure China that the United States will protect China's sea lines of communication.<sup>94</sup> Another, related step would be to eliminate any significant arms sales to Taiwan that might provoke China to invest in long-range power-projection forces. A third recommended approach would be to limit US defence programmes without reciprocity, such as establishing a cap on US missile-defence capacity, to guarantee to China that it could with confidence destroy American cities in the hope of persuading China not to expand its nuclear forces.

### **How to be dissuasive**

Beyond these ideas for reassurance and other possible steps to channel China away from developing power-projection forces, a third important set of proposed recommendations could be called 'dissuasion' or 'competitive

strategy'.<sup>95</sup> Authors of these ideas wish to dissuade China from acquiring disruptive forces by, for example, developing US weapon systems and competitive capabilities as a means of stimulating China to reallocate defence spending to counter these new US forces. One such proposal is to build a long-range stealth bomber to influence China to allocate more to air defences. Prompt Global Strike proponents have proposed such a capability to pre-empt Chinese anti-satellite weapons and perhaps dissuade China from entering the anti-satellite field at all.

Among the more creative dissuasion strategies that have been proposed are those developed by Robert Martinage before he joined the Pentagon. (He has emphasised that his ideas are illustrative only.<sup>96</sup>) These include the idea, based on a century-old British concept, of encouraging China to invest heavily in a blue-water navy, the rationale being that it is preferable for Beijing to invest in soon-to-be obsolete technology, such as 30-year-old Russian aircraft carriers that can be easily sunk by US, Indian, Japanese or Vietnamese missiles, than in the more advanced technologies it might otherwise pursue.<sup>97</sup> One way of doing so might be to facilitate India's development of a blue-water navy, or otherwise increase the perceived threat to China's sea lines of communication, thus encouraging Chinese investment in blue-water capabilities sooner, more vigorously and on a larger scale than might otherwise be the case. A second recommendation would be for Washington to take action to encourage China to focus on short-range, coastal ships rather than long-range ships. This would mean encouraging the perception among Chinese decision-makers that their country's territorial waters were threatened, and therefore that coastal defences should be prioritised over an expensive, global blue-water navy and a network of worldwide bases. For example, the United States could ratchet up the perceived threat to China's home waters posed by US attack submarines, thus encouraging Beijing to shift more resources into coastal anti-submarine warfare capabilities.<sup>98</sup>

In another category of dissuasion, Washington could exploit arms-control agreements in areas that are strategically advantageous to the United States, for example, by barring the fielding of terrestrial and space-based anti-satellite capabilities, or by trying to block advanced bioweapons or

tailored-effect nuclear weapons such as electromagnetic-pulse, enhanced-radiation or very low-yield weapons. In addition, the United States could develop, field, and demonstrate capabilities needed to disable or destroy future Chinese capabilities, such as weapons that could penetrate China's anti-access or area-denial networks, and attack both fixed and mobile targets across the Chinese homeland. Similarly, the United States could develop stealthy, long-range and persistent intelligence, surveillance, reconnaissance and precision-strike capabilities; nuclear-powered attack submarines and ballistic-missile submarines; navy unmanned combat air systems for carrier decks; abilities for locating and neutralising hardened and deeply buried targets; airborne and space-based remote sensing; micro-robotic sensors; earth-penetrating weapons; and electronic-attack capabilities (including high-power microwave and cyber-attack capabilities). Washington could also develop and demonstrate defences and counter-measures such as hardening US bases in the Pacific, which would force China to expend multiple missiles per shelter in any attack scenario and hence compel the country to invest in more expensive, longer-range missiles with unitary warheads. Another option would be to demonstrate more effective cruise- and ballistic-missile defence capabilities, or to equip future US military satellites with on-orbit refuelling capabilities, enabling them to manoeuvre more frequently.

Finally, the United States could try to convince China that the military capabilities it seeks could be rendered irrelevant or obsolete. For example, Washington could seek to render radio-frequency jamming irrelevant by investing in laser communications and fielding terrestrial substitutes for satellite systems (such as high-altitude airships and very long-endurance unmanned aerial vehicles); it could also render Chinese short-range ballistic missiles less relevant by investing in extended-range land- and carrier-based aircraft. The United States could also place increased emphasis on submerged power projection, devaluing China's major investment in surface-navy 'area-denial' capabilities.

### **Gauging China's reactions**

No matter what kind of strategy is adopted, all analysts agree that much depends on how the Chinese react to it. Yet it may be a mistake to assume

that China will react at all to any US strategic moves. According to a study published in *Harvard Business Review*, in market competition, one-third of the time private companies do not respond to their rivals' actions.<sup>99</sup> It may be that Chinese strategic decision-making parallels the decision-making of business organisations, meaning that, at least in some cases, American approaches may fail to produce a result. This outcome might be minimised, however, by evaluating any given strategy with reference to the following questions:

- Will Chinese decision-makers even realise that the United States has made a move? Even if an action seems obvious, Chinese decision-makers may not recognise it.
- Can Chinese decision-makers still meet their goals despite the US move? If so, they may conclude that mounting a response is not worth the expense and distraction, unless their real fears and sensitivities have been provoked.
- Will mounting a response be a priority? Chinese decision-makers have a full agenda that would have to be curtailed to react. If they have already committed to plans that will occupy all their attention, they may be reluctant to shift their priorities, again unless their real fears or major sensitivities have been stimulated.
- Can Chinese decision-makers overcome organisational inertia? Many officials might resist if reacting requires major organisational changes.
- To what degree can China be convinced that the United States has benign, accommodating and cooperative intentions? Nationalistic – even paranoid – publications have appeared in China that suggest the country may never accept American reassurances, as these will always be seen as cloaking a secret strategy to contain China's growth.
- How intense are the various Chinese fears that would be heightened by a US strategy intended to channel Chinese defence investments away from power projection and disruptive systems? Will positive efforts be sufficient? Alternatively, are Chinese fears so intense that

it will be relatively easy to shift China away from global power-projection forces and toward cooperation and domestic-oriented defence spending?

Of course, if the Chinese do decide to react to a US move, they are almost sure to choose the response that promises the biggest pay-off according to their own analysis. It is vital, therefore, that American policymakers study Chinese decision-makers' actual (as opposed to theoretical or ideal) behaviour and preferences, so as to better estimate the likelihood of their responding at all, to identify the responses they are likely to consider, and to evaluate which of these will have the biggest pay-off according to their own criteria. Moreover, it should always be remembered that linkages and organisational factors in Chinese decision-making may be in play so that certain US strategic choices might actually provoke an even more aggressive Chinese military expansion and increase in the military's share of overall spending. Obviously, no American strategist would wish to provoke an overall increase in Chinese suspicion and mistrust of the United States that would lead to a greater level of defence spending than otherwise would have been the case.

\* \* \*

Those who minimised China's military build-up over the past two decades have had to revise their views. Renewed creativity will be needed as American policymakers determine whether it is possible to limit the disruptive aspects of China's future forces and, if so, how. America's Cold War experience may be worth recalling as Washington goes about selecting an effective strategy toward China: Christopher Ford and David Rosenberg remind us that many years of extensive intelligence work to penetrate the Soviet military mind was necessary before precise measures – including arms-control negotiations – could be designed to cap Moscow's forces.<sup>100</sup> Whether we have reached this level of understanding of China is an open question that deserves to be answered. Until it is, policymakers' guiding principle should be to 'first, do no harm'.

## Notes

- 1 John Lewis Gaddis, *George F. Kennan, An American Life* (New York: Penguin, 2011), p. 186.
- 2 See Nathan Leites, 'On Violence in China', in Elizabeth Wirth Marvick (ed.), *Psychopolitical Analyses: Selected Writings of Nathan Leites* (New York: John Wiley, 1977), pp. 213–46; and Richard E. Nisbett, *The Geography of Thought: How Asians and Westerners Think Differently and Why* (New York: Free Press, 2003). Cultural differences are also emphasised in Charles Horner, *Rising China and its Postmodern Fate: Memories of Empire in a New Global Context* (Athens, GA: University of Georgia Press, 2010). A much-cited classic is François Jullien, *A Treatise on Efficacy: Between Western and Chinese Thinking* (Honolulu, HI: University of Hawai'i Press, 2004), p. 38.
- 3 This research drew upon a multi-year research project first reported in the author's previous works, *Chinese Views of Future Warfare*, 2nd ed. (Washington DC: NDU Press, 1998), and *China Debates the Future Security Environment* (Washington DC: NDU Press, 2000), both of which detail the dozens of visits to Chinese military and intelligence research centres in Beijing and Shanghai facilitated by the author's early relationship to the People's Liberation Army and Chinese intelligence services in the 1970s, before the normalisation of diplomatic relations between China and the United States. That story is recounted in Philip Heymann, *Living the Policy Process* (Oxford: Oxford University Press, 2008); Raymond L. Garthoff, *Détente and Confrontation: American–Soviet Relations from Nixon to Reagan* (Washington DC: Brookings Institution Press, 1984); and James Mann, *About Face: A History of America's Curious Relationship with China, from Nixon to Clinton* (New York: Knopf, 1998).
- 4 Michael Pillsbury, 'U.S. Debates About Taiwan's Security, 1979–2009', in Cheng-yi Lin and Denny Roy (eds), *The Future of United States, China, and Taiwan Relations* (New York: Palgrave Macmillan, 2011), pp. 209–42.
- 5 See Amy Chang, *Indigenous Weapons Development in China's Military Modernization* (Washington DC: US–China Economic and Security Review Commission, 5 April 2012), <http://www.uscc.gov/researchpapers/2012/China-Indigenous-Military-Developments-Final-Draft-03-April2012.pdf>); John Pomfret, 'Defense Secretary Gates: U.S. Underestimated Parts of China's Military Buildup', *Washington Post*, 9 January 2011, <http://www.washingtonpost.com/wp-dyn/content/article/2011/01/09/AR2011010901068.html>; Anna Mulrine, 'We Underestimated China, U.S. Official Says after Reports of J-20 Stealth Fighter', *Christian Science Monitor*, 6 January 2011; 'New US Pacific Commander Concerned About North Korea, China', *Voice of America News*, 21 October 2009, <http://www.voanews.com/english/news/a-13-2009-10-21-voa8.html>.

- 6 Henry Kissinger, 'The Future of U.S.–Chinese Relations', *Foreign Affairs*, vol. 91, no. 2, March–April 2012, pp. 44–5.
- 7 Thomas G. Mahnken et al., 'Asia in the Balance: Transforming US Military Strategy in Asia', American Enterprise Institute, 4 June 2012, <http://www.aei.org/papers/foreign-and-defense-policy/regional/asia/asia-in-the-balance-transforming-us-military-strategy-in-asia/>.
- 8 For the creation of the new Air–Sea Battle Office, see Bill Gertz, 'China's High Tech Military Threat and What we are Doing About It', *Commentary*, April 2012. Mitt Romney laid out a national programme in *No Apology: The Case for American Greatness* (New York: St Martin's Press, 2010), pp. 82–100.
- 9 See Thomas Mahnken (ed.), *Competitive Strategies for the 21st Century: Theory, History and Practice* (Stanford, CA: Stanford University Press, 2012).
- 10 For more on the importance of understanding psycho-cultural factors to effectively forecast Chinese defence decision-making over the long term (and the ways in which studying such factors in the Chinese context will be more difficult than studying the Soviets), see Nathan Leites, *A Study Of Bolshevism: An Analysis Of Soviet Writings To Find A Set Of Rules Governing Communist Political Strategy* (Glencoe, IL: Free Press, 1953); *Remembering Nathan Leites: An Appreciation* (Santa Monica, CA: RAND Corporation, 1988). The collection of essays by George Loewenstein, *Exotic Preferences, Behavioral Economics and Human Motivation* (Oxford: Oxford University Press, 2007), reprints his insightful 1996 essay 'Out Of Control: Visceral Influences On Behavior', pp. 65, 272–92; another useful survey is George Loewenstein and Jennifer S. Lerner, 'The Role of Emotion in Decision Making', in R.J. Davidson, H.H. Goldsmith and K.R. Scherer (eds), *The Handbook of Affective Sciences* (Oxford: Oxford University Press, 2002).
- 11 Feng Liang and Duan Tingzhi of the Naval Command College argue that China's coastline is 'not exposed to the open ocean', classifying the bodies of water around China as 'sealed-off'. Feng Liang and Duan Tingzhi, 'Characteristics of China's Sea Geostrategic Security and Sea Security Strategy in the New Century', *Zhongguo Junshi Kexue* [China Military Science], January 2007, pp. 22–9.
- 12 Colonel Dai Xu writes: 'The current security environment around China is the worst among the peripheries of all large countries ... At present, a large "C shape" encirclement targeted at China has taken shape.' Dai Xu, 'The Threat of War Is Not Far From China', *Huanqiu Shibao* [Global Times], 20 August 2009. See also Liu Yijian, *Zhihaiquan yu Haijun Zhanlue* [The Command of Sea and the Strategic Employment of Naval Forces] (Beijing: National Defense University Press, 2004), p. 233.
- 13 See Toshi Yoshihara, 'Chinese Military Strategy and the U.S. Naval Presence in Japan: The Operational View from Beijing', *Naval War College Review*, vol. 63, no. 3, Summer 2010, pp. 39–62.
- 14 For examples of the Chinese fear of blockade, see Bernard D. Cole, 'The Energy Factor in Chinese Maritime

- Strategy', and James Bussert, 'China's Surface Combatants in the New SLOC Defense Imperative', in Gabriel B. Collins et al. (eds), *China's Energy Strategy: The Impact on Beijing's Maritime Policies* (Annapolis, MD: Naval Institute Press, 2008). See also Chang Jui-chang, 'Shimoji Island: Rising Strategic Keystone', *Asahi Shimbun*, 14 February 2005.
- 15 Gao Fugang and Sun Mu, 'Study of Operational Effectiveness of Blockade Running of Escorted Submarine', *Junshi Yunchou Yu Xitong Gongcheng* [Military Operations Research and Systems Engineering], 3 September 2006, pp. 39–42.
- 16 Such blockade methods are described in articles such as Tai Feng, 'Multi-pronged Blockade of the Ocean: Japan's Measures after the Offshore Submarine Incident', *Xiandai Wuqi* [Modern Weapons], March 2005, p. 51 (translation from the Chinese provided by Professor Toshi Yoshihara of the US Naval War College); Li Zuyu, 'Combat Uses of Japan's Airpower', *Shipborne Weapons*, March 2007, p. 48 (translation from the Chinese provided by Professor Toshi Yoshihara of the US Naval War College); Wu Peihuan and Wu Yifu, 'Acting with a Motive: The Japan–U.S. Island Defenses Exercises', *Modern Weaponry*, February 2006, p. 8 (translation from the Chinese provided by Professor Toshi Yoshihara of the US Naval War College).
- 17 The references cited in this study include Ge Genzhong, 'Submarine Operation in Informatized Warfare', *Qianting Xueshu Yanjiu* [Submarine Research], vol. 22, no. 1, 2004; Mao Chuangxin et al., *Case Study of Submarine Warfare* (Qingdao: Naval Submarine Academy, 1997); Zhang Wenyu et al., 'Introduction to Asymmetric Operations of Submarines', *Qianting Xueshu Yanjiu* [Submarine Research], vol. 22, no. 1, 2004; Rong Haiyang et al., *Submarine Tactics* (Qingdao: Naval Submarine Academy, 2001); Qin Gang, *Submarines in Naval Warfare* (Nanjing: Naval Command Academy, 1997); Wan Chun, *Surface Warship Tactics* (Nanjing: Naval Command Academy, 2004); Cheng Wangchi et al., 'A Method to Estimate Force Required for Submarine to Run a Blockade', *Junshi Yunchou Yu Xitong Gongcheng* [Military Operations Research and Systems Engineering], vol. 18, no. 1, 2004, pp. 21–3.
- 18 Zhang Dengyi, 'Guanhao Yonghao Haiyang' [Manage and Use the Ocean Well], *Qiushi*, no. 11, p. 46; Feng Liang and Zhang Xiaolin, 'Lun Heping Shiqi Haijun de Zhanlue Yunyong' [A Discussion of the Navy's Strategic Use in Peacetime], *Zhongguo Junshi Kexue* [China Military Science], no. 3, 2001, p. 78.; and Lu Rude, 'Zai Da Zhanlue zhong gei Zhongguo Haiquan Dingwei' [Defining Sea Power in China's Grand Strategy], *Renmin Haijun* [People's Navy], 6 June 2007.
- 19 Zhang Wenmu, 'Jingji Quanqiuhua yu Zhongguo Haiquan' [Economic Globalization and Chinese Sea Power], *Zhanlue yu Guanli* [Strategy and Management], no. 1, 2003, p. 96.
- 20 He Jiacheng, Zou Lao and Lai Zhijun, 'Guoji Junshi Anquan Xingshi ji Woguo de Guofang

- Jingji Fazhan Zhanlue' [The International Military Situation and China's Strategy of National Defense Economic Development], *Junshi Jingji Yanjiu* [Military Economic Research], no. 1, 2005, p. 12.
- 21 Da Wei, 'Zhongguo de Haiyang Anquan Zhanlue' [China's Maritime Security Strategy], in Yang Mingjie (ed.), *Haishang Jiaodao Anquan yu Guoji Hezuo* [Sea Lane Security and International Cooperation] (Beijing: Shishi Chubanshe, 2005), p. 365.
- 22 Liu Xinhua and Qin Yi, 'Zhongguo de Shiyou Anquan ji qi Zhanlue Xuanze' [China's Oil Security and its Strategic Choices], *Xiandai Guoji Guanxi* [Contemporary International Relations], no. 12, 2003, p. 39. This journal is published by the Ministry of State Security's think tank, China Institute of Contemporary International Relations (CICIR).
- 23 *Ibid.*, p. 119. See also Gabriel B. Collins and William S. Murray, 'No Oil for the Lamps of China?', *Naval War College Review*, vol. 61, no. 2, Spring 2008, pp. 79–95; Andrew Erickson and Lyle Goldstein, 'Gunboats for China's New "Grand Canals"?', *Naval War College Review*, vol. 62, no. 2, Spring 2009; 'Chinese Admiral Floats Idea of Overseas Naval Bases', Reuters, 30 December 2009, <http://www.reuters.com/article/idUSTRE5BT0p20091230>. China's fear about its sea lines of communication is heightened by its concerns that global 'peak oil' production has been reached, increasing China's future vulnerability to a blockade. See Cao Kui and Zou Peng, 'Discussion of China's Oil and Energy Security', *Teaching Politics*, November 2005; 'A Study of Energy Security', Chinese Academy of Social Sciences, 5 December 2007, <http://www.cass.net.cn/file/20071205106095.html>; and 'The Real Meaning of 'Energy Security'', Office of the National Energy Leading Group, 18 September 2006, available at <http://www.chinaenergy.gov.cn/>.
- 24 See Andrew Erickson and Lyle Goldstein, 'Gunboats for China's New "Grand Canals"?', *Naval War College Review*, vol. 62, no. 2, Spring 2009, <http://www.usnwc.edu/getattachment/f655705e-0ef3-4a21-af5a-93df77e527fa/Gunboats-for-China-s-New--Grand-Canals---Probing-t>.
- 25 According to the guide, 'during deep-sea SLOC defense combat, the loss of superior coastal conditions and the presence of numerous disadvantageous factors mean that there is a great threat from enemy forces disrupting transportation'. The Chinese navy, it argues, should employ 'large group concentrations' to attack enemy ships taking on fuel and supplies or transiting 'narrow waterways', particularly during inclement weather; and 'stick close to the coasts of friendly countries'. To improve deep-sea SLOC protection in the future, China should 'endeavor to establish a contemporary, integrated and offensive, new, special mixed fleet with an aircraft carrier at its core, with missile destroyers (or cruisers) and nuclear attack submarines as backbone forces'. Bi Xinglin (ed.), *Campaign Theory Study Guide* (Beijing: National Defense University Press, 2002), pp. 107, 228–56.

- 26 Zhang Yuliang et al., *Science of Campaigns* (Beijing: National Defense University Press, 2006), pp. 297–303.
- 27 Shi Chunlun, 'A Commentary on Studies of the Last Ten Years Concerning China's Sea Power', *Xiandai Guoji Guanxi* [Contemporary International Relations], 20 April 2008; and Liu Jiangping and Zhui Yue, 'Management of the Sea in the 21st Century: Whither the Chinese Navy?', *Dangdai Haijun* [Modern Navy], June 2007.
- 28 Xu Genchu, *Lianhe Xunlian Xue* [Science of Joint Training] (Beijing: Military Science Press, 2007). This volume, like many of the others cited here, are marked 'junnei faxing', which literally means 'military internal dissemination'. They are not 'secret' in the sense of being actually classified, but in Chinese military bookshops, they are kept in special rooms that only officers of the People's Liberation Army may enter. They do not have ISBN numbers on their covers. The US government has made many such volumes available to scholars at the Harvard and UC Berkeley libraries, though it is not known how they were originally obtained.
- 29 Guang Tao and Yao Li, *Zhongguo Zhanqu Junshi Dili* [China's Theater Military Geography] (Beijing: PLA Press, 2005).
- 30 *Ibid.*
- 31 *Zhanyi Xue* [The Science of Campaigns] (Beijing: NDU Press, 2000); *Zhanyi Lilun Xuexi Zhinan* [Guide to the Study of Campaign Theory] (Beijing: NDU Press, 2002); *Zhongguo Renmin Jiefangjun Lianhe Zhanyi Gangyao* [PLA Outline on Joint Campaigns] (Beijing: Central Military Commission, 1999). The text of the *Outline* is secret, but its existence is discussed in *Guide to the Study of Campaign Theory* and many other places. Its issuance was announced in 'Zhongyang Junwei zhuxi Jiang Xemin qianshu mingling wojun xinyidai zuozhan tiaoling banfa' [CMC Chairman Jiang Zemin Signs Order Implementing Our Army's New Generation of Operational Regulations], *Renmin Ribao* [People's Daily], 25 January 1999, <http://www.people.com.cn/item/ldhd/Jiangzm/1999/mingling/ml0003.html>.
- 32 Guang Tao and Yao Li, *Zhongguo Zhanqu Junshi Dili* [China's Theater Military Geography].
- 33 'CCTV-7 Shows North Sword 2005 Exercise, PLA's Li Yu Meeting Foreign Observers', Beijing CCTV-7, 28 September 2005; 'Chinese Military Paper Details North Sword 2005 PLA Exercise', *PLA Daily*, 28 September 2005; 'PLA Airborne in "1st Live" Drill vs "Digitised" Armor Unit in "North Sword"', *Kongjun Bao* [Airforce Daily], 29 September 2005; 'Xinhua Article Details PLA's "North Sword 2005" Exercise Held at Beijing MR Base', *Xinhua Domestic Service*, 27 September 2005; and 'China Launches Its Biggest-Ever War Exercises', *People's Daily Online*, 27 September 2005, [http://english.peopledaily.com.cn/200509/27/eng20050927\\_211190.html](http://english.peopledaily.com.cn/200509/27/eng20050927_211190.html).
- 34 For an overview of this issue, see Murray Scot Tanner, 'How China Manages Internal Security Challenges and Its Impact on PLA Missions', in Roy Kamphausen, David Lai and Andrew Scobell (eds), *Beyond*

- the Strait: PLA Missions Other Than Taiwan* (Carlisle, PA: US Army War College, 2009), <http://www.strategicstudiesinstitute.army.mil/pdffiles/pub910.pdf>.
- 35 The official was identified as Yu Hongjun, deputy director of the research division of the Central Committee Liaison Department, who gave an interview to the Qinghua University World Affairs Forum, as reported in *Shijie Zhishi* [World Knowledge], no. 23, 1 December 2002, pp. 34–9.
- 36 'Backgrounder: Major PLA-Related Joint Anti-Terror Military Exercises and Trainings', *People's Daily Online*, 21 December 2007, <http://english.peopledaily.com.cn/90001/90776/6325264.html>.
- 37 Li Haiyuan, 'Renmin Wang on Anti-Terrorist Drills in PRC, with SCO Members', *People's Daily Online*, 29 September 2003.
- 38 *Ibid.*; 'National Counterterrorist Exercise "Great Wall #2" Successfully Held', Dispatch of the Information Office of the State Council, hosted on the website of the Chinese Government, April 2007, [http://www.gov.cn/ztl/2006gagz/content\\_582558.htm](http://www.gov.cn/ztl/2006gagz/content_582558.htm); Li Zhanbing and Xu Chuanhai, 'East–West Gas Transmission Pipeline Company Participates in "Great Wall #2" Counterterrorism Exercise', *China Oil News*, 23 February 2006, [http://www.oilnews.com.cn/gb/vguyb/2006-02/23/content\\_656035.htm](http://www.oilnews.com.cn/gb/vguyb/2006-02/23/content_656035.htm).
- 39 Li Xinqi, Tan Shoulin and Li Hongxia, 'Precaution Model and Simulation Actualization on Threat of Maneuver Target Group on the Sea', *Qingbao Zhihui Kongzhi Xitong* Yu Fangzhen Jishu [Intelligence Control Systems and Simulation Methods], 1 August 2005; Michael Pillsbury, *China Debates the Future Security Environment* (Washington DC: National Defense University Press, 2000), pp. 83–5. Additional sources include Major-General Guo Xilin, 'The Aircraft Carrier Formation Is Not an Unbreakable Barrier', *Guangming Ribao Online*, 26 December 2000; Zhou Yi, 'Aircraft Carriers Face Five Major Assassins', *Junshi Wenzhai* [Military Digest], 1 March 2002, pp. 4–6; Feng Changsong, Xu Jiafeng and Wang Guosheng, 'Six Aircraft Carrier Busters', *Zhongguo Guofang Bao* [China Defence News], 5 March 2002, p. 4; Dong Hua, 'Aircraft Carrier's Natural Enemy: Anti-ship Missiles', *Junshi Wenzhai* [Military Digest], 1 July 2002, pp. 50–2; Xiao Yaojin and Chang Jiang, 'China's Existing Tactical Missiles Can Fully Meet the Need of a Local War Under High-Tech Conditions', *Guangzhou Ribao* [Guangzhou Daily Online], 21 October 2002; and Wang Jiasuo, 'Aircraft Carriers: Suggest You Keep Out of the Taiwan Strait!', *Junshi Wenzhai* [Military Digest], 1 April 2001, pp. 58–9.
- 40 For examples of operations-research analysis on anti-aircraft-carrier methods, see 'Preliminary Analysis on the Survivability of a U.S. Aircraft Carrier', *Zhidao feidan* [Guided Missiles], no. 5, 2000, pp. 1–10; 'Study of Attacking an Aircraft Carrier Using Conventional Ballistic Missiles', *Dier paobing gongcheng sheji yuanjiuyuan* [Second Artillery Corps Research Institute of Engineering Design], Xian, 2002; 'Concept of Using Conventional

- Ballistic Missiles to Attack a Carrier Fleet', *Keji yanjiu* [Science and Technology Research], no. 1, 2003; *Movement Forecast Model and Precision Analysis of Maneuvering Targets at Sea* (Beijing: Second Artillery Engineering Academy, 2005); 'Research on Optimisation Methods for Firepower Allocation Plans in Joint Strike Fires', *Junshi yunchou yu xitong gongcheng* [Military Operations Research and Systems Engineering], 2005.
- 41 Huang Hongfu, 'Concept of Using Conventional Ballistic Missiles to Attack a Carrier Fleet', *Keji Yanjiu* [Science and Technology Research], no. 1, 2003, pp. 6–8; Wang Yanfeng, 'Study of Attacking Aircraft Carrier Using Conventional Ballistic Missiles', Master's thesis, Institute of Engineering of the Second Artillery; Bi Shiguan, 'Preliminary Analysis on the Survivability of a U.S. Aircraft Carrier', *Feihang Daodan* [Guided Missiles], no. 5, 2000, pp. 1–10; Liu Sifeng et al., *Grey System: Theory and Application* (Beijing: Science Press, 1999); Xiong Shengqing and Zhou Qin, 'China's Contemporary National Defense Series', in *Zhongguo Dangdai Junshi Wenku* [China Modern Military Treasury] (Beijing: NDU Press, 1998) [book excerpt]. Xiong served as director of the Military Affairs Research Office at the Fleet Training Center and was the director of the Nanhai Fleet Command Department office, holding the rank of naval captain. He has published more than 20 academic articles, of which several have won the Outstanding Naval Article prize.
- 42 Tony Capaccio, 'China's New Missile May Create a "No-Go Zone" for U.S. Fleet', Bloomberg News, 17 November 2009.
- 43 Teng Lianfu and Jiang Fusheng (eds), *Kongjun Zuozhan Yanji* [Air Force Operations Research] (Beijing: National Defense University Press, May 1990), pp. 276–82; and Dai Jinyu (ed.), *Kongjun Zhanlue Xue* [Science of Air Force Strategy] (Beijing: NDU Press, July 1995).
- 44 Hua Renjie, Cao Yifeng and Chen Huixiu (eds), *Kongjun Xueshu Sixiang Shi* [History of Air Force Theory] (Beijing: PLA Publishers, 1991), pp. 294–331.
- 45 For a comprehensive discussion of Chinese air force doctrinal developments and new operational concepts, see Kevin M. Lanzit and Kenneth Allen, 'Right-Sizing the PLA Air Force: New Operational Concepts Define a Smaller, More Capable Force', in Roy Kamphausen and Andrew Scobell (eds), *Right-sizing the People's Liberation Army: Exploring the Contours of China's Military* (Carlisle, PA: Strategic Studies Institute, U.S. Army War College, 2007).
- 46 See chapter 2 of Dennis Blasko, *The Chinese Army Today* (Abingdon: Routledge, 2006), pp. 16–46.
- 47 China's fear of US–Taiwan defence cooperation is described in Michael Pillsbury, 'The US Role in Taiwan's Defense Reforms: Report to the U.S.–China Economic and Security Review Commission', 29 February 2004, [http://www.uscc.gov/researchpapers/2004/04\\_05\\_24\\_dr\\_pspeechintaipei\\_final1.php](http://www.uscc.gov/researchpapers/2004/04_05_24_dr_pspeechintaipei_final1.php). See also 'Deputy Li Tiemin: Ensure Safety of Strategic Seaways for China', *PLA Daily*, 14 March 2007;

- Zhou Hongtu, 'Reconsidering the "Malacca Dilemma" and China's Energy Security', *Xiandai Guoji Guanxi* [Contemporary International Relations], 20 June 2007; and Ju Hailong, 'Can the South China Sea Issue Be Resolved Peacefully?', *Shijie Zhishi* [World Knowledge], 1 February 2007.
- 48 See Mark Cozad, 'Prospects for Future Missions In The South And East China Seas', in Kamphausen and Scobell (eds), *Right-sizing the People's Liberation Army*.
- 49 Tao Shelan, 'PLA Admiral States Need for Offensive as well as Defensive Capabilities', *Zhongguo Xinwen She* [China News Agency], 9 January 2007; Zhou Yawen, Li Gencheng and Tang Zhongping, 'South Sea Fleet Base Enhances Ship-Borne Weaponry Support Capabilities', *PLA Daily*, 25 March 2008; and Ju Hailong, 'Can the South China Sea Issue Be Resolved Peacefully?', *Shijie Zhishi* [World Knowledge], 1 February 2007.
- 50 Xu Changlei and Pan Li, 'Blue Force Also Wins', *Rocket Force News*, 25 April 2006; Wang Suming and Zhang Shenghong, *Rocket Force News*, 7 July 2006, p. 2. I am indebted to Ken Allen of CNA for this reference.
- 51 See Liu Mingsong and Zhang Jiangang, 'Profile: Sun Jiyin – Showdown at Frontline of Virtual World', *Rocket Force News*, 24 September 2008, p. 4.
- 52 Wei Cunren, 'Moubu yong shizhan biao zhun jianyan zhandouli' [A Certain Unit Uses Realistic Warfare Standards to Evaluate Combat Power], *Rocket Force News*, 18 April 2006, p. 1.
- 53 The best study of war control is Lonnie D. Henley, 'Evolving Chinese Concepts of War Control and Escalation Management', in Michael D. Swaine, Andrew N.D. Yang and Evan S. Medeiros (eds), *Assessing the Threat: The Chinese Military and Taiwan's Security* (Washington DC: Carnegie Endowment, 2007), pp. 85–110. See also Xin Qin, *Xinxihua Shidai de Zhanzheng* [Warfare in the Information Age] (Beijing: National Defense University Press, 2000), pp. 1, 10; Chen Yong, Xu Guocheng and Geng Weidong (eds), *Gao Jishu Tiaojian xia Lujun Zhanyi Xue* [The Study of Ground Forces Campaign Theory under High Technology Conditions] (Beijing: Military Science Press, 2003).
- 54 See Michael S. Chase and Evan Medeiros, 'China's Evolving Calculus: Modernization and Doctrinal Debate', in James Mulvenon and David Finklestein (eds), *China's Revolution in Doctrinal Affairs: Emerging Trends in the Operational Art of the Chinese People's Liberation Army* (Arlington, VA: RAND Corporation and the Center for Naval Analysis, 2006), p. 147; Ken Allen and Maryanne Kivlehan-Wise, 'Implementing PLA Second Artillery Doctrinal Reforms', in Mulvenon and Finklestein (eds), *China's Revolution in Doctrinal Affairs*, pp. 159–200; and Bates Gill, James Mulvenon and Mark Stokes, 'The Chinese Second Artillery Corps: Transition to Credible Deterrence', in James Mulvenon and Andrew N.D. Yang (eds), *The People's Liberation Army as an Organization* (Santa Monica, CA: RAND Corporation, 2002), pp. 510–86.

- 55 Peng Guangqian and You Youzhi, *Zhanlue Xue* [The Science of Military Strategy], (Beijing: Military Science Press, 2001), p. 213.; Yao Youzhi and Zhao Dexi, 'Zhanlue de fanhua, shouheng yu fazhan' [The Generalization, Conservation, and Development of Strategy], *Zhongguo Junshi Kexue* [China's Military Science], 30 September 2001, pp. 120–7; Han Jiahe and Xiong Chunbao, 'Qiantan junshi weiji kongzhi' [A Brief Discussion of Military Crisis Control], *Guofang Bao* [Defense News], 22 October 2001, p. 101; Yu Jiang, 'Zhanzheng kongzhi: zouchu suobujide weigu' [War Control: Getting Out of an Exhausting Difficult Situation], *Guofang Bao* [Defense News], 25 March 2004, <http://www.pladaily.com.cn/gb/defence/2004/03/25/20040325017054.html>; Feng Changsong, 'Tigao daying zhanzheng he ezhi zhanzheng de nengli' [Raise Abilities to Win and Contain Wars], *PLA Daily*, 27 August 2003; 'Zhongguo junshi zhuanye tichu xiandai zhanzheng mouqiu "gao zhengzhi"' [Chinese Military Specialists Address the Quest for 'High Control' in Modern Warfare], *Guangming Ribao* [Guangming Daily], 28 April 2004.
- 56 Peng Guangqian and You Youzhi, *Zhanlue Xue* [The Science of Military Strategy].
- 57 Xiao Tianliang, *Zhanzheng Kongzhi Wenti Yanjiu* [On War Control] (Beijing: National Defense University Press, 2002).
- 58 Cited in Lonnie D. Henley, 'Evolving Chinese Concepts of War Control and Escalation Management', in Michael D. Swaine, Andrew N.D. Yang and Evan S. Medeiros (eds), *Assessing the Threat: The Chinese Military and Taiwan's Security* (Washington DC: Carnegie Endowment, 2007), pp. 85–110.
- 59 For a comparison between JTIDS and *Qu Dian* see Bob Schaffer, 'Remarks on China in the House of Representatives', Congressional Record, 14 March 2002, Extensions, pp. E360–E361, available at [http://www.fas.org/irp/congress/2002\\_cr/h031402.html](http://www.fas.org/irp/congress/2002_cr/h031402.html).
- 60 Stephen Saunders (ed.), *Jane's Fighting Ships: 2005–2006*, 108th ed. (Coulsden: Jane's Information Group, 2005), p. 123.
- 61 *Jane's All the World's Aircraft, 2005–2006*, (Coulsden: Jane's Information Group, 2005), p. 443; *Jane's C4I Systems: 2005–2006*, 17th ed. (Coulsden: Jane's Information Group, 2005), p. 274. Cited in Larry M. Wortzel, 'PLA Command, Control and Targeting Architectures: Theory, Doctrine, and Warfighting Applications', in Kamphausen and Scobell (eds), *Right-Sizing the People's Liberation Army*, p. 222.
- 62 Fan Li, 'Exploration of Construction of Security Defense Architecture for Military Information System', *Jisuanji Anquan* [Computer Security], February 2009.
- 63 Pei Jingyu et al., *Information Security and Cryptographic Technology* (Beijing: Haichao Press, 2003); 'Information Warfare – Principle and Application', 28th Research Institute of the Ministry of Information Industry, 2001; Jiang Chunfan, et al., 'Study on Issues Related to Security System Architecture for Information

- Systems', *Jisuanji Gongcheng Yu Yingyong* [Computer Engineering and Applications], 2004; Wang Lang, 'Study and Design of a Model of an Information Security Assurance System', *Beijing Shifan Daxue Xuebao* [Journal of Beijing Normal University], 2004; Su Jie et al. 'Design and Realization of a Novel Comprehensive Security Defense System', *Jisuanji Yingyong Yu Ruanjian* [Computer Application and Software], 2006.
- <sup>64</sup> Ding Xiaofeng and Xue Zhi, 'Network Attack/Defense and Game Theory', *Xinxi Anquan Yu Tongxin Baomi* [Information Security and Communications Security], September 2008.
- <sup>65</sup> Hu Wen, 'Analysis and Countermeasures of Computer Network Leakage', *Jisuanji Anquan* [Computer Security], 1 January 2009.
- <sup>66</sup> Yao Lihong, Zi Xiaochao and Li Jianhua, 'Information Transmission Model for Covert Channels', *Dianzi Xuebao* [Electronics Journal], November 2008.
- <sup>67</sup> Li Na 'Trusted Computing and Network Security', *Jisuanji Anquan* [Computer Security], October 2005, pp. 7-9.
- <sup>68</sup> Department of Defense, 'DoD 5200.28-STD Trusted Computer System Evaluation Criteria', 15 August 1983; Ádám Darvas, Reiner Hähnle and David Sands, 'A Theorem Proving Approach to Analysis of Secure Information Flow', *Lecture Notes in Computer Science*, no. 3450, 2003, pp. 193-209; Alessandra Di Pierro, Chris Hankin and Herbert Wiklicky, 'Approximate Non-interference', *Journal of Computer Security*, vol. 12, no. 1, 2004, pp. 37-81; Steven Gianvecchio and Haining Wang, 'Detecting Covert Timing Channels: An Entropy-Based Approach', *Proceedings of the 14<sup>th</sup> ACM Conference on Computer and Communications Security* (New York: ACM, 2007), pp. 307-16.
- <sup>69</sup> 'The Strategic Chess Game on the Security of Psychological Space', *PLA Daily*, 1 September 2009, p. 7.
- <sup>70</sup> For examples of operations research on anti-satellite capabilities, see 'Campaign Efficiency Evaluation Model of Anti-Satellite Weapons', *Zhanshu daodan kongzhi jishu* [Control Technology and Tactical Missiles], 1 December 2005; Cheng Fengzhou, Wang Ziming and Chen Shilu, 'Terminal Guidance Analysis of Extra-Atmospheric Kinetic Kill Vehicle', *Feixing lixue* [Flight Dynamics], no. 1, 2002; and Li Daguang, *Space Warfare* (Beijing: NDU Press, 2001), pp. 409-10.
- <sup>71</sup> Jia Junming, *On Space Operations* (Beijing: NDU Press, 2003). Three Chinese military studies on space warfare and assassin's mace weapons are reviewed in Michael Pillsbury, 'An Assessment of China's Anti-Satellite and Space Warfare Programs, Policies And Doctrines', U.S-China Economic and Security Review Commission, 19 January 2007, <http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA476735>.
- <sup>72</sup> Larry M. Wortzel, 'The Chinese People's Liberation Army and Space Warfare', *American Enterprise Institute*, 17 October 2007, p. 2, <http://www.aei.org/paper/26977>; Ashley J. Tellis, 'Punching the U.S. Military's

- "Soft Ribs": China's Antisatellite Weapon Test in Strategic Perspective', Carnegie Endowment for International Peace, Policy Brief 51, June 2007, pp. 2–4, <http://www.carnegieendowment.org/publications/index.cfm?fa=view&id=19317>.
- 73 Ashley J. Tellis, 'China's Military Space Strategy', *Survival*, vol. 49, no. 3, Autumn 2007, p. 41.
- 74 Vago Muradian, 'China Attempted To Blind U.S. Satellites with Laser', *Defense News*, 28 September 2006.
- 75 Ian Easton, 'The Great Game in Space: China's Evolving ASAT Weapons Programs and their Implications for Future U.S. Strategy', Project 2049, 24 June 2009, [http://project2049.net/documents/china\\_asat\\_weapons\\_the\\_great\\_game\\_in\\_space.pdf](http://project2049.net/documents/china_asat_weapons_the_great_game_in_space.pdf).
- 76 Arun Sahgal, 'China's Search for Power and Its Impact on India', *The Korean Journal of Defence Analysis*, vol. 15, no. 1, Spring 2003, pp. 155–82, especially pp. 155, 171; Valerie Niquet, 'China and the Indian Subcontinent', *China News Analysis*, no. 1555, 1 March 1996, p. 5; John W. Garver, 'Asymmetrical Indian and Chinese Threat Perceptions', in Sumit Ganguly (ed.), *India as an Emerging Power* (London: Frank Cass, 2003), pp. 109–34.
- 77 See Yang Pingxue, 'A Trial Analysis of Factors Limiting Development of Sino-Indian Relations', *Nanyang Yanjiu Qikan* [South Asia Quarterly], no. 1, March 2002, pp. 38–41.
- 78 Zheng Tingying, *Qingnian Cankao Online* [Youth Reference Online], 12 June 2009.
- 79 Lu Yin, 'Challenges Facing Nuclear Nonproliferation in Northeast Asia', *Guoji Wenti Yanjiu* [International Issues Research], no. 5, 2010.
- 80 Jian Xinfeng and Long Wenhui, 'Examination of Japan's Military Transformation in Recent Years', *Riben Xuekan*, [Japan Review] no. 1, 2009; and Xu Wansheng, 'Trends in Japanese Nuclear Policy', *Xiandai Guoji Guanxi* [Contemporary International Relations], no. 4, 2008.
- 81 Zhao Huasheng, 'An Evaluation of Eight Years of Putin's Foreign Policy', *Xiandai Guoji Guanxi* [Contemporary International Relations], no. 2, 2008.
- 82 Dennis C. Blair, 'Military Power Projection In Asia', in Ashley J. Tellis, Mercy Kuo and Andrew Marble (eds), *Strategic Asia 2008–09: Challenges and Choices* (Seattle, WA: National Bureau Of Asian Research, 2008), p. 420.
- 83 Cortez A. Cooper, 'The PLA Navy's New Historic Missions-expanding Capabilities for a Re-emergent Maritime Power', testimony presented before the US–China Economic and Security Review Commission, 11 June 2009.
- 84 These estimates take into account market exchange rates and purchasing-power-parity calculations. See Keith Crane et al., *Modernizing China's Military Opportunities and Constraints* (Santa Monica, CA: The Rand Corporation, 2005).
- 85 *Ibid.*
- 86 Kissinger, 'The Future of U.S.–China Relations', p. 55.
- 87 Interviews with staff of China Arms Control and Disarmament Association, Beijing, 26 June 2012.
- 88 Christopher Twomey, 'Chinese–U.S. Strategic Affairs: Dangerous Dynamism', *Arms Control Association*,

- January–February 2009, [http://www.armscontrol.org/act/2009\\_01-02/china\\_us\\_dangerous\\_dynamism](http://www.armscontrol.org/act/2009_01-02/china_us_dangerous_dynamism).
- <sup>89</sup> Lewis Dunn, 'Reshaping Strategic Relationships: Expanding the Arms Control Toolbox', Arms Control Association, May 2009, [http://www.armscontrol.org/act/2009\\_5/Dunn](http://www.armscontrol.org/act/2009_5/Dunn).
- <sup>90</sup> Christopher Twomey, 'Chinese–U.S. Strategic Affairs: Dangerous Dynamism'.
- <sup>91</sup> Hans Kristensens, Robert Norris and Ivan Oelrich. 'From Counterforce to Minimal Deterrence: A New Nuclear Policy on the Path Toward Eliminating Nuclear Weapons', Federation of American Scientists and the National Resources Defense Council, Occasional Paper No. 7, April 2009, [http://www.fas.org/pubs/\\_docs/OccasionalPaper7.pdf](http://www.fas.org/pubs/_docs/OccasionalPaper7.pdf).
- <sup>92</sup> Brad Roberts, 'Dissuasion and China', *Strategic Insights*, vol. 3, no. 10, October 2004.
- <sup>93</sup> Mark Cozad, 'China's Regional Power Projection: Prospects for Future Missions in the South and East China Seas', in Roy Kamphausen, David Lai and Andrew Scobell (eds), *Beyond the Strait: PLA Missions Other Than Taiwan* (Carlisle, PA: US Army War College, 2009), <http://www.strategicstudiesinstitute.army.mil/pdffiles/pub910.pdf>.
- <sup>94</sup> See, for example, Eric McVadon, 'China and the United States on the High Seas', *China Security*, vol. 3, no. 4, Autumn 2007, pp. 3–28, [http://www.chinasecurity.us/images/stories/CS8\\_1.pdf](http://www.chinasecurity.us/images/stories/CS8_1.pdf).
- <sup>95</sup> The concept of dissuasion or competitive strategy dates to the early 1970s. See A.W. Marshall, *Long-Term Competition with the Soviets: A Framework for Strategic Analysis* (Santa Monica, CA: RAND, April 1972). The concept of dissuasion was recommended by the National Defense Panel in 1997, which stated the United States might seek options that 'could be used ... to dissuade prospective competitors from undertaking aggressive military competition'. National Defense Panel, 'Transforming Defense: National Security in the 21st Century', December 1997, p. 57.
- <sup>96</sup> Robert (Bob) Martinage, 'Dissuasion Strategy', Congressional Briefing, US Capitol, 6 May 2008, available at [http://www.csbaonline.org/4Publications/PubLibrary/S.20080506.Dissuasion\\_Strateg/S.20080506.Dissuasion\\_Strateg.pdf](http://www.csbaonline.org/4Publications/PubLibrary/S.20080506.Dissuasion_Strateg/S.20080506.Dissuasion_Strateg.pdf).
- <sup>97</sup> Sir John Fisher, retiring as First Sea Lord, imparted what he called 'the whole secret' that he called 'plunging' to the new First Sea Lord Winston Churchill, according to Nicholas A. Lambert, *Sir John Fisher's Naval Revolution* (Columbia, SC: University of South Carolina Press, 2002), p. 246. London's strategy also dissuaded Paris from challenging British naval supremacy, according to Paul Kennedy, *The Rise and Fall of British Naval Mastery* (Amherst, NY: Humanity Books, 1983), p. 174.
- <sup>98</sup> Martinage seems well aware these two recommendations would be tricky to implement unless the United States had the requisite knowledge of China's perceptions. Similarly, in his edited volume (*Competitive Strategies for the 21st Century*), Thomas Mahnken cautions in his concluding

chapter that 'more needs to be done' by scholars to ensure that American efforts at dissuasion will be effective. Surprisingly, Mahnken even challenges claims by both scholars and policymakers that US efforts at competitive strategy toward the Soviet Union ever succeeded, arguing that, despite these claims, 'there has been no detailed case study of this interaction, particularly one incorporating Russian sources'. See Mahnken (ed.), *Competitive Strategies for the 21st Century*, pp. 301–2.

<sup>99</sup> Kevin P. Coyne and John Horn, 'Predicting Your Competitor's Reaction', *Harvard Business Review*,

April 2009, <http://hbr.org/2009/04/predicting-your-competitors-reaction/ar/1>; Richard A. D'Aveni, 'Mapping Your Competitive Position', *Harvard Business Review*, November 2007, <http://hbr.org/2007/11/mapping-your-competitive-position/ar/1>; Michael E. Porter, 'The Five Competitive Forces That Shape Strategy', *Harvard Business Review*, January 2008, <http://hbr.org/2008/01/the-five-competitive-forces-that-shape-strategy/ar/1>.

<sup>100</sup> Christopher A. Ford and David Rosenberg, 'The Naval Intelligence Underpinnings of Reagan's Maritime Strategy', *Journal of Strategic Studies*, vol. 28, no. 2, April 2005, pp. 379–409.