Navigating the Taiwan Strait

Deterrence, Escalation Dominance, and U.S.-China Relations

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Since the end of the Cold War, the strategic focus of the United States has shifted from Europe to East Asia, in recognition of East Asia's growing economic importance and the strategic dynamism of the People's Republic of China (PRC).[1] In this context, the prospect for war in the Taiwan Strait has emerged as a major preoccupation of U.S. policymakers. The March 1996 U.S.-China confrontation, when the PRC carried out military exercises and missile tests near Taiwan and the United States deployed two aircraft carriers to the region, placed this concern at the forefront of U.S. strategic planning. The result has been increased U.S. arms sales to Taiwan, the beginnings of a U.S.-Taiwan defense relationship focused on wartime cooperation, and heightened U.S. interest in missile defense.[2]

The assumption of the George W. Bush administration is that war in the Taiwan Strait is sufficiently likely that the United States must strengthen its diplomatic and military ties with Taiwan, even though such ties could disrupt U.S.-China relations and regional stability. But the analysis supporting this key assumption is lacking. In the aftermath of the Cold War, interest among scholars and policymakers in deterrence theory and in its application to U.S. foreign policy has languished.[3] This article draws on deterrence theory to understand

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The author is grateful for funding support from the United States Institute of Peace. For their helpful comments on early versions, he thanks Robert Art, Paul Godwin, Alastair Iain Johnston, Allen Whiting, and participants in the Security Studies Program Seminar at the Center for International Studies, Massachusetts Institute of Technology, and in the Research Program in International Security at the Center for International Studies, Princeton University.

1. U.S. Department of Defense, *Quadrennial Defense Report* (Washington, D.C.: U.S. Department of Defense, 2001); and U.S. Department of Defense, "Special DoD News Briefing—Conventional Forces Study," June 22, 2001. For an analysis of this report, see Michael McDevitt, "The QDR and East Asia," *Proceedings,* March 2002, pp. 87–88.
2. Steven M. Goldstein and Randall Schriver, "An Uncertain Relationship: The United States, Taiwan, and the Taiwan Relations Act," *China Quarterly,* No. 165 (March 2001), pp. 147–172; Keith B. Payne, *The Fallacies of Cold War Deterrence and a New Direction* (Lexington: University Press of Kentucky, 2001), chap. 6; and Peter W. Rodman, *Shield Embattled: Missile Defense as a Foreign Policy Problem* (Washington, D.C.: Nixon Center, 2002), pp. 43–55.
3. The exceptions include Barry R. Posen, "U.S. Security Policy in a Nuclear-Armed World, or What If Iraq had Nuclear Weapons?" in Victor A. Utgoff, ed., *The Coming Crisis: Nuclear Proliferation, U.S. Interests, and World Order* (Cambridge, Mass.: MIT Press, 2000), pp. 157–190; T.V. Paul,

International Security, Vol. 27, No. 2 (Fall 2002), pp. 48–85

post–Cold War East Asia and to contribute to the debate over U.S. policy toward China and Taiwan.

To understand the importance of deterrence theory for East Asia, it is useful to revisit some of the security concepts originally developed for the European theater during the Cold War and to consider the following questions: How do the factors that contribute to deterrence—including interests, capabilities, and resolve—interact in the Taiwan Strait? Similarly, what role do nuclear weapons play in China's consideration of the use of conventional force?[4] What do Chinese leaders believe is necessary to deter an adversary, and do they believe that such conditions exist?[5]

This article argues that the United States can be very confident that, absent a Taiwan declaration of independence, it can continue to deter the use of force by China against Taiwan. The United States possesses the capabilities—including a robust war-fighting force and "escalation dominance"—that even the most cautious analysts argued were necessary for deterring Soviet aggression.[6]

Richard J. Harknett, and James J. Wirtz, eds., *The Absolute Weapons Revisited: Nuclear Arms and the Emerging International Order* (Ann Arbor: University of Michigan, 1998); Payne, *The Fallacies of Cold War Deterrence;* and James J. Wirtz, "Counterproliferation, Conventional Counterforce, and Nuclear War," *Journal of Strategic Studies,* Vol. 23, No. 1 (March 2000), pp. 5–24.

4. The classic studies of deterrence are highly relevant to the post–Cold War era. See Herman Kahn, *Thinking about the Unthinkable* (New York: Horizon, 1962); Thomas C. Schelling, *The Strategy of Conflict* (New York: Oxford University Press, 1963); Thomas C. Schelling, *Arms and Influence* (New Haven, Conn.: Yale University Press, 1966); Glenn H. Snyder, *Deterrence and Defense: Toward a Theory of National Security* (Princeton, N.J.: Princeton University Press, 1961); William W. Kaufmann, "The Requirements of Deterrence," in Kaufmann, ed., *Military Policy and National Security* (Princeton, N.J.: Princeton University Press, 1956); and Alexander L. George and Richard Smoke, *Deterrence in American Foreign Policy: Theory and Practice* (New York: Columbia University Press, 1974). On conventional deterrence, see Edward Rhodes, "Conventional Deterrence," *Comparative Strategy,* Vol. 19, No. 3 (July–September 2000), pp. 221–254; John J. Mearsheimer, *Conventional Deterrence* (Ithaca, N.Y.: Cornell University Press, 1983); T.V. Paul, *Asymmetric Conflicts: War Initiation by Weaker Powers* (Cambridge: Cambridge University Press, 1994); and Paul K. Huth, *Extended Deterrence and the Prevention of Local War* (New Haven, Conn.: Yale University Press, 1988). On the relationship between nuclear weapons and conventional war, see Robert Jervis, *The Meaning of the Nuclear Revolution: Statecraft and the Prospect of Armageddon* (Ithaca, N.Y.: Cornell University Press, 1989); Henry A. Kissinger, *The Necessity for Choice: Prospects of American Foreign Policy* (New York: Harper and Brothers, 1960); and Herman Kahn, *On Escalation: Metaphors and Scenarios* (New York: Frederick A. Praeger, 1965).

5. For earlier discussions of Chinese approaches to deterrence and the use of force, see Allen S. Whiting, *The Chinese Calculus of Deterrence* (Ann Arbor: University of Michigan Press, 1975); Allen S. Whiting, "China's Use of Force, 1950–96, and Taiwan," *International Security,* Vol. 26, No. 2 (Fall 2001), pp. 103–131; Alastair Iain Johnston, "China's New 'Old Thinking': The Concept of Limited Deterrence," *International Security,* Vol. 20, No. 3 (Winter 1995/96), pp. 5–42; and Avery Goldstein, *Deterrence and Security in the Twenty-first Century* (Stanford, Calif.: Stanford University Press, 2000).

6. See, for example, Kissinger, *The Necessity for Choice,* pp. 33–56, chaps. 3, 4; Colin S. Gray, "Nuclear Strategy: The Case for a Theory of Victory," in Steven E. Miller, ed., *Strategy and Nuclear Deterrence* (Princeton, N.J.: Princeton University Press, 1984), pp. 23–56; Colin S. Gray and Keith Payne, "Victory Is Possible," *Foreign Policy,* No. 39 (Summer 1980), pp. 14–27; B.H. Liddell Hart, *Deterrence*

Moreover, Chinese leaders respect not only U.S. military capabilities but also U.S. resolve, and thus believe that American retaliatory threats are credible. Effective deterrence enables Washington to avoid policies that undermine U.S.-China cooperation while maintaining peace in the Taiwan Strait.

The first section of this article reviews the core concepts of deterrence theory and their relevance to the Taiwan Strait. The second section addresses the conditions under which China is either deterrable or undeterrable and the implications of asymmetric U.S.-China interests for deterrence. The third section analyzes Beijing's understanding of the role of nuclear weapons in deterrence—its response to the "stability-instability paradox"—and the implications for Chinese use of force. The fourth section assesses Chinese analysis of U.S.-China conventional deterrence dynamics. The fifth section examines potential sources of deterrence failure. The final section considers the implications of conventional deterrence dynamics in the Taiwan Strait for U.S. interests and how Washington can deter war while expanding U.S.-China cooperation.

Deterrence Theory and the Taiwan Strait

There are two deterrence dyads in the Taiwan Strait. The first involves U.S. deterrence of China's use of force against Taiwan for the purpose of unification. The second entails Chinese deterrence of Taiwan from declaring independence from mainland sovereignty. This article examines the U.S.-China dyad because it is of greater concern to U.S. policymakers and drives much of the decision-making regarding U.S. policy toward both China and Taiwan.

Effective deterrence demands that the status quo state possess the retaliatory capability to inflict costs that outweigh the benefits on a state that seeks to change the status quo. U.S. deterrence in the Taiwan Strait requires that Chinese leaders believe that the United States can use its military capabilities effectively in a war in the Taiwan theater and that it can inflict sufficient costs on China that outweigh the benefits of unification through war.

In some deterrence relationships, the revisionist state may have such a strong interest in challenging the status quo that it is not deterrable, regardless of the costs involved. U.S. deterrence of Chinese force thus requires that China values other interests more than unification with Taiwan. But even if China is

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or Defense: A Fresh Look at the West's Military Position (New York: Frederick A. Praeger, 1960); and Paul Nitze, "The Relationship of Strategic and Theater Nuclear Forces," *International Security,* Vol. 2, No. 2 (Fall 1977), pp. 122–132. See also Robert Jervis, *The Illogic of American Nuclear Strategy* (New York: Columbia University Press, 1984), chap. 5, for a discussion of official views.

deterrable and acknowledges U.S. superiority in the Taiwan Strait, the United States must have still a reputation for resolve, so that its retaliatory threat is credible to China. U.S. interests regarding the Taiwan issue are therefore important because they influence China's assessment of the credibility of U.S. retaliatory threats.[7]

Sometimes the deterrer's interests are so high that its credibility is not in doubt. At other times its interests are so low that the deterrer's reputation cannot enhance its credibility, regardless of its capabilities. In between lurks the extended deterrence problem, where uncertainty exists over the deterrer's interests and reputation can determine the credibility of threats.[8] In the 1950s and 1960s, U.S. policymakers feared that insofar as the credibility of the United States to deter the Soviet Union from invading Western Europe was uncertain, U.S. ability to deter the conventional use of force by a nuclear-armed China was even less certain, because U.S. interest in the East Asian status quo was not as strong as U.S. interest in the European status quo.[9] Thus, Washington's extended deterrence problem in East Asia is no different now than it was during the first half of the Cold War. Today, there is considerable uncertainty in Washington over Beijing's assessment of U.S. resolve to defend Taiwan.

China's perception of U.S. resolve is thus a critical determinant of the effectiveness of the U.S. extended deterrence posture and the state of U.S.-China relations. China can acknowledge U.S. military superiority but still question U.S. resolve to risk war and high costs, including the potential for incurring a large number of casualties, over the defense of Taiwan. Thus, the United States must compensate for U.S.-Chinese asymmetric interests in Taiwan to deter China's use of force. Moreover, China's assessment of U.S. resolve affects U.S. defense planning. U.S. concerns over the credibility of its extended deterrence posture

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7. On asymmetric interests and war, see Glenn H. Snyder and Paul Diesing, *Conflict among Nations: Bargaining, Decision Making, and System Structure in International Crises* (Princeton, N.J.: Princeton University Press, 1977), p. 190; Andrew Mack, "Why Big Nations Lose Small Wars: The Politics of Asymmetric Conflict," *World Politics,* Vol. 27, No. 2 (January 1975), pp. 175–200; and Paul, *Asymmetric Conflicts,* pp. 16–17.
8. Richard K. Betts, *Nuclear Blackmail and Nuclear Balance* (Washington, D.C.: Brookings, 1987); Patrick M. Morgan, "Saving Face for the Sake of Deterrence," in Robert Jervis, Richard Ned Lebow, and Janice Gross Stein, *Psychology and Deterrence* (Baltimore, Md.: Johns Hopkins University Press, 1985), pp. 125–135; Schelling, *Arms and Influence,* chaps. 2, 3; and Schelling, *The Strategy of Conflict,* chap. 8. For an alternative view of the role of reputation in deterrence, see George and Smoke, *Deterrence in American Foreign Policy,* pp. 559–560; Kaufmann, "The Requirements of Deterrence," pp. 23–29; Snyder and Diesing, *Conflict among Nations,* pp. 185–188; and Jonathan Mercer, *Reputation and International Politics* (Ithaca, N.Y.: Cornell University Press, 1996).
9. For a discussion of the Cold War deterrence problem in East Asia, see, for example, Schelling, *Arms and Influence,* pp. 49–50, 63–66, 82–83; Snyder, *Deterrence and Defense,* chap. 4; and Kissinger, *The Necessity for Choice,* chap. 2.

could lead to a Taiwan policy that would be detrimental to American interests in U.S.-China cooperation.

The key to the extended deterrence problem is the role of nuclear weapons in the conventional use of force. Leaders in Beijing may believe that China's nuclear weapons can deter U.S. conventional use of force in defense of Taiwan, thus enabling the Chinese to start a war. This is the core issue in the "stability-instability paradox."[10] On the one hand, the history of the Cold War suggests that the deterrence of conventional war by the danger of accidental or unintended escalation to mutually assured destruction (MAD) may be a reality.[11] On the other hand, during the Cold War, U.S. officials feared that although the risk of nuclear war would deter the United States from launching a conventional war, they could not be sure whether the Soviet Union would respond similarly to the risk of an unintended nuclear exchange. Thus, after the Soviet Union acquired a second-strike nuclear capability in the mid-1960s, many U.S. government officials and defense analysts argued that deterrence required robust U.S. conventional and/or nuclear war-fighting capabilities and "escalation dominance."[12] These concerns contributed to NATO's deployment of tactical nuclear weapons in Western Europe.[13]

Regarding contemporary East Asia, some U.S. policy analysts fear that leaders in Beijing may believe that China's limited nuclear capability deters U.S. intervention on behalf of Taiwan, thus tempting China to use force for unification. These concerns drive much of the desire of the Bush administration to enhance U.S.- Taiwan defense cooperation and missile defense. But if Chinese leaders are like their U.S. counterparts during the Cold War, they will lack confidence in the utility of nuclear weapons to deter U.S. intervention in a mainland-Taiwan war; instead they will focus on China's conventional capabilities as its deterrent force.

The capabilities and credibility of the status quo state interact with the revisionist state's interest in challenging the status quo to create the expected cost

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10. On the stability-instability paradox, see Jervis, *The Meaning of the Nuclear Revolution,* chap. 3; Bernard Brodie, *Escalation and the Nuclear Option* (Princeton, N.J.: Princeton University Press, 1966), pp. 28–29; and Schelling, *The Strategy of Conflict,* pp. 200–202.
11. John Lewis Gaddis, "The Long Peace: Elements of Stability in the Postwar International System," in Sean M. Lynn-Jones and Steven E. Miller, eds., *The Cold War and After: An* International Security *Reader,* exp. ed. (Cambridge, Mass.: MIT Press, 1977), pp. 22–25; and McGeorge Bundy, *Danger and Survival: Choices about the Bomb in the First Fifty Years* (New York: Random House, 1988).
12. See note 6.
13. Snyder, *Deterrence and Defense,* pp. 196–198; Lawrence Freedman, *The Evolution of Nuclear Strategy,* 2d ed. (New York: St. Martin's, 1989); Walter Slocomb, "The Countervailing Strategy," in Miller, *Strategy and Nuclear Deterrence,* pp. 245–254; and Schelling, *Arms and Influence,* pp. 109–116.

of the use of force and thus the effectiveness of deterrence. During the Cold War, the probability that the United States would risk a U.S.-Soviet nuclear exchange in retaliation for a Soviet invasion of Western Europe may have been low, but the costs for the Soviet Union would have been catastrophic, thus creating sufficient expected costs to deter the Soviet use of force.[14] To determine the expected cost of the use of force in the Taiwan Strait, Chinese leaders must balance the credibility of a U.S. threat to intervene, the likely costs for China of U.S. intervention, and the potential benefits of unification.

Conventional deterrence by a stronger and credible power can fail when the weaker state relies on an asymmetric strategy to inflict high costs on a superior adversary. In the context of asymmetric interests, China may believe that such a strategy could compel the United States to concede rather than engage in a costly war over Taiwan. Deterrence can also fail when the deterrer's military strategy cannot eliminate the challenger's option of a fait accompli strike that achieves the challenger's limited objectives and leaves war initiation or escalation to the deterrer. In the Taiwan Strait, failed conventional deterrence could entail China starting a war to seek the rapid political capitulation of Taiwan. Thus, effective deterrence requires the United States to possess the specific capabilites necessary to frustrate a fait accompli strategy.[15]

Finally, deterrence can be effective but unstable if either side fears that the other would benefit from a first strike, creating pressures for crisis escalation and/or preemptive war. Unstable deterrence can reflect exacerbated security dilemma dynamics. During the Cold War, the security dilemma was especially acute, as U.S. fear of a Soviet conventional first strike contributed to crisis escalation. In post–Cold War East Asia, the security dilemma as well as the likelihood of crisis instability and an unintended war will reflect U.S. and Chinese military capabilities and the geography of the Taiwan theater.[16]

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14. On expected costs and similar concepts, see Snyder, *Deterrence and Defense*, p. 29; and George and Smoke, *Deterrence in American Foreign Policy,* pp. 60, 525–526. See also Robert Jervis, "Deterrence and Perception," in Miller, *Strategy and Nuclear Deterrence,* pp. 58–59; Bruce Bueno de Mosquita, *The War Trap* (New Haven, Conn.: Yale University Press, 1981); and Jervis, *The Illogic of American Nuclear Strategy,* pp. 46–47.

15. Mack, "Why Big Nations Lose Small Wars"; Betts, *Nuclear Blackmail and Nuclear Balance,* pp. 14–16; Paul, *Asymmetric Conflicts;* Huth, *Extended Deterrence and the Prevention of Local War,* pp. 34–35, 75; and Mearsheimer, *Conventional Deterrence.*

16. Schelling, *The Strategy of Conflict*, chap. 9; Snyder, *Deterrence and Defense,* pp. 97–110; and Stephen Van Evera, *Causes of War: Power and the Roots of Conflict* (Ithaca, N.Y.: Cornell University Press, 1999), pp. 35–44. On the security dilemma, see Robert Jervis, "Cooperation under the Security Dilemma," *World Politics,* Vol. 30, No. 2 (January 1978), pp. 167–215; and Stephen Van Evera, "Offense, Defense, and the Causes of War," *International Security,* Vol. 22, No. 4 (Spring 1998), pp. 5–43.

Asymmetric Interests in the Taiwan Strait

The United States and China have asymmetric interests in the Taiwan Strait. The Chinese leadership views Taiwan as Chinese territory, and it has strong nationalist and security incentives to seek unification. On the other hand, U.S. security interests in Taiwan are limited to reputational interests. Washington seeks to deter the mainland's use of force to preserve the credibility of U.S. regional security commitments. For this to succeed, Beijing must be persuaded that despite its greater interest in Taiwan, U.S. military capabilities and resolve make the use of force too risky.

Ultimately, the efficacy of U.S. deterrence depends on Chinese interests. Is China deterrable, or is it so dissatisfied with the status quo that it is prepared to adopt high-risk policies to secure its objectives? Since 1949, when the Republic of China (ROC) leadership moved to Taiwan and the PRC was established, Taiwan has enjoyed de facto independence from the mainland. Within the diplomatic cover of the "one-China principle," according to which the PRC and the ROC agreed that Taiwan was part of China, Beijing has tolerated the status quo. Despite China's interest in reversing the "humiliation" of Western and Japanese imperialism and ending foreign interference in its domestic affairs, Washington has successfully deterred Beijing from challenging the status quo. Rather than go to war for unification, Chinese leaders have pursued higher-value interests, including ideological objectives under Mao Zedong and economic modernization under Deng Xiaoping and his successors.

China's tolerance of the status quo does not preclude it from taking action if Taiwan were to challenge the status quo. Since the mid-1990s, Taipei has adopted a series of measures suggesting to Beijing that a secessionist movement is under way on Taiwan. For China, a formal Taiwan declaration of independence would be the equivalent of a declaration of war. It would challenge the nationalist legitimacy of the Chinese Communist Party (CCP), which is based on erasing the humiliation of past imperialist invasions. Thus as one observer has noted, "no Chinese politician, strategist, or anyone else will dare to abandon the objective of making Taiwan return and the unification of the motherland."[17] Moreover, Taiwan independence would increase the likelihood that Taiwan could be used by a rival power to threaten PRC security, much the

17. Wang Yizhou, "Mianxiang 21 Shiji de Zhongguo Waijiao: San Xuqiu de Xunqiu ji qi Pingheng" [Chinese diplomacy facing the 21st century: the search for the three musts and their balances], *Zhanlue yu Guanli* [Strategy and management], No. 6 (1999), p. 20.

way that the United States used Taiwan in the 1950s in its "containment" of China. The island is both the "protective shield" (*pingzhang*) and the "strategic gateway" (*suoyue*) to southeast China.[18] Chinese leaders also have a credibility problem. Should Beijing fail to retaliate against a Taiwan declaration of independence, secessionist movements in Tibet, Xinjiang, and other parts of China could be emboldened to escalate their resistance to Chinese rule.[19]

For some observers, the issue is whether advances in China's military capabilities have undermined the credibility of the U.S. retaliatory threat just as Beijing is becoming increasingly apprehensive that developments in Taiwan could lead to a declaration of independence.[20] Thus, to deter China from using force in a bid for unification, the United States requires both the military capability and the credibility to pose an unacceptable expected cost to Beijing of U.S. intervention.

But are U.S. interests in Taiwan sufficiently important that Washington will risk hostilities with China to defend Taiwan? Until the Korean War, Washington acknowledged that Chinese control over Taiwan would not significantly affect U.S. security. U.S. Secretary of State Dean Acheson explained to members of Congress in January 1950 that PRC occupation of Taiwan would add only forty miles to mainland power projection toward Okinawa. U.S. military leaders concurred, noting that Taiwan was less important to Japanese security than Korea, from which the U.S. military had already withdrawn.[21] In June

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A note on sources: Many of the Chinese-language sources used in this article are open-source materials written by military officers. Articles in the prestigious journal *Zhongguo Junshi Kexue* fall into this category. Other materials carry such designations as "internal distribution" (*neibu faxing*), "distribution within the military" (*junnei faxing*), or "military use" (*junnei shiyong*). These materials reveal the Chinese military's thinking about such issues as deterrence, nuclear weapons, the roles of advanced weapons in war, and the course of a possible war with United States and/or Taiwan. I have interviewed Chinese government foreign policy analysts and military officers, whose studies frequently contribute to the Chinese government's net assessment and policymaking process.

18. Hu Angang and Yang Fan, *Daguo Zhanlue: Zhongguo Liyi yu Shimin* [Great power strategy: China's interests and mission] (Shenyang: Liaoning Renmin Chubanshe, 2000), pp. 34–35; Cheng Guanzhong, *Diyuan Zhanlue Lun* [On geostrategy] (Beijing: Guofang Daxue Chubanshe, 1999), p. 214; Dong Liangqing, *Zhanlue Dili Xue* [The science of strategic geography] (Beijing: Guofang Daxue Chubanshe, 2000), pp. 129–130; and Yang Jiemian, *Hou Lengzhan Shiqi de Zhong Mei Guanxi: Waijiao Zhengci Bijiao Yanjiu* [U.S.-China relations in the post–Cold War era: a comparative study of diplomatic policy] (Shanghai: Shanghai Renmin Chubanshe, 2000), p. 172.

19. Interviews with Chinese government foreign policy analysts, 2001 and 2002.

20. Thomas J. Christensen, "Posing Problems without Catching Up: China's Rise and Challenges for U.S. Security Policy," *International Security,* Vol. 25, No. 4 (Spring 2000), pp. 5–40; Mark A. Stokes, *China's Strategic Modernization: Implications for the United States* (Carlisle, Penn.: Strategic Studies Institute, U.S. Army War College, 1999); Payne, *The Fallacies of Cold War Deterrence*, chap. 6; and Rodman, *Shield Embattled,* pp. 43–55.

21. "Memorandum of Conversation, by the Secretary of State," January 5, 1950, U.S. Department of State, *Foreign Relations of the United States* (*FRUS*), 1950, Vol. 6 (Washington, D.C.: Government Printing Office, 1976), pp. 260–261; and "Memorandum of Conversation, by the Secretary of State,"

1950 Washington reversed policy by attaching strategic importance to Taiwan separation from the PRC. This shift reflected its Korean War policy of forward containment of China, rather than a reevaluation of Taiwan's intrinsic importance to U.S. security. Fifty years later, Taiwan still possesses minimal geopolitical significance. Thus U.S. policy has sought a peaceful resolution of the Taiwan conflict, suggesting that if Taiwan chose to join the mainland, absent PRC use of force, Washington could accept it.

In March 1996, the United States responded to Chinese military exercises near Taiwan to signal its resolve to oppose PRC use of force. U.S. Secretary of Defense William Perry declared that the presence of U.S. carriers near Taiwan was a warning that "the United States has a national interest in the security and the stability in the western Pacific region. We have a powerful military force there to help us carry out our national interests." The State Department explained that the carriers were "a signal meant to convey the strong interests that we have in a peaceful outcome" to mainland-Taiwan differences.[22] But did Washington persuade Beijing of its resolve despite its secondary, reputational interests in the Taiwan conflict?

Nuclear Weapons and Chinese Use of Force

China's limited number of nuclear weapons would seem to give it a retaliatory force sufficient to fulfill a minimal deterrence capability. Chinese analysts argue that based on the assumption that states make a "cost-benefit comparison" (*bi deshi*) in deciding to use force, a limited nuclear force can target an adversary's "strategic points" (*yaohai*) to inflict sufficient costs to deter a superior power's use of nuclear weapons. In this respect, China's nuclear forces serve as a "counter-nuclear deterrent" (*fan he weishe)* capability, undermining an adversary's ability to carry out "nuclear blackmail" (*he ezha*) to threaten China with a nuclear attack in response to the latter's use of conventional force to defend its interests. China's nuclear deterrent can also persuade other nuclear powers from escalating a conventional war directly against Chinese territory, for fear of a possible Chinese nuclear retaliation.[23]

December 29, 1949, *FRUS,* 1949, Vol. 9 (Washington, D.C.: Government Printing Office, 1974), p. 467.

22. U.S. Department of Defense, news briefings, March 12, 1996, March 14, 1996, and March 16, 1996; and U.S. Department of State, press briefing, March 11, 1996. See also Robert S. Ross, "The 1995–96 Taiwan Strait Confrontation: Coercion, Credibility, and Use of Force," *International Security,* Vol. 25, No. 2 (Fall 2000), pp. 87–123.

23. Strategic Research Department of the Academy of Military Science, *Zhanlue Xue* (2001 ed.) [Science of military strategy] (Beijing: Junshi Kexue Chubanshe, 2001), pp. 234–235, 242; Zhu

To the extent that China is thus engaged in mutual nuclear deterrence with the United States, it participates in the stability-instability paradox. Chinese leaders may believe that because the PRC can pose the risk of unintended escalation and mutually assured destruction, the United States would be deterred from interfering in a conventional mainland-Taiwan conflict over a second-level U.S. interest such as the independence of Taiwan. It is not clear, however, that leaders in Beijing believe that China has a sufficient nuclear deterrent capability or that nuclear weapons can deter the conventional use of force.

China possesses approximately twenty CSS-4 intercontinental ballistic missiles (ICBMs) capable of reaching the west coast of the United States. This force is sufficient to pose a risk to the United States of unacceptable destruction from unintended escalation. Moreover, at least one Chinese leader has suggested that the risk to Los Angeles of a Chinese nuclear strike might deter Washington from intervening in a mainland-Taiwan war, thus freeing China to act against Taiwan.[24] China also possesses CSS-2, CSS-3, and CSS-5 nuclear-capable intermediate-range ballistic missiles (IRBMs) that can reach U.S. regional bases and allies. This means, for example, that China could hold the security of Japan hostage to U.S.-China relations.[25]

Nonetheless, Chinese leaders have minimal confidence that China's strategic forces have a second-strike capability or even a first-strike capability. China's missiles and nuclear warheads are stored in separate locations. The time required to fit a warhead onto a missile would give the adversary time to detect Chinese preparations. In addition, because China's missiles are liquid fueled,

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Haisheng, chief ed., *Junshi Sixiang Gailun* [An introduction to military thought] (Beijing: Guofang Daxue Chubanshe, 1999), pp. 466–467; and Yu Qisu, *Guoji Zhanlue Lun* [On international strategy] (Beijing: Junshi Kexue Chubanshe, 1998), pp. 212–213. Wang Zhongqun and Wen Zhonghua, *Bu Gan de He Yinyun—He Wuqi yu He Zhanlue: Zong Zuotian dao Mingtian* [The dark cloud that is not dared—nuclear weapons and nuclear strategy: from yesterday to today] (Beijing: Guofang Daxue Chubanshe, 2000), pp. 190–195. One analyst makes the unusual claim that Chinese nuclear weapons deterred a Soviet invasion of China during the 1969 Sino-Soviet border war. See Zhao Xijun, "'Bu Zhan er Quren zhi Bing' yu Xiandai Weishe Zhanlue" ["Victory without war" and modern deterrence strategy], *Zhongguo Junshi Kexue* [Chinese military science], No. 5 (2001), pp. 57–58. Johnston, "China's New 'Old Thinking,'" discusses the earlier Chinese literature on deterrence. See also Wang Houqing and Zhang Xingye, eds., *Zhanyi Xue* [Science of campaigns] (Beijing: National Defense University Press, 2000), pp. 368–369.

24. Patrick Tyler, "As China Threatens Taiwan, It Makes Sure U.S. Listens," *New York Times,* January 24, 1996, p. 3.

25. National Intelligence Council, *Foreign Missile Developments and the Ballistic Missile Threat through 2015* (Washington, D.C.: National Intelligence Council, 2001), pp. 8–9; Bates Gill and James Mulvenon, "The Chinese Strategic Rocket Forces: Transition to Credible Deterrence," in National Intelligence Council, ed., *China and Weapons of Mass Destruction: Implications for the United States* (Washington, D.C.: National Intelligence Council, 2000), pp. 34–40; and "NRDC Nuclear Notebook: Chinese Nuclear Forces, 2001," *Bulletin of the Atomic Scientists,* Vol. 57, No. 5 (September/October 2001), pp. 71–72.

considerable preparation is required, affording the adversary even more time for detection and the opportunity to launch a preemptive attack.[26] Most of China's IRBMs take even longer to prepare for launch. With the exception of the CSS-5, many are deployed in caves and must be transported to the launch site before they can be joined with the warhead and fueled. At best, the launch preparation time for these IRBMs is slightly more than two and a half hours.[27] As a further complication, reports have surfaced of serious desertion problems within China's strategic missile corps, which suggests that its missile forces may not be able to carry out timely launch preparation in a crisis.[28]

Chinese military officials recognize that because China's nuclear force is small and underdeveloped, and because potential adversaries possess advanced technologies that permit high-accuracy and long-distance missiles to target Chinese missiles, its retaliatory capability is vulnerable to a preemptive strike. Moreover, there is widespread Chinese acceptance that because advanced U.S. conventional weapons inflict minimal civilian casualties and collateral damage, they can be used with greater flexibility and less restraint than nuclear weapons to achieve strategic objectives.[29] Chinese studies note that U.S. precision-guided missiles can play the role that nuclear weapons played

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26. National Intelligence Council, *Foreign Missile Developments,* p. 8. China's missile technology and deployment systems are discussed in John Wilson Lewis and Xue Litai, *China Builds the Bomb* (Stanford, Calif.: Stanford University Press, 1988), pp. 211–215.

27. Wang and Zhang, *Zhanyi Xue,* pp. 368–373; Zhang Jianzhi, *Yi Tian Zhangji Kan Shijie: Xiandai Gao Jishu Zhanzheng he Daodan He Wuqi* [Wielding a great sword and looking at the world: contemporary high-technology war and nuclear missile weaponry] (Beijing: China Youth Press, 1998), pp. 410–411; and Zhan Xuexi, *Zhanyi Xue Yanjiu* [Research on science of strategy] (Beijing: Guofang Daxue Chubanshe, 1997), p. 280. On the launch time of the IRBM, see John Wilson Lewis and Hua Di, " China's Ballistic Missile Programs: Technologies, Strategic, and Goals," *International Security,* Vol. 17, No. 2 (Fall 1992), p. 23.

28. He Liangping, Xiong Lujian, Gong Hong, and Luo Lisheng, "How to Guard Against Cases of Desertion," in *Huojianbing Bao* [Rocket forces daily], November 10, 2001, in Foreign Broadcast Information Service (FBIS), February 22, 2002.

29. Wang and Zhang, *Zhanyi Xue,* pp. 372–374; Wang Jixiang and Chang Lan, "Guowai Jidong Dandao Daodan Dimian Shengcun Nengli Yanjiu" [Research on ground-survival capabilities of foreign mobile ballistic missiles], in Xu Dazhe, chief ed., *Guowai Dandao Daodan Jishu Yanjiu yu Fazhan* [Research and developments in foreign ballistic missiles technology] (Beijing: Yuhang Chubanshe, 1998), pp. 107–108; Peng Xiwen and Xue Xinglin, *Kongxi yu Fan Kongxi: Zenyang Da* [Air attack and antiair attack: how to fight] (Beijing Zhongguo Qingnian Chubanshe, 2001), pp. 237, 247; Zhan, *Zhanyi Xue Yanjiu,* p. 280; and Tang Wenjun, "Wo Jun Lianhe Zhanyi Ying Queli he Weishe Tiaojian xia Zuozhan de Zhidao Sixiang" [China's military combined operations should establish command thinking for war fighting under nuclear deterrence conditions], in Military Armed Services Teaching Office, National Defense University Scientific Research Department, ed., *Gao Jishu Tiaojian xia Lianhe Zhanyi yu Junbing Zuozhan* [Joint campaign and armed forces operations under high-technology conditions] (Beijing: Guofang Daxue Chubanshe, 1997), pp. 77–78. For U.S. emphasis on the strategic role of precision-guided conventional weaponry, see the excerpts from the Department of Defense, *2002 Nuclear Posture Review,* http://www.globalsecurity.org/wmd/library/policy/dod/npr.htm.

during the Cold War in deterring an adversary from using weapons of mass destruction (WMD).[30] Chinese analysts have also noted U.S. interest in using low-yield nuclear warheads deployed on high-accuracy missiles to target WMD, suggesting that Washington had "lowered the nuclear threshold" (*jiangdi he menkan*) for employing nuclear weapons in possible future preemptive strikes. These analysts are also aware that (1) the 2002 U.S. nuclear posture places China, along with "rogue countries," on the list of states potentially subject to a preemptive nuclear attack, (2) China's potential for using force against Taiwan significantly drives U.S. nuclear planning, and (3) Washington could use nuclear deterrence in a Taiwan crisis to deter Chinese use of conventional force.[31]

Beijing's concern for the vulnerability of its nuclear forces has led it to rely on mobility, dispersed deployment, and camouflage to enhance its second-strike capability. Yet these methods, particularly its wide dispersal of launch sites, undermine China's command-and-control systems and thus the reliability of its retaliatory capability.[32] Concern for the survivability of its strategic forces has also led to "repercussions and controversy" among PRC specialists over whether China should reconsider its no first-use of nuclear weapons policy. Defenders of this doctrine insist that should circumstances change so that China "cannot not use or has no choice but to use nuclear weapons, it would not be a departure from the intrinsic nature of deterrence, but would be in coordinated unity with it." Similarly, if an enemy's conventional attack

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30. Yao Yunzhu, *Zhanhou Meiguo Weishe Lilun yu Zhengce* [Postwar U.S. deterrence theory and policy] (Beijing: National Defense University Press, 1998), pp. 162, 168–169; and Military Training Department, General Staff Department, Chinese People's Liberation Army, *Junshi Gao Jishu Zhishi Jiaocai*, Vol. 2 [Teaching materials on military high-technology knowledge] (Beijing: Jiefangjun Chubanshe, 1997), pp. 148–149.

31. Zhu Feng, "Meiguo Zhunbei Fadong He Gongji? Ping Meiti Pilu 'He Taishi Pinggu Baogao'" [Is the United States preparing to launch a nuclear attack? On the "nuclear posture review" disclosed by the media], http://www.Chinadaily.net/worldrep/2002–03–11/20220.html; Zhu Feng, "'He Taishe Pinggu Baogao' yu Zhongguo: Meiguo Weishenma yao Chongxin Tuixing dui Zhongguo de 'He Weishe' Zhengce?" ["Nuclear posture review" and China: why is the United States carrying out again a nuclear deterrence policy toward China?], *Studies of International Politics*, Vol. 12, No. 2 (2002), pp. 82–91; Zhang Tuosheng, "What Will China Do About U.S. Preemptive Strategy?" *Shijie Zhishi* [World affairs], August 16, 2002, in FBIS, September 6, 2002; Zhou Jianguo, "Bushe Zhengfu He Zhanlue you Weishe Zhujian zouxiang Shizhan" [Bush administration nuclear strategy gradually moves from deterrence toward real war], *Jiefang Junbao* [Liberation army daily], March 18, 2002; and Wang Guosheng and Li Wei, "Meiguo He Zhanlue Quanmian Gaiban" [Comprehensive adjustment in U.S. nuclear strategy], *Jiefang Junbao*, January 30, 2002.

32. Wang and Zhang, *Zhanyi Xue*, pp. 370, 373; Zhan, *Zhanyi Xue Yanjiu*, p. 280; and Ge Xinying, Mao Guanghong, and Yo Bo, "Xinxi Zhan zhong Daodan Budui Mianlin de Wenti yu Duice" [Problems faced by missiles units in information warfare and countermeasures], in Military Scholarship Study Group, ed., *Wo Jun Xinxi Zhan Wenti Yanjiu* [Research in Chinese military information warfare] (Beijing: National Defense University Press, 1999), pp. 188–192.

would threaten its existence, China could counterattack with nuclear weapons, in accordance with its deterrence doctrine.[33]

China's concern for survivability has encouraged its leadership to consider a launch-on-warning doctrine. An early discussion of Chinese nuclear doctrine explained that the meaning of a retaliatory attack was not "passive acceptance of attack. We cannot wait until after the enemy's nuclear missiles explode and there is confusion everywhere before carrying out a nuclear counterattack." More recently, Chinese military writings advise that "if the enemy first uses nuclear weapons," China's strategic missile forces, while preparing for the attack, "must resolutely carry out a counterattack."[34] Given the vulnerability of Chinese forces to a preemptive attack and its deficient early-warning capabilities, however, it is unlikely that China has a launch-on-warning capability.

China's next generation of ICBMs, the DF-31, will be mobile and solid fueled, thus reducing launch times and vulnerability to preemptive attack. Should China also deploy this missile with its warhead, it will be even less vulnerable to preemptive attack. This greater reliability would presumably enhance China's deterrent capability and the confidence of China's leaders that it could deter U.S. intervention in a mainland-Taiwan conflict. Nonetheless, not until the end of this decade, at the earliest, will China be able to begin deployment of the longer-range DF-31, which will be able to reach the continental United States.[35]

Even if China develops a survivable second-strike capability, its leadership would still have minimal confidence that its limited nuclear arsenal could deter U.S. intervention in a war between it and Taiwan. China's understanding of the stability-instability paradox is that a mutual second-strike capability at the nuclear level and the risk of unintended nuclear war do not deter the conventional use of force. Its perspective is similar to that of the United States during the Cold War, when Washington feared that the U.S.-Soviet nuclear stalemate and U.S. threats of nuclear retaliation would not deter the Soviet use of conventional capabilities against Western Europe.

Chinese military and civilian analysts have studied the United States' persistent Cold War effort to make credible its extended deterrence posture toward

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33. Zhang, *Yi Tian Zhangji Kan Shijie,* pp. 410–411; and interview with Chinese military officer, 2001.
34. Strategic Research Department, Academy of Military Science, *Zhanlue Xue* (Beijing: Junshi Kexue Chubanshe,1987), p. 235; and Strategic Research Department, Academy of Military Science, *Zhanlue Xue* (2001 ed.), p. 322. See also Zhan, *Zhanyi Xue Yanjiu,* p. 282; and Wang and Zhang, *Zhanyi Xue,* pp. 373–374.
35. National Intelligence Council, *Foreign Missile Developments,* pp. 8–9.

Western Europe, despite the combination of the Soviet Union's second-strike nuclear capability and its conventional superiority in the European theater. The United States developed nuclear war-fighting capabilities and deployed tactical and theater nuclear weapons, but Chinese analysts argue that the United States never overcame the weak credibility of its threat to use nuclear weapons against a Soviet conventional attack. The U.S. search for a space-based defense capability reflected this irresolvable dilemma. Although some studies argue that nuclear weapons may have contributed to European stability, Chinese analysts concur that nuclear weapons played a very limited role in preventing war elsewhere in the world.[36] Thus nuclear deterrence is not an "all-purpose" strategy. Rather in local war situations, because of the "enormous destructive power" of nuclear weapons, when mutual deterrence and the danger of nuclear retaliation exist, the "credibility of using nuclear deterrence is very very low and its role in containing local war is very very weak."[37]

Thus, Chinese deterrence of U.S. intervention in a Taiwan conflict depends on China's conventional war-fighting capability. In this respect, China's deterrence calculus resembles the U.S. deterrence calculus for Europe once the Soviet Union gained its second-strike capability in the early 1960s. Because U.S. policymakers could not be sure that the Soviet response to stability at the nuclear level was caution at the conventional level, presidents from John F. Kennedy to Ronald Reagan consistently sought a conventional war-fighting capability to deter a Soviet invasion of Western Europe. Chinese leaders are no different. They do not believe that Chinese nuclear forces can deter the United States from intervening with conventional forces in a mainland-Taiwan war.

Conventional Deterrence in the Taiwan Strait

China's emphasis on conventional capabilities in deterring local war means that the U.S.-China conventional deterrence relationship will determine whether China will use force against Taiwan to achieve unification. Three is-

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36. Yao, *Zhanhou Meiguo Weishe Lilun yu Zhengce,* pp. 110–115; Chen Zhou, *Xiandai Jubu Zhanzheng Lilun Yanjiu* [A study of modern local war theories] (Beijing: National Defense University Press, 1997), pp. 151–152; Chen Zhou, "Xiandai Jubu Zhanzheng Yanjiu Jige Lilun Wenti Bianzhi" [Analysis of several theoretical issues in research on contemporary local war], *Zhongguo Junshi Kexue,* No. 2 (1998), p. 147; Zhai Xiaomin, *Lengzhanhou de Meiguo Junshi Zhanlue* [Post–Cold War U.S. military strategy] (Beijing: National Defense University Press, 1999), p. 70; and Zhu Feng, *Dandao Daodan Fangyu Jihua yu Guoji Anquan* [Ballistic missile defense and international security] (Shanghai: Shanghai Renmin Chubanshe, 2001), chap. 1. For a discussion of the deterrent effect of unintended escalation to MAD as a reality, see Zhao "'Bu Zhan er Quren zhi Bing' yu Xiandai Weishe Zhanlue," pp. 57–58.

37. Strategic Research Department, Academy of Military Science, *Zhanlue Xue,* p. 235.

sues determine whether or not China is deterred from using force against Taiwan: (1) Chinese leaders' understanding of the requirements of effective conventional deterrence, (2) their assessment of the war-fighting capability of the United States, including the effectiveness of U.S. capabilities in a Taiwan contingency, and the impact of U.S. intervention on Chinese interests, and (3) their assessment of the resolve of the United States to fulfill its commitment to defend Taiwan and intervene in a mainland-Taiwan conflict. Taken together, these issues determine China's assessment of the expected cost of an attack on Taiwan for the purpose of unification.

China and conventional deterrence

Chinese military leaders believe that limited nuclear capabilities can deter a more powerful nuclear state from launching a nuclear war or from using nuclear blackmail to achieve political objectives without war. They have a very different understanding, however, of the capabilities needed to deter a conventional war. China's senior military leader, Gen. Zhang Wannian, captures the Chinese military's position on conventional deterrence in the nuclear era: "The foundation for containing war is possession of war-winning capabilities. Only with the possession of war-winning capabilities can deterrence be effectively carried out."[38]

The importance of "real war" (*shizhan)* capabilities permeates Chinese military analyses. As one authoritative analysis explains, "The struggle of deterrence and counterdeterrence is a confrontation of power." In this situation, if one does not have "the capability to prepare to win a war, then it is very difficult to even talk about deterrence."[39] This approach holds that China should strive for Sun-tzu's "ideal objective" of "defeating the enemy without fighting." Nonetheless, it is "necessary" that conventional deterrence be established on the "solid base of using war to stop war." In an approach similar to the U.S. concept of "escalation dominance," some Chinese military analysts argue that a war-fighting capability deters potential adversaries insofar as "winning a small war can hold back a medium-size war; winning a medium-size war can hold back a large war." Similarly, wartime deterrence can include sur-

38. Zhang Wannian, *Dangdai Shijie Junshi yu Zhongguo Guofang* [Contemporary world military affairs and Chinese national defense] (Beijing: Zhonggong Zhongyang Dangxiao Chubanshe, 2000), p. 96. There are two versions of this book, each published by a different press. They are cited with their respective press. See also Yuan Zhengling, "Shilun Changgui Weishe" [On conventional deterrence], *Zhongguo Junshi Kexue,* No. 4 (2001), p. 90.
39. Wang Wenrong, chief ed., *Zhanlue Xue* (Beijing: Guofang Daxue Chubanshe, 1999), pp. 251–253.

gical operations designed to subdue the enemy and win quick victory.[40] But whether to deter the outbreak of war or to deter the expansion of a war, Zhang Wannian asserts that having "the will to fight and the ability to fight in order to defeat the enemy without fighting is the bedrock of Chinese deterrence thinking."[41]

From this real-war, war-winning perspective, only when the deterrer has "extremely limited" political objectives, when there is an "extreme power imbalance," and when the target has a "conciliatory attitude," is it possible to deter conventional war without the actual use of force.[42] Chinese military analysts recognize the importance of military posturing and shows of force to signal intentions and establish a determination to "make good on a threat." This is sometimes described as "demonstration deterrence" (*shengshi weishe* or *zaoshi weishe*). These analysts also argue that demonstration deterrence was an effective device for deterring Taiwan's use of force in 1962, when Taiwan mobilized its forces, in the context of Sino-Indian border conflict, Sino-Soviet tension, and Chinese economic turmoil following the Great Leap Forward. They also indicate that China's 1996 military exercises and missiles test in the Taiwan Strait was a case of demonstration deterrence. But Chinese analysts also insist that wartime deterrence and military signaling are effective only when applied in combination with military superiority. Resolve and determination without capabilities cannot deter potential aggressors.[43]

U.S. CAPABILITIES AND THE COST OF WAR

Chinese military leaders believe that the United States possesses superior warfighting capabilities in the Taiwan Strait. They also believe that U.S. superiority can impose high costs on vital Chinese interests. According to a senior analyst close to China's military leadership, by China's own assessment of the preconditions of deterrence, it could not deter U.S. intervention in a Taiwan-mainland war.[44]

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40. Chen, *Xiandai Jubu Zhanzheng Lilun Yanjiu,* p. 151; and Zhang, *Dangdai Shijie Junshi yu Zhongguo Guofang,* p. 96. On surgical operations, see Strategic Research Department, Academy of Military Science, *Zhanlue Xue* (2001 ed.), pp. 233–234. On the relationship between capabilities and deterrence, see also Yuan, "Shilun Changgui Weishe," pp. 88–89; and Chen, "Xiandai Jubu Zhanzheng Yanjiu Jige Lilun Wenti Bianzhi," pp. 147–148.
41. Zhang Wannian, *Dangdai Shijie Junshi yu Zhongguo Guofang* [Contemporary world military affairs and Chinese national defense] (Beijing: Junshi Kexue Chubanshe, 1999), pp. 181–182.
42. Chen, *Xiandai Jubu Zhanzheng Lilun Yanjiu,* pp. 151–152.
43. Ibid., pp. 151–154; Strategic Research Department, Academy of Military Science, *Zhanlue Xue* (2001 ed.), pp. 239–240, 243; Wang, *Zhanlue Xue,* p. 252; and Yuan, "Shilun Changgui Weishe," p. 89.
44. Interview with a Chinese military officer, 2001.

Chinese military analysts argue that the most fundamental change in U.S. conventional capabilities since the end of the Cold War is that the United States no longer faces adversaries with superior or even equal conventional power. When the United States confronted adversaries with effective conventional forces, it depended on its nuclear forces for extended deterrence. Today, U.S. extended deterrence relies on high-technology conventional weaponry that can be as effective as nuclear weapons in achieving military objectives. U.S. military superiority thus enables Washington to delink extended deterrence from a reliance on nuclear weapons.

Military analysts in China argue that the U.S. victories in the 1991 Gulf War and the 1999 war in Kosovo confirm not only that high technology has become the most important factor in war fighting, but that the elements of high-technology warfare "to a very high degree determine the outcome of war." In particular, superiority in "precision-guided weapons of greater variety and higher performance" results in "battlefield control."[45] Moreover, the U.S. military's rapid deployment capabilities allow it to project force "as soon as needed" for any regional contingency, further reducing U.S. dependency on nuclear missiles for retaliation.[46]

The conventional military superiority of the United States is primarily based on its overwhelming information warfare capabilities. In the era of information warfare, "Military combat 'transparency' [*toumingdu*] . . . has already become an effective form of . . . combat." The superior power can blind the adversary by destroying its information systems, thus immobilizing its war-fighting capabilities and establishing information dominance. Indeed a fundamental element of contemporary deterrence is "information deterrence" (*xinxi weishe*). Some Chinese military specialists argue that superior information capabilities can create an "information umbrella" (*xinxi san*) that not only can substitute for the nuclear umbrella but is superior to it. Information deterrence is the "finest result" of "defeating the enemy without fighting." It seeks "bloodless confrontation to achieve military victory."[47] Moreover, Chinese military analysts argue

45. Su Yanrong, chief. ed., *Gao Jishu Zhanzheng Gailun* [An overview of local wars under high-technology conditions] (Beijing: Guofang Daxue Chubanshe, 1993), p. 7; and Hu Guanping, "Kexue Jishu Shi Diyi Zhandouli" [Science and technology is the primary combat power] *Zhongguo Junshi Kexue,* No. 3, 2000, p. 85.

46. Yao, *Zhanhou Meiguo Weishe Lilun yu Zhengce,* pp. 162, 168–169, 173–174; and Zhai, *Lengzhanhou de Meiguo Junshi Zhanlue,* pp. 73, 81, 93.

47. On information and deterrence, see Strategic Research Department, Academy of Military Science, *Zhanlue Xue* (2001 ed.), pp. 237–238; Chen Bojiang, "Xinxi Shidai Meiguo Junshi Liliang Jianshe yu Yunyong de Jishuhua" [Buildup and use of U.S. military strength in the information age], *Zhongguo Junshi Kexue,* No. 2 (1999), p. 146; Chen Bojiang, "Zong 'He Wupin San' dao 'Xinxi San'" [From "nuclear weapons umbrella" to "information umbrella"], *Guangming Ribao* [Enlight-

that whereas nuclear deterrence poses excessive risks and thus is not usable in war, "the information umbrella," while it cannot pose a terrifying threat, has greater potential use than the nuclear umbrella." It is a "peace umbrella" (*heping san*).[48]

The conventional superiority of the United States enhances U.S. credibility to intervene in regional conflicts and thus to deter war. This development reflects three aspects of U.S. capabilities. First, if nuclear extended deterrence had failed during the Cold War, the United States could not have used its nuclear capabilities to retaliate without exposing itself to universal condemnation. Today U.S. extended deterrence relies on conventional capabilities. Because collateral damage to an adversary would be relatively small, there are reduced U.S. misgivings about punishing potential challengers.[49] As one Chinese military analyst has concluded, "The usability of conventional deterrence forces is far greater than that of nuclear deterrence forces," and U.S. credibility of its extended deterrence commitments to intervene in local conflicts is thus higher than in the past. Superior conventional forces thus provide the United States with an effective and usable "independent" deterrent capability to prevent war in such places as Europe and on the Korean Peninsula.[50]

Second, even if deterrence fails, the United States can still achieve its objectives through victory on the battlefield. Conventional deterrence failure therefore has the unintended effect of actually enhancing the credibility of subsequent U.S. deterrence threats. This was the effect of deterrence failure against Iraq and the subsequent U.S. victory in the Gulf War. Presumably, Chinese analysts would conclude that U.S. deterrence failure and subsequent military actions first against Serbia and then against the Taliban government

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enment daily], January 23, 2001, http://www.gmw.com.cn/0_gm/2001/01/20010123/GB/01^18674^0^GMC1–218.htm; Zhao, "'Bu Zhan er Quren zhi Bing' yu Xiandai Weishe Zhanlue," p. 60; Yuan, "Shilun Changgui Weishe," pp. 91; and Zhao Zhongqiang and Peng Chencang, *Xinxi Zhan yu Fan Xinxi Zhan: Zenyang Da* [Information war and anti-information war: how to fight] (Beijing: Zhongguo Qingnian Chubanshe, 2001), p. 375. See also Michael Pillsbury, *Chinese Views of Future Warfare* (Washington, D.C.: Institute for National Strategic Studies, National Defense University, 1997), pt. 4.

48. Chen, "Xinxi Shidai Meiguo Junshi Liliang Jianshe yu Yunyong de Jishuhua," p. 146; and Military Teaching Department, General Staff Department, Chinese People's Liberation Army, *Junshi Gao Jishu Zhishi Jiaocai,* 2d ed. [Teaching materials on knowledge about military high technology] (Beijing: Jiefangjun Chubanshe, 1996), pp. 148–149. See also the statement by Vice Adm. Timothy LaFleur, commander of the U.S. naval surface forces in the Pacific, that "If our networks can outperform the other guy's networks, we can win the battle without ever firing a shot." Quoted in Sharon Weinberger, "Future Littoral Ships Could Wage Information Warfare, Official Says," *Aerospace Daily,* July 17, 2002.

49. Yao, *Zhanhou Meiguo Weishe Lilun yu Zhengce,* pp. 177–178.

50. Ibid., pp. 172, 177–178.

in Afghanistan have had a similar effect in enhancing the credibility of U.S. deterrence.[51]

Third, if nations do not submit to U.S. demands, Washington can use conventional forces to carry out "assured destruction" that in the past would have depended on nuclear weapons. Chinese analysts cite numerous examples of successful U.S. conventional deterrence and coercive diplomacy in the 1990s based on threats of conventional preemptive attacks. Moreover, its offensive conventional capabilities enable the United States to abandon the strategies of limited war and gradual escalation that it unsuccessfully employed in the Vietnam War. Should deterrence fail in the post–Cold War era, U.S. strategy calls for the rapid and decisive introduction of U.S. forces, facilitating victory in the shortest possible time in the initial stages of the war.[52]

Chinese leaders acknowledge that U.S. capabilities would be particularly effective against Chinese forces operating in the Taiwan theater. A senior Chinese military officer has lectured his troops that China's likely adversary in a local war would possess high-technology equipment that could neutralize China's ability to rely on manpower to defeat the enemy. A civilian analyst has noted that, in a war in China's coastal region, it would be difficult for the People's Liberation Army (PLA) to take advantage of its superior numbers—as it did during the Korean War—and that the adversary could "make full use of its superiority in air and naval long-range, large-scale, high-accuracy weaponry."[53] A military analyst was more direct, explaining that not only would such superior capabilities seriously restrict China's ability to seize and maintain sea control around a "large island," but they would also pose a major

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51. Ibid.; Zhai, *Lengzhanhou de Meiguo Junshi Zhanlue,* pp. 82–83; Wang Qiming and Chen Feng, eds., *Daying Gao Jishu Jubu Zhanzheng: Junguan Bidu Shouci* [Winning high-technology local war: required reading handbook for military officers] (Beijing: Junshi Yiwen Chubanshe, 1997), pp. 405–406; and Strategic Research Department, Academy of Military Science, *Zhanlue Xue* (2001 ed.), pp. 235–236. For a comparison of the role of high technology in the Gulf War and the war in Kosovo, see, for example, Gao Qiufu, ed., *Xiaoyan Wei San: Kesuowo Zhanzheng yu Shijie Geju* [The smoke did not disperse: the war in Kosovo and world structure] (Beijing: Xinhua Chubanshe, 1999), pp. 280–283. See also Chen, *Xiandai Jubu Zhanzheng Lilun Yanjiu,* p. 153. For an early analysis of the U.S. war in Afghanistan, see the assessment in the PRC-owned Hong Kong newspaper: Tian Xin, "Afghan War Assaults Chinese Military Theory," *Wen Wei Pao,* February 4, 2002, in FBIS, February 14, 2002.

52. Yao, *Zhanhou Meiguo Weishe Lilun yu Zhengce,* pp. 178–180; Chen, *Xiandai Jubu Zhanzheng Lilun Yanjiu,* p. 155; and Teaching Department of the Chinese Communist Party Central Party School, *Wuge Dangdai Jianggao Xuanbian* [A compilation of five contemporary lectures] (Beijing: Zhonggong Zhongyang Dangxiao Chubanshe, 2000), p. 243.

53. Zhang, *Dangdai Shijie Junshi yu Zhongguo Guofang* (Beijing: Junshi Kexue Chubanshe, 1999), pp. 183–184; and Chu Shulong, "Zhongguo de Guojia Liyi, Guojia Liliang, he Guojia Zhanlue" [China's national interest, national strength, and national strategy], *Zhanlue yu Guanli,* No. 4 (1999), p. 15.

threat to China's coastal political, economic, and military targets.[54] Experts at China's Air Force Command College have concluded that an "air-attack revolution" has occurred and that a "generation gap" exists between the high-technology air-attack capabilities of the United States and the "stagnant" air defense capabilities of less advanced countries, causing a "crisis" in air defense.[55]

Thus China assumes that if the United States intervened in a mainland-Taiwan war, the PLA could not protect its war-fighting capabilities, nor could it prevent U.S. penetration of Chinese airspace. It must also assume that the prospect of victory would be close to nil and that the costs of war and defeat would be massive. Once war began, the United States could target China's large but backward navy. Even China's advanced Russian destroyers equipped with highly capable missiles would not contribute to its war-fighting capability, because they lack sufficient stand-off range to challenge U.S. offensive forces. Indeed U.S. capabilities would be even more effective in targeting Chinese surface assets at sea than they have been in targeting enemy assets in deserts, as in the Gulf War and the war in Afghanistan.[56] Moreover, China's air force would likely remain grounded, because neither its pilots nor its aircraft could challenge U.S. air superiority.

A U.S. defeat of the PRC, however, would entail more than the loss of Chinese military assets. China's modernization effort would be set back decades. War with the United States would compel China to switch to a wartime econ-

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54. Liu Yijian, *Zhi Haiquan yu Haijun Zhanlue* [Command of the sea and strategic employment of naval forces] (Beijing: National Defense University Press, 2000), p. 146. See also Zhang, *Dangdai Shijie Junshi yu Zhongguo Guofang* [Contemporary world military affairs and Chinese defense] (Beijing: Zhonggong Zhongyang Dangxiao Chubanshe, 2000), p. 100. A Chinese comparison of the Gulf War and the war in Kosovo underscores that deserts do not provide the cover necessary to defeat information dominance. The implication for China's surface fleet is clear. See Zhao and Peng, *Xinxi Zhan yu Fan Xinxi Zhan,* pp. 42–44.

55. "Kongjun Zhihui Xueyuan Zhuanjia Tan—21 Shiji de Fangkong Geming" [Air Force Command College experts discuss—the 21st century revolution in air defense], *Jiefang Junbao,* May 16, 2001, p. 9; Yu Kaitang and Cao Shuxin, eds., *Tezhong Kongxi Mubiao yu Dui Kang Lilun Yanjiu* [Theoretical research on special air-attack targets and counterattack] (Beijing: Guofang Daxue Chubanshe, 2000); and Wang and Zhang, *Zhanyi Xue,* chap. 12; Wang and Chen, *Daying Gao Jishu Jubu Zhanzheng.* See also Kenneth W. Allen, "China and the Use of Force: The Role of the PLA Air Force," Center for Naval Analyses, Washington, D.C. (forthcoming).

56. On the impact of U.S. intervention on the outcome of a war, see David A. Schlapak, David T. Orletsky, and Barry A. Wilson, *Dire Strait? Military Aspects of the China-Taiwan Confrontation and Options for U.S. Policy* (Santa Monica, Calif.: RAND, 2000), pp. 38–45. On the PRC navy, see Bernard D. Cole, *The Great Wall at Sea: China's Navy Enters the Twenty-first Century* (Annapolis, Va.: Naval Institute Press, 2001). On the air force, see Kenneth W. Allen, "PLA Air Force Operations and Modernization," in Susan M. Puska, ed., *People's Liberation Army After Next* (Carlisle, Penn.: Strategic Studies Institute, U.S. Army War College, 2001), pp. 189–254; and Allen, "China and the Use of Force."

omy, requiring the reallocation of resources away from civilian infrastructure development to the large-scale acquisition of outdated military hardware; it would also cost China access to international markets, capital, and high technology. The resulting economic dislocations would defer China's ability to achieve great power status well into the second half of the twenty-first century.[57] Most important, the combination of a military defeat over Taiwan and a domestic economic crisis would challenge the leadership's core value—continued leadership of China by the CCP. Nationalism and economic performance, the twin pillars of CCP legitimacy, would collapse, bringing down with them party rule.

asymmetric interests and china's assessment of u.s. resolve

The U.S.-China military balance undermines PRC confidence that it can deter U.S. intervention on behalf of Taiwan. But given U.S.-China asymmetric interests in Taiwan, the extended deterrence capability of the United States also depends on China's assessment of U.S. resolve. Although U.S. security interests in Taiwan are limited to reputation interests, China has enough respect for U.S. resolve that U.S.-China asymmetric interests do not appreciatively enhance China's confidence that it can use force without it leading to U.S. intervention.

Chinese civilian and military analysts understand that U.S. domestic politics increases the likelihood of U.S. intervention in defense of Taiwan. Domestic political opposition toward China and political support for Taiwan in the United States are at their highest levels since the late 1960s. U.S. domestic politics has encouraged the growth in U.S. arms sales to Taiwan since the early 1990s, and it will constrain the administration's options during a mainland-Taiwan conflict. Chinese military and civilian analysts also grasp the extent of Washington's strategic commitment to Taiwan. They acknowledge that the March 1996 deployment of two U.S. carriers was a "strong military signal" of U.S. readiness to intervene in a possible war over Taiwan.[58] Moreover, the carrier deployment firmly coupled the U.S. commitment to defend Taiwan with

57. On this point, see Shi Yinhong, "Guanyu Taiwan Wenti de Jixiang Bixu Zhengshi de Da Zhanlue Wenti [Several great strategic issues regarding the Taiwan issue that must be squarely faced], *Zhanlue yu Guanli,* No. 2 (2000), p. 30; and the discussion by Jia Qingguo, in An Wei and Li Dongyan, *Shizi Lukou shang de Shijie: Zhongguo Zhuming Xuezhe Tantao 21 Shiji de Guoji Jiaodian* [World at the crossroads: famous Chinese scholars explore international central issues of the 21st century] (Beijing: Zhongguo Renmin Daxue Chubanshe, 2000), p. 393.

58. Zhang Zhaozhong, "Meiguo Junshi Zhanlue Zhuanxiang Yatai Zhendui Shei?" [The move toward Asia-Pacific of U.S. military strategy is aimed at who?], *Beijing Qingnian Bao* [Beijing youth news], August 30, 2001, http://www.people.com.cn/GB/junshi/192/3514/3646/20010830/547897.html.

the credibility of its security commitments to its allies in East Asia. Since then, Chinese leaders have assumed that a war with Taiwan means a war with the United States. As one observer has noted, "What many, many people realize is that the effectiveness of [U.S.] deterrence . . . must markedly exceed that of 1996, so that the likelihood of U.S. military intervention is even more notable, with a likely corresponding escalation in the deterrence dynamics."[59] Another analyst has warned that the possibility of U.S. intervention means that any Chinese action could encounter "unexpectedly serious consequences."[60]

Chinese analysts also realize that because of its superiority in long-range, high-accuracy weaponry, the United States can wage war while remaining out of range of enemy forces. Moreover, it can use precision-guided munitions to target leadership command-and-control centers to shorten the war and further reduce casualties. Chinese studies of the 1991 Gulf War conclude that high-accuracy, long-range weaponry was the decisive factor in the U.S. victory. One Chinese military analyst, summing up the impact of high technology on warfare, has argued that "whoever possesses the newest knowledge and technology can thus grab the initiative in military combat and also possess the 'killer weapon' to vanquish the enemy." Moreover, Chinese analysts recognize that the development by the United Sates of increasingly sophisticated unmanned aerial vehicles (UAVs) will enable U.S. forces to carry out these missions while further reducing their vulnerability to enemy forces.[61] Thus the ability of the

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59. Shi Yinhong, "Kunnan yu Xuance: Dui Taiwan Wenti de Sikao" [Difficulty and choice: thoughts on the Taiwan issue], *Zhanlue yu Guanli,* No. 5 (1999), p. 4; Shi Yinhong, "Meiguo dui Hua Zhengce he Taiwan Wenti de Weilai" [U.S. policy toward China and the future of the Taiwan issue], *Zhanlue yu Guanli,* No. 6, 2000, p. 52; Zhang, "Meiguo Junshi Zhanlue Zhuanxiang Yatai Zhendui Shei?"; and interviews with Chinese government foreign policy analysts civilians and military officers, 2000.

60. Wang, "Mianxiang 21 Shiji de Zhongguo Waijiao," p. 21. See also the comments by Yan Xuetong and Jia Qingguo, in An and Li, *Shizi Lukou shang de Shijie,* pp. 388–389.

61. Guo Dafang, "Kexue Jishu Shi Gao Jishu Jubu Zhanzheng Shouyao de Zhisheng Yuansu" [Science and technology is the first factor in subduing the enemy in high-technology local war], *Zhongguo Junshi Kexue,* No. 6 (2000), p. 146; Chen Youyuan, "Junshi Jishu Geming yu Zhanyi Lilun de Fazhan" [The revolution in military technology and the development of campaign theory], and Zhan Xuexi, "Xiandai Zhanyi Tedian" [Analysis of the characteristics of contemporary campaigns], in Campaign Teaching and Research Office, Research Department, National Defense University, *Gao Jishu Tiaojian xia Zhanyi Lilun Yanjiu* [Research on the theory of local war under high-technology conditions] (Beijing: Guofang Daxue Chubanshe, 1997), pp. 21, 54–56; Wang and Chen, *Daying Gao Jishu Jubu Zhanzheng,* p. 502; Wang Baocun, "Shixi Xinxi Zhan [Analysis of high-technology warfare], *Zhongguo Junshi Kexue,* No. 4 (1997), p. 103; Yao, *Zhanhou Meiguo Weishe Lilun yu Zhengce,* p. 169; Zhao and Peng, *Xinxi Zhan yu Fan Xinxi Zhan,* pp. 44–47; and Liu Aimin, "Xinxihua Zhanzheng Tezheng Tantao" [Inquiry into the characteristics of the information transformation of war], *Zhongguo Junshi Kexue,* No. 3 (2000), p. 72. On the role of UAVs, see, for example, Zi Ya, "Wurenji Shajin Weixian Zhanchang" [Unmanned aircraft engage dangerous battlefields], *Huanqiu Shibao* [Global times], January 31, 2002, p. 10.

United States to wage war with minimal casualties contributes to the credibility of its extended deterrence commitments.

China's expectation of U.S. intervention in a mainland-Taiwan war is reflected in various PLA studies. Analyses of blockade operations and warfare against a "large island," for example, assume the intervention of an advanced power using large surface vessels—including aircraft carriers—which could significantly impede PRC operations.[62] PLA studies of the use of its short-range DF-15 conventional missiles against Taiwan assume that China's coastal launch sites could be targeted by advanced technology, high-accuracy cruise missiles. Mobility and camouflage are thus critical to PLA planning. The PLA further assumes that in a war over Taiwan its coastal military installations and deployments—including airfields and advanced aircraft, radar, and command-and-control facilities—and civilian and military infrastructure would be vulnerable to devastating air assaults by long-range and highly accurate cruise missiles (similar to those the United States used against Iraq, Serbia, and Afghanistan) and by advanced UAVs. The PLA has reportedly deployed its Russian S-300 surface-to-air missiles around Beijing, in apparent preparation for possible U.S. raids during a mainland-Taiwan war. Chinese leaders understand that the United States can penetrate Chinese airspace as effectively as it penetrated the airspace of Iraq, Serbia, and Afghanistan.[63]

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62. See, for example, Huang Jie, "Haishang Fengsuo Zhanyi zhong Da Di Daxing Jianting Biandui de Jige Wenti" [Several issues regarding attacks on large enemy fleets during a naval blockade], in Hu Wenlong, chief ed., *Lianhe Fengsuo Zuozhan Yanjiu* [Research on joint blockade operations] (Beijing: Guofang Daxue Chubanshe, 1999); Gao Yu, *Daoyu Jingong Zuozhan* [Island attack operations] (Beijing: Junshi Kexue Chubanshe, 2001); Wang and Zhang, *Zhanyi Xue,* chap. 12; Liu, *Zhi Haiquan yu Haijun Zhanlue,* pp. 146–149; Wang Yongguo, "Haishang Fengsuo Zuozhan Wenti Tantao" [Inquiry into issues in blockade warfare at sea], in Campaign Teaching and Research Office, *Gao Jishu Tiaojian xia Zhanyi Lilun Yanjiu,* p. 195; and Nie Yubao, "Daji Haishang Di Daxing Jianting Biandui de Dianzizhan Zhanfa" [Electronic-warfare methods to attack enemy large fleets], in Military Scholarship Study Group, *Wo Jun Xinxizhan Wenti Yanjiu,* pp. 183–188.

63. Zhu Weixun and Ye Guoquan, "Lianhe Zhanyi Didi Changgui Daodan Budui Zuozhan Mianlin de Wenti ji Duice [Problems faced by joint campaign surface-to-surface conventional missile force operations and response], in Military Armed Services Teaching Office, *Gao Jishu Tiaojian xia Lianhe Zhanyi yu Junbing Zuozhan,* pp. 246–251; Ge Xinqing, Mao Guanghong, and Yu Bo, "Xinxi Zhan zhong Daodan Budui Mianlin de Wenti yu Duice [Problems faced by missiles forces in information warfare and response], in Military Scholarship Study Group, *Wo Jun Xinxizhan Wenti Yanjiu* (Beijing: National Defense University Press, 1999), pp. 188–193; "Dier Paobing Mo Jidi Zengqiang Jidong Zuozhan Nengli" [A certain base of the second artillery strengthens mobile war-fighting capability], *Jiefang Junbao,* September 3, 2002, p. 2; Wang and Zhang, *Zhanyi Xue,* chap. 13; and Li Qinghua, Jiang Daohong, and Cui Xianghua, *Gao Jishu Tiaojian xia Fan Kongxi Zuozhan Houqin Baozhang* [Logistics security in antiair attack warfare under high-technology conditions] (Beijing: Guofang Daxue Chubanshe, 2000), pp. 25–26. The missile deployment is discussed in Zhu Jianling, "Daxue Xuezhe: Beijing, Shanghai, Xiangang Fangyu Zhongdian [Beijing, Shanghai, and Hong Kong are defense key points], *Zhongguo Shibao* [China times], August 12, 2002, http://news.chinatimes.com/Chinatimes/newslist-content/0,3546,1105+112002081400015,00.html.

Beijing's respect for U.S. resolve and for the high cost of a U.S.-China war produces a very high expected cost of an attack on Taiwan for unification. Accordingly, Chinese military officers and civilian analysts urge caution and promote reliance on "peaceful unification" with Taiwan through long-term development of China's economy and modernization of its military. "Smooth economic development," not immediate unification, is China's most fundamental interest and most important national security strategy. It is also the most effective way to assure Chinese territorial integrity. As long as China's economy continues to develop, time is on its side.[64] As one Chinese analyst has argued, China has already waited 100 years to achieve unification and should be prepared to wait another 50 years.[65] For these analysts, China should not use military force for unification, but should continue to deter Taiwan from declaring independence by threatening military retaliation. They argue that as long as Chinese deterrence of Taiwan is effective, China can avoid war with the United States and achieve unification.[66]

Challenges to Peace?

Deterrence can fail despite the overwhelming logic of accommodation to superior capabilities and high resolve. Failure can result when the weaker state believes that it can use an asymmetric strategy or a fait accompli strategy to achieve its military objectives. Deterrence can also fail due to instability associated with the security dilemma. Asymmetric strategies and fait accompli/limited aims strategies can give the weaker revisionist power the optimism necessary to use force despite otherwise unfavorable expected cost assumptions. In contrast, unstable deterrence poses the risk of unintended war. Neither state wants war, but either or both prefer starting a war than risking an adversary's first strike.

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64. Zhang, *Dangdai Shijie Junshi yu Zhongguo Guofang,* pp. 76–77; Chu, "Zhongguo de Guojia Liyi, Guojia Liliang he Guojia Zhanlue," pp. 16–17; Shi, "Guanyu Taiwan Wenti de Jixiang Bixu Zhengshi de Da Zhanlue Wenti," p. 31; and Wang, "Mianxiang 21 Shiji de Zhongguo Waijiao," p. 21; and interviews with Chinese military officers and civilian analysts, 2001 and 2002.
65. Ye Zicheng, "Zhan yu He, Jiaogei Taiwan Dangju Xuan" [War and peace: give the choice to the Taiwan authorities], *Huanqiu Shibao,* October 22, 1999.
66. Shi, "Kunnan yu Xuance," p. 4; Zhang, *Dangdai Shijie Junshi yu Zhongguo Guofang* (Beijing: Junshi Kexue Chubanshe, 1999), pp. 203–204; Zhang, *Dangdai Shijie Junshi yu Zhongguo Guofang* (Beijing: Zhonggong Zhongyang Dangxiao Chubanshe, 2000), p. 75; and discussion by Jia Qingguo, in An and Li, *Shizi Lukou shang de Shijie,* pp. 393–394. This is also the conclusion of Yan Xuetong, "Dui Zhongguo Anquan Huanjing de Fenxi yu Sikao" [Analysis and thoughts on China's strategic environment], *Shijie Jingji yu Zhengzhi* [World economics and politics], No. 2 (2000), p. 10.

asymmetric strategies (i): searching for the strategic "trump card"

Chinese military analysts are seeking to develop asymmetric capabilities to exploit U.S. weaknesses. They are especially interested in undermining U.S. information dominance and electronic warfare superiority. In so doing, they hope to be able to obstruct U.S. ability to carry out surveillance of Chinese activities and to reduce the effectiveness of U.S. targeting capabilities. In other words, China is looking for the "unexpected thrust," the "trump card," or the "killer mace" (*shashoujian* or *sashoujian*)—weaponry that can render the United States "blind and deaf."[67]

Chinese military analysts observe that the destruction of any weak link in advanced technologies can compromise the war-fighting effectiveness of the entire weapon system. They are particularly interested in the use of viruses that can attack computer systems and missiles that can destroy communication nodes, thereby undermining early warning systems and "paralyzing" the enemy's command-and-control facilities. They have also researched such asymmetric strategies as attacking surveillance and communication satellites, including with space-based weapons, and using antiradiation and electromagnetic pulse weapons to degrade radar systems. Ultimately, an attack on an adversary's intelligence system could amount to an "electronic Pearl Harbor" (*dianzi Zhenzhugang*), destroying the adversary's war-fighting capa-bility.[68]

The Chinese motivation for studying these strategies is clear. None would give China the confidence or capability to launch a war and risk U.S. intervention. Rather, these are precautionary strategies that could give China addi-

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67. Li Yinian, Chen Ligong, and Li Chunli, "Gao Jishu Tiaojian xia Jubu Zhanzheng Ruhe Dacheng 'Yi Lie Sheng You'" [How to "defeat a strong enemy with a weak force" in local war under high-technology conditions], *Zhongguo Junshi Kexue,* No. 4 (1998), p. 172; and Jiang Leizhu, *Xiandai yi Lie Sheng You Zhanlue* [Modern strategy of pitting the inferior against the superior] (Beijing: National Defense University Press, 1997), pp. 186–187.

68. Zhao and Peng, *Xinxi Zhan yu Fan Xinxi Zhan,* pp. 342–343, chap. 2; Wang Shuhua and Xu Xiaobin, "Yi Changgui Bingqi duifu Gao Jishu Bingqi de Tantao" [Inquiry into the use of conventional weaponry to deal with high-technology weaponry], *Zhongguo Junshi Kexue,* No. 1 (1999), p. 98; Jiang, *Xiandai yi Lie Sheng You Zhanlue,* pp. 199–200; and Military Armed Services Teaching Office, National Defense University Scientific Research Department, ed., *Gao Jishu Tiaojian xia Lianhe Zhanyi yu Junbing Zuozhan* [Joint campaign and armed forces' operations under high-technology conditions] (Beijing: Guofang Daxue Chubanshe, 1997), pp. 234, 243. See also Qiao Liang and Wang Xiaosui, eds., *Chao Xianzhan: Dui Quanqiu Shidai Zhanzheng yu Zhanfa de Xiangding* [Unrestricted warfare: thoughts on war and methods of war in the era of globalization] (Beijing: Jiefangjun Wenyi Chubanshe, 1999); and Strategic Research Department, Academy of Military Science, *Zhanlue Xue* (2001 ed.), p. 237. For an early Chinese discussion of the use of space in war, see Zhongguo Shehui Kexueyuan Shiji Jingji yu Zhengzhi Yanjiusuo, ed., *Xingqiu Dazhan: Dui Mei Su Taikong Zhengduo de Puxi* [Star wars: analysis of the U.S.-Soviet space struggle] (Beijing: Jiefangjun Chubanshe, 1986).

tional capabilities should it find itself at war with the United States. These studies examine asymmetric strategies in theory and in the classroom. They do not evaluate such strategies in the context of a war with a superior adversary that is attacking China's command-and-control facilities and its aircraft and naval vessels. At best, these studies reflect the preparation for war, not the planning of one. As Zhang Wannian has explained, "The overall level of China's military equipment is still relatively low, and its high-technology forces are still relatively few. This fundamental situation will not entirely change for a relatively long period. Within this period, *if war should happen*, China will still have to use inferior equipment to defeat an enemy with superior equipment."[69]

China faces daunting obstacles to developing an asymmetric strategy that can level the playing field. To undermine critical U.S. communication technologies and surveillance operations, high-technology military capabilities and considerable funding are needed. Long-range missiles that are effective against mobile maritime targets, sophisticated antisatellite weaponry, and spaced-based weaponry are not within China's reach. Meanwhile, as China advances its offensive asymmetric capabilities, the United States is continuing to develop high-technology countermeasures. It is thus doubtful that China is closing the gap in the offense-defense balance in information warfare.

Chinese military analyses stress the "serious challenges" that China faces in developing high-technology weaponry that can degrade U.S. technologies. Given China's significant inferiority in information technologies vis-à-vis the United States, its ability to engage in counterinformation warfare is severely limited. This would be especially true after a preemptive strike, which would undermine China's ability to target U.S. information warfare facilities. Even if China launched a successful first strike, its impact on the war would be limited. Because of the large gap in capabilities between China and the United States, China would have difficulty carrying out "hard destruction" (*ying cuihui*) measures, including targeting weaponry on information system hardware. It would easier for China to use "soft destruction" (*ruan cuihui*) measures, such as computer viruses and electronic interference, to attack an adversary's advanced information systems. But penetrating the Pentagon's backbone computer communication systems would be difficult. Moreover, such attacks would not diminish overall U.S. capabilities, China's military ana-

69. Zhang, *Dangdai Shijie Junshi yu Zhongguo Guofang* (Zhonggong Zhongyang Dangxiao Chubanshe, 2000), p. 98 (emphasis in original).

lysts acknowledge, because information systems can generally recover from "soft damage" attacks.[70] In addition, because the high-technology weaponry and rapid deployment capability of the United States would help to shorten the duration of a war, the opportunities for an inferior power such as China to employ traditional asymmetric strategies—including protracted warfare aimed at sapping the enemy's will—would also be reduced.[71]

Most important, a Chinese preemptive strike against U.S. communication systems might degrade U.S. information warfare capabilities, but it would not change the final outcome. The United States would retain superiority in all aspects of warfare in the Taiwan theater. Thus, asymmetric strategies cannot address China's fundamental deterrence problem: The United States would retain its war-winning capability, and China would still confront high expected costs from the combination of credible U.S. intervention in a mainland-Taiwan conflict war and the resulting high costs to high-value Chinese targets.

asymmetric strategies (ii): imposing high costs on a risk-adverse adversary

The second approach to asymmetric warfare focuses on the use of accessible capabilities to inflict high costs on a superior adversary, compelling it to withdraw rather than continue to incur costs in pursuit of secondary interests. In a Taiwan scenario, high U.S. casualties could undermine the resolve of the United States to continue intervention on behalf of Taiwan.[72] Numerous Chinese studies, for example, emphasize the vulnerability of large surface ships (e.g., destroyers and aircraft carriers) to submarines, torpedoes, mines, aircraft, antiship missiles, and electronic jamming.[73]

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70. Ai Husheng, "Gao Jishu Tiaojian xia Wo Jun Xinxi Zhan de Jiben Tedian" [Several fundamental characteristics of the Chinese military's information warfare under high-technology conditions], in Military Scholarship Study Group, *Wo Jun Xinxi Zhan Wenti Yanjiu,* pp. 26–27.

71. Zhu Xiaoli, *Junshi Geming Wenti de Yanjiu* [A study of the revolution in military affairs] (Beijing: National Defense University Press, 1999), pp. 174–178; Zhu, *Junshi Sixiang Gailun,* pp. 404–405; Zhai, *Lengzhanhou de Meiguo Junshi Zhanlue,* pp. 217–218; Jiang, *Xiandai yi Lie Sheng You Zhanlue,* pp. 183, 185–186; Li Jiangzhou and Yu Dehui, "Xinxi Jingong Ying Queli 'Yiti Zuozhan, Xianji Huitan' de Zhidao Sixiang" [Information offense should establish the guiding thought of "organic warfare, first-strike destructive paralysis"], in Military Scholarship Study Group, *Wo Jun Xinxi Zhan Wenti Yanjiu,* pp. 79; and Teaching Department of the Chinese Communist Party Central Party School, *Wuge Dangdai Jianggao Xuanbian,* p. 243.

72. Jiang, *Xiandai yi Lie Sheng You Zhanlue,* pp. 182, 191–192; and Zhai, *Lengzhanhou de Meiguo Junshi Zhanlue,* pp. 93–94.

73. See, for example, Ding Yiping, "Da Di Daxing Jianting Biandui de Zhuyao Zhanfa' [Primary combat methods for attacking large enemy fleets], in Hu, *Lianhe Fengsuo Zuozhan Yanjiu,* pp. 55–59; Yuan Caijin, "Da Di Daxing Jianting Biandui Ying Zhongshi Fahui Tingjian Bingli de Zuoyong" [We should emphasize bringing into full play the role of submarine forces in attacking large enemy

This strategy offers some hope to China that it could reverse U.S. intervention in a mainland-Taiwan conflict should war occur. It does not, however, create sufficient Chinese confidence that China can start a winnable war. Chinese planners acknowledge that this strategy would require a significant improvement in Chinese capabilities, including the ability to target distant moving objects and to carry out surprise attacks. One analyst stresses that, for Chinese forces, long-distance rapid maneuvers and concealment of intentions are "extremely difficult." Another analyst observes that China's aircraft possess minimal fighting radius, limited ability to penetrate enemy defenses, and weak electronic warfare capabilities.[74] In addition, China lacks high-precision guidance systems. China's Sovremenny-class destroyers are equipped with advanced Moskit missiles. But China does not have the reconnaissance capability necessary for the Moskit to find a target. Moreover, the Moskit lacks the stand-off range necessary to threaten a U.S. carrier.[75]

China has ordered four Kilo-class submarines from Russia. If it orders an additional eight Kilos, as has been reported, China will be signaling its commitment to focus its resources on targeting U.S. surface vessels and developing an access-denial capability for the Taiwan theater. The Kilo is a sophisticated submarine. But the PLA must still learn to maintain and operate it effectively. Moreover, in the absence of surface and air support, submarines cannot permit reliable access-denial capability.[76] Given the antisubmarine-warfare capability of the United States and its overwhelming advantage in information warfare, long-range missiles, and air defense, a Chinese strategy aimed at sinking an aircraft carrier to deter U.S. intervention would seem to be a high-risk approach to achieving unification with Taiwan. Moreover, as the United States converts its Trident submarines to nuclear-powered guided missile submarines (SSGNs) and deploys them in East Asia, the vulnerability of U.S. power-projection capability to China's navy as well as to its close-in, land-based,

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fleets], in ibid., pp. 69–74; and Nie, "Daji Haishang Di Daxing Jianting Biandui de Dianzizhan Zhanfa." See also Zhou Yi, "Aircraft Carriers Face Five Major Assassins," *Junshi Wenzhai* [Military digest], March 1, 2002, in FBIS, March 15, 2002.

74. Liu Jinsong, "Guanyu Shishi Zhiyuan Zuozhan de Jige Wenti" [Several issues regarding implementation of support warfare], in Campaign Teaching and Research Office, *Gao Jishu Tiaojian xia Zhanyi Lilun Yanjiu,* pp. 33–34; and Li, Jiang, and Cui, *Gao Jishu Tiaojian xia Fan Kongxi Zuozhan Houqin Baozhang,* pp. 22–23.

75. Cole, *The Great Wall at Sea,* pp. 98–99. Should China upgrade the Sovremenny with the Yahont missile, its range would increase to 62 nautical miles, still short of the stand-off range of US. carrier-based forces.

76. On PRC interest in additional Kilos, see John Pomfret, "China to Buy 8 More Russian Submarines," *Washington Post,* June 25, 2002, p. 15. See Cole, *The Great Wall at Sea,* pp. 97–98 and chap. 8, for a discussion of the Kilos.

access-denial capability will dramatically diminish. At the same time, China's vulnerability to U.S. retaliation will significantly increase.[77]

But even if China's leaders were confident that its forces could target a U.S. aircraft carrier, Chinese military and civilian analysts acknowledge that the United States could respond with an even greater commitment to fight, rather than retreat.[78] Although the Somalia analogy (the suggestion that the United States cannot tolerate even minimal casualties) is comforting to some Chinese,[79] U.S. war against a great power in support of a fifty-year commitment to a de facto strategic and ideological East Asian ally is not the same as war in support of famine relief in a small African country. Moreover, the war in Somalia occurred at the dawn of the post–Cold War era. Since then, U.S. confidence in its global military supremacy and its reputation for resolve have grown significantly. Washington has shown that it can fight a war with minimum casualties and that it has the will to put troops on the ground and incur casualties in response to attacks on Americans, as it has done in Afghanistan. Given the uncertainty that the United States would retreat, combined with the certainty of high costs to China of U.S. intervention, Chinese reliance on this asymmetric strategy is an unlikely source of deterrence failure. Chinese assertions that the United States is averse to taking casualties are best understood as the effort of a weaker power to gain some leverage through expressions of false confidence.

fait accompli strategies and the taiwan strait

Deterrence could fail if China's leaders believe that the rapid use of coercive military power could decisively destabilize Taiwan, compelling it to acknowledge PRC sovereignty over the island before the United States could intervene. This strategy would depend on a massive short-term barrage of PRC missiles and air assaults on Taiwan to create political and economic chaos and associated psychological pressures. In the absence of timely U.S. intervention, Taiwan could capitulate. It could sue for peace by accepting hitherto unacceptable symbolic concessions, thus ending its aspirations for independence.[80] The

77. Owen R. Coté Jr., *The Future of the Trident Force: Enabling Access in Access-Constrained Environments* (Cambridge, Mass.: Security Studies Program, Massachusetts Institute of Technology, 2002); and U.S. Department of Defense, *Quadrennial Defense Report*.

78. Interviews with Chinese government foreign policy analysts and military officers, 2000 and 2001.

79. Jiang, *Xiandai yi Lie Sheng You Zhanlue,* pp. 182, 191–192; and Zhai, *Lengzhanhou de Meiguo Junshi Zhanlue,* pp. 93–94; and interviews with Chinese government foreign policy analysts and military officers, 2000–01.

80. Wang and Zhang, *Zhanyi Xue,* pp. 375–382; Wang Benzhi, "Didi Changgui Daodan Huoli Yunyong de jige Wenti" [Several issues in the use of land-to-land conventional missile firepower], in Military Armed Services Teaching Office, *Gao Jishu Tiaojian xia Lianhe Zhanyi yu Junbing Zuozhan,*

United States would then face a PRC fait accompli and have to ponder going to war to reverse Taiwan concessions that would not damage U.S. interests directly but would harm U.S. regional credibility.

Confidence that China can carry out this strategy depends on its capability to compel Taiwan to submit before the United States can intervene. But the forward presence of the U.S. military in East Asia and U.S. intelligence capabilities minimize such confidence. U.S. forces deployed at Kadena Air Force Base on Okinawa, including seventy-two F-15s, are an imposing threat. Although this force lacks numerical superiority over the Chinese air force, U.S. qualitative superiority, including electronic warfare capabilities and pilot expertise, would neutralize Chinese aircraft, including the advanced Su-27s and Su-30s. The deployment of U.S. forces in close proximity to Taiwan and the possibility that in a crisis the United States would act first and consult with Japan later should give China pause. Moreover, the likelihood of Japanese support for the U.S. use of Kadena would be high should China use force for unification, rather than in response to a destabilizing Taiwan declaration of independence. Also, in recent years Japanese concern over China's growing power has increased, and Japanese public opinion has become less tolerant of Chinese transgressions on Japanese interests. This further enhances the credibility of U.S. intervention with Kadena-based U.S. aircraft.[81]

In addition to the U.S. forward presence at Kadena, a carrier task force would likely be present near the Taiwan Strait at the outbreak of war and would consolidate U.S. air superiority.[82] In response to increased apprehension over the prospect of a mainland attack on Taiwan and heightened suspicion of Chinese intentions, the United States has begun to routinely deploy a carrier task force near Taiwan when China conducts major maritime military exercises. The addition of a second carrier battle group would provide the United

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pp. 236–241; Wang Wei, Chen Yilai, and Geng Weidong, "Gao Jishu Tiaojian xia Jubu Zhanzheng Zhanyi Zhidao de Jige Wenti" [Several issues regarding command of local war operations on high-technology conditions], pp. 58–64, and Wang Xiaodong and Wang Xiangwei, "Daodan Budui zai Jingong Zhanyi zhong de Yunyong Wenti" [Issues in the use of missiles units in offensive operations], in Campaign Teaching and Research Office, *Gao Jishu Tiaojian xia Zhanyi Lilun Yanjiu,* pp. 232–235.

81. Schlapak, Orletsky, and Wilson, *Dire Strait?* On the vulnerability of the Chinese air force, see Allen, "China and the Use of Force." On Japan's China policy, see Michael Jonathan Green, "Managing Chinese Power: The View from Japan," in Alastair Iain Johnston and Robert S. Ross, *Engaging China: The Management of an Emerging Power* (New York: Routledge, 1999), pp. 152–175.

82. See, for example, Yangzi Wanbao, "The United States Denies the Military Exercise of Two Aircraft Carrier Battle Groups in the South China Sea Is Directed Against China's Military Exercises on Dongshan Island," *Renmin Wang* [People's web], August 19, 2001, in FBIS, August 21, 2001; and Central News Agency (Taiwan), August 11, 2001, in FBIS, August 13, 2001. *Renmin Wang* is the web page of the *People's Daily.*

States with overwhelming superiority, yet it would amount to only a fraction of the forces that the United States would mobilize for a major theater war. Moreover, U.S. forces will continue to carry out transfers from the European theater to the Pacific theater. A Los Angeles–class attack submarine left for its new home port in Guam in September 2002. Two additional attack submarines will arrive in Guam by fiscal year 2004. The U.S. Navy will also gain increased access to facilities in Singapore and the Philippines. Thus the U.S. forward presence near Taiwan will grow.[83] In addition, a fait accompli strategy cannot compensate for China's vulnerability to a rapid U.S. preemptive strategic strike as a prelude to intervention.

U.S. signal intelligence capabilities, in cooperation with facilities based on Taiwan, and satellite surveillance capabilities can detect Chinese preparations for the use of force.[84] Only if China relied on missile launches could it confidently take the United States and Taiwan by surprise. Yet in the absence of other military operations, including air attacks, conventional missile strikes would likely lack both the destructive and psychological force necessary to coerce Taiwan to surrender. If U.S. intelligence estimates are correct and Beijing deploys as many as 650 DF-15 missiles across from Taiwan by 2010, China will still lack a powerful coercive capability.[85] In the wars in Kosovo and Afghanistan, the United States dropped approximately 22,000 bombs. In Afghanistan, this figure included more than 12,000 precision-guided bombs. Yet in both cases, these attacks did not cause enough destruction to coerce rapid surrender. In comparison, Chinese missile deployments in the Taiwan theater are

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83. U.S. Department of Defense, *Quadrennial Defense Report;* and James Dao, "Army to Move Some Weapons Out of Europe," *New York Times,* August 31, 2001, p. 16. On U.S. force requirements, see Schlapak, Orletsky, and Wilson, *Dire Strait?* pp. 38–39; and "Sub Stops in San Diego En Route to New Home Port," *Navy Newsstand,* September 18, 2002, http://www.news.navy.mil/search/display.asp?story_id=3599. For Chinese attention to these trends, see Cai Wei, "Mei Haijun Zhunbei Jinnian Xiaji jiang Sansou Luoshanji ji He Jianting Bushu dao Guandao" [U.S. Navy this year in the summer will deploy three Los Angeles–class nuclear submarines to Guam], *Huanqiu Shibao,* May 9, 2002, p. 17; Yang Lei, "U.S. Strategy is Pointed Straight at Asia," *Renmin Ribao* (Guangzhou South China News Supplement), April 3, 2001, in FBIS, April 3, 2000; and Wu Qingli, "At Whom Is the U.S. Asia-Pacific Strategic Spearhead Pointed?" *Renmin Wang,* March 29, 2002, in FBIS, March 31, 2002.

84. *Jane's Defence Weekly,* April 3, 2002, p. 16; Wendell Minnick, "Taiwan-USA Link Up on SIGINT," *Jane's Defence Weekly,* January 24, 2001, p. 16; and Qiu Xu, "Informal Information from the U.S. on a Major PLA Sea and Air Exercise Creates a Stir in Taiwan," *Qingnian Cankao* [Youth reference], March 21, 2002, in FBIS, March 23, 2002.

85. On PRC deployments, see U.S. Department of Defense, *Annual Report on the Military Power of the People's Republic of China* (2002), Report to Congress Pursuant to the FY2000 National Defense Authorization Act, http://www.defense.link.mil/news/Jul2002/d20020712China.pdf., p. 16; and Shirley A. Kan, *China: Ballistic and Cruise Missiles,* CRS Report for Congress (97–391 F) (Washington, D.C.: Congressional Research Service, Library of Congress, 2000).

both fewer and of lesser quality than those used by U.S. forces in Kosovo and Afghanistan.[86] Moreover, with a circular-error-probable of 300 meters, the DF-15 lacks the accuracy to degrade with confidence Taiwan's command-and-control centers, radar facilities, aircraft, and runways. Even with greater accuracy, Chinese missiles would not be very effective at destroying hardened targets.

Thus, a Chinese missile-based fait accompli strategy might be able to wreak havoc in Taiwan, but Beijing cannot have high confidence that it would cause the government of Taiwan to accede to even symbolic political unification. If Taiwan did not surrender, the ensuing humiliation would devastate the CCP's legitimacy and significantly undermine it staying power. If Taiwan fought back, using its superior air power to damage the Chinese navy and air force and to fight the mainland to a draw, the humiliation would be even greater.[87] Should Chinese leaders then decide that they had no choice but to prosecute a long-term war for unification, the CCP would face an even greater likelihood of U.S. intervention, military defeat, domestic humiliation, and collapse. Chinese missiles and aircraft may be a powerful deterrent, and a fait accompli strategy might be China's only recourse should deterrence fail and Taiwan declare independence, but it is not a reliable instrument of coercive warfare. China faces a high expected cost of use of force that deters it from using a fait accompli strategy to challenge the status quo.

crisis instability and deterrence in the taiwan strait

Deterrence could also fail if either the United States or China believed that it was vulnerable to a debilitating first strike. The danger of crisis instability in the Taiwan theater could involve a U.S. temptation to strike first if Washington believed that Beijing was preparing for a first strike against U.S. forces as a prelude to an attack on Taiwan. Given U.S. maritime superiority, however, a Chinese first strike could not determine the outcome of the war. Even if China were able to inflict costs on U.S. forces, it could not significantly weaken U.S. capabilities. The United States could still defend Taiwan against mainland air and naval capabilities and inflict punishing retaliation against Chinese military and economic targets.

Thus, during periods of heightened tension in which Chinese forces mobilize for military exercises for diplomatic signaling, U.S. forces do not need to

86. Michael E. O'Hanlon, "A Flawed Masterpiece," *Foreign Affairs,* Vol. 81, No. 3 (May/June 2002), p. 52.
87. On Taiwan's air superiority, see U.S. Department of Defense, *Annual Report on the Military Power of the People's Republic of China* (2002), pp. 51–52.

go on heightened alert, much less carry out a preemptive attack in response to a possible Chinese first strike. Rather Washington can monitor Chinese activities and reinforce U.S. defensive capabilities, enhancing its deterrence of a first strike. This was the case in March 1996, when China mobilized for its largest show of force against Taiwan since the 1950s. Although Chinese forces could conceivably have been used against U.S. maritime forces, U.S. policymakers did not expect war and did not believe that there was a crisis. Secretary of Defense Perry explained that attacking Taiwan would be "a dumb thing" for China to do. China did "not have the capability" to invade Taiwan. Although Perry believed that China had the ability to "harass" Taiwan, he observed that "it does not make any sense. . . . I do not expect China to be attacking Taiwan."[88] U.S. fear of a Chinese strike against U.S. forces was even more remote.

Improved Chinese capabilities have not greatly increased the vulnerability of U.S. forces to a first strike. Although China's short-range missiles and Russian aircraft have given it a much improved deterrent against a Taiwan declaration of independence, it is unlikely that China will develop first-strike capabilities well into the twenty-first century. In the offense-defense balance, the advantage will remain with the defensive capabilities of the maritime power, thus mitigating the security dilemma and the likelihood of unintended escalation. U.S. maritime forces enjoy overwhelming advantages that assure it of significant retaliatory capabilities, and geopolitical constraints pose a long-term impediment to Beijing's ability to challenge U.S. maritime superiority. First, China's land-power forces lack offshore offensive capabilities. Water provides a significant defensive "moat" for U.S. naval forces. Second, as a land power facing significant long-term challenges to border security from many potential adversaries, China will be hard-pressed to devote adequate financial resources to enable development of a significant maritime capability.[89] Third, the U.S. lead in capabilities will enable the United States to maintain its advantages even as China modernizes.

Conclusion: Managing Deterrence and U.S.-China Cooperation

The United States can continue to deter China from initiating war in the Taiwan Strait for many decades. In the absence of a Taiwan declaration of inde-

88. Secretary of Defense William Perry's comments at the National Press Club, Washington, D.C., February 28, 1996. See also Ross, "The Taiwan Strait Confrontation."
89. For a Chinese discussion of enduring PRC naval inferiority, see Liu Yijian, "Zhongguo Weilai de Haijun Jianshe yu Haijun Zhanlue" [China's future naval construction and naval strategy] *Zhanlue yu Guanli,* No. 5 (1999), pp. 99–100. This argument is developed in Robert S. Ross, "The

pendence, China prefers to maintain the status quo and an international environment conducive to economic and military modernization. Moreover, Chinese analysts understand that China is vastly inferior to the United States in nearly all facets of international power and that it will remain so for a long time. One analyst estimated that Chinese military technology is fifteen to twenty years behind that of the United States.[90] More important, Chinese analyses of "comprehensive national power," which takes into account the military, technological, educational, and economic bases of national strength, estimated in 2000 that China would catch up to the United States in 2043 if Chinese comprehensive national power grew at a rate of 6 percent per year and U.S. comprehensive national power grew at 3 percent per year.[91]

During the Cold War, the most pessimistic U.S. civilian and government analysts insisted that only if the United States possessed war-winning capabilities and/or escalation dominance could it deter the Soviet use of force in Europe.[92] In the twenty-first century, the United States possesses escalation dominance in the Taiwan Strait. At every level of escalation, from conventional to nuclear warfare, the United States can engage and defeat Chinese forces. Moreover, it can do so with minimal casualties and rapid deployment, undermining any Chinese confidence in the utility of asymmetric and fait accompli strategies. Chinese military and civilian leaders have acknowledged both U.S. resolve and its superior war-winning capabilities.

Confidence in its deterrence capabilities enables the United States to protect Taiwan while developing cooperative relations with China. This was post–Cold War U.S. policy toward China in both the George H.W. Bush and Clinton administrations. Maintaining this policy is both possible and necessary. On the one hand, the United States should continue to develop its capabilities in long-range precision-guided weaponry and in its command-and-control facilities. It should also continue to develop and forward deploy not only aircraft carriers but also Trident SSGNs and UAVs, platforms that enable the United States to

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Geography of the Peace: East Asia in the Twenty-first Century," *International Security,* Vol. 23, No. 4 (Spring 1999), pp. 81–118.

90. Wu Xisulin, chief ed., *Gao Jishu Zhanzheng yu Guofang Xiandaihua* [High-technology war and national defense modernization] (Beijing: Guofang Daxue Chubanshe, 2001), p. 195.

91. Comprehensive National Power Studies Group, China Institute of Contemporary International Relations, *Yanjiu Baogao: Zonghe Guoli Pinggu Xitong* [Research report: national comprehensive power estimate system] (Beijing: Zhongguo Xiandai Guoji Guanxi Yanjiusuo, 2000), p. 19. See also Huang Shuofeng, *Zonghe Guoli Xinlun Jian Lun Xin Zhongguo Zonghe Guoli* [New theory of comprehensive national power and new China's comprehensive national power] (Beijing: Zhongguo Shehui Kexueyuan, 1999); Chu, "Zhongguo de Guojia Liyi, Guojia Liliang he Guojia Zhanlue," pp. 15–16; and Yan, "Dui Zhongguo Anquan Huanjing de Fenxi yu Sikao," p. 10.

92. See note 13.

deliver precision-guided weaponry and carry out surveillance with minimal risk of casualties, thus further reducing PRC expectations that asymmetric capabilities or a fait accompli strategy could deter U.S. defense of Taiwan.

But instead of welcoming the benefits of deterrence, the George W. Bush administration has developed policies that contribute to conflict by unnecessarily challenging China's interests in Taiwan. It has expanded arms sales to Taiwan, including reversing the twenty-year policy of refusing Taiwan's requests for submarines. Its 2001 arms sales offer to Taiwan was the largest since 1992. U.S. officials have recently said that they were "eager to help" Taiwan's military modernization effort and would welcome any requests for additional weaponry. They continue to consider the possible sale to Taiwan of missile defense technologies, including technology enabling Taiwan access to U.S. satellite-based intelligence.[93] Working-level and high-level exchanges between U.S. and Taiwan military officials are expanding, and U.S. officers have provided advice during Taiwan's military exercises and have discussed wartime coordination with its military officials. Interoperability of the U.S. and Taiwan militaries is also under consideration. Further, the administration has also enhanced its treatment of Taiwan civilian and defense officials by agreeing to a visit to the United States by Taiwan's defense minister in March 2002.[94]

The Bush administration's Taiwan policy does not significantly contribute to Taiwan's security or to deterrence. On the one hand, as the PRC modernizes, the Taiwan-mainland military balance will increasingly favor China. And Taiwan can contribute to deterrence. Its air defense capability, including aircraft and improved hardening of targets against Chinese missiles, can lower Chinese confidence in a fait accompli strategy.[95] But deterring China's use of force has never depended on Taiwan's capabilities; Taiwan alone cannot deter the mainland. Moreover, given overwhelming U.S. superiority, Taiwan's contribution to the outcome of a U.S.-China war would be nominal, at best. Washington would ask Taipei to step aside, rather than try to cooperate with Taiwan and risk chaos and friendly fire in the complex Taiwan theater. During the Gulf

93. See, for example, Jim Wolf, "U.S. Eyes Long-Term Weapons Projects for Taiwan," Reuters, June 18, 2002.
94. John Pomfret, "In Fact and in Tone, U.S. Expresses New Fondness for Taiwan," *Washington Post,* April 30, 2002, p. 12; Agence France-Presse, April 12, 2002; *China Times,* July 20, 2001; and interviews with U.S. defense contractors, 2001. See also Wang Weixing, "Taijun 'Hanguang' Yanxi you Sha Xin Huayang" [What new tricks are there in the Taiwan military's "Hanguang" exercises?], *Jiefang Junbao,* June 6, 2002, p. 9.
95. See U.S. Department of Defense, *Annual Report on the Military Power of the People's Republic of China* (2002), pp. 47–55. On Taiwan's defense policy, see Michael D. Swaine, *Taiwan's National Security, Defense Policy, and Weapons Procurement Processes* (Santa Monica, Calif.: RAND, 1999).

War, the United States minimized Saudi involvement, despite Saudi Arabia's large inventory of advanced U.S. weaponry. During the war in Afghanistan, the United States minimized involvement by its NATO allies. The United States would be no more interested in cooperating with Taiwan in the event of a U.S.-China war in the Taiwan Strait.

U.S. participation in a Taiwan missile defense program would be especially misguided. First, Taiwan is too close to the mainland, so that the launch-to-target time of Chinese DF-15 missiles does not allow sufficient opportunity for missile interceptors to target and intercept a Chinese missile. The exception would be a naval-based system in which a U.S. ship was deployed in the Taiwan Strait, dangerously close to China's coast and its missiles. Second, even if U.S. missile defense could respond to Chinese offensive capabilities, it would also affect China's ability to deter a Taiwan declaration of independence. Given the low cost of DF-15s, especially compared to the cost of missile defense systems, China can engage in an arms race rather than allow U.S. missile defense to undermine its deterrent capability. These issues in part explain Taiwan's recent reluctance to continue acquisition of the Patriot III missile defense system.[96]

Nor does deterrence significantly benefit from the Bush administration's improved diplomatic treatment of Taiwan officials. By enhancing Taiwan's diplomatic stature, the United States signals its security commitment to Taiwan. But by the end of the Clinton administration, the U.S. commitment to defend Taiwan was stronger than at any time since the late 1960s, and China possessed great respect for U.S. resolve. Since then, U.S. success in waging war in Afghanistan with minimal casualties has heightened Chinese perception of U.S. resolve, so that there is now even less imperative to use U.S.-Taiwan diplomatic relations to signal U.S. resolve.

Whereas recent U.S. policy toward Taiwan does not enhance deterrence, it can significantly undermine U.S.-China cooperation. By moving toward integrated defense ties with Taiwan, the United States is extending its military power to China's coastal frontiers. At some point Chinese leaders will resist U.S. strategic presence on Taiwan, causing heightened bilateral tension and reduced Chinese cooperation on a range of issues, including proliferation and

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96. James. M. Lindsay and Michael E. O'Hanlon, *Defending America: The Case for Limited National Missile Defense* (Washington, D.C.: Brookings, 2001), pp. 123–130. On Taiwan's diminished interest in missile defense, see James Mulvenon, *Missile Defenses and the Taiwan Scenario,* Report No. 44 (Washington, D.C.: Henry L. Stimson Center, 2002); and Lu Te-yun, "Taiwan and the United States Are Both Responsible for Their Different Perceptions and Poor Communication," *Lien-ho Pao,* July 27, 2002, in FBIS, July 29, 2002.

stability in Central Asia and the Middle East and on the Korean Peninsula. Increased arms sales to Taiwan, consolidated defense cooperation, and closer U.S.-Taiwan diplomatic ties suggest greater U.S. support for formal Taiwan independence, similarly challenging a vital PRC interest. The Taiwan leadership talks of a "democratic alliance" between Taiwan and the United States. China has taken notice. Its military analysts argue that the United States seeks a "quasi-military alliance" with Taiwan to take advantage of its "special military value" and that the United States and Taiwan are moving toward joint exercises and a "coalition warfare" capability.[97]

Rather than stress the military instruments of its Taiwan diplomacy and needlessly undermine regional stability, the United States can use its military advantages to support a peaceful resolution of the Taiwan conflict. As China's modernization continues and economic and social integration between the mainland and Taiwan deepens, both sides may exercise greater caution and the impediments to a compromise solution will likely decrease. By the end of 2001, more than 300,000 Taiwanese were living in Shanghai and more than 30,000 Taiwan companies had manufacturing facilities there. In 2002, a Taiwan bank opened its first representative office in China, Chinese and Taiwanese state-owned energy corporations developed a joint venture for oil exploration, and Chinese firms began recruiting Taiwan financial and technology experts. There has also been progress toward establishing direct trade across the strait.[98] Over the next decade, the cross-strait relationship will likely become more amenable to a diplomatic solution.

The challenge for the United States is to maintain its deterrence of the Chinese use of force against Taiwan, thus protecting Taiwan's security, democracy, and prosperity, while not contesting Chinese security interests. During the first ten years of the post–Cold War era, the United States increased its superiority over China in naval power and high-technology weaponry, enhanced its forward presence through greater access to military facilities in Singapore and the Philippines, and consolidated its alliance with Japan. Simultaneously, it ac-

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97. "Mei Tai Junshi Hezuo Shengji Pohuai Yatai Heping Wending" [U.S.-Taiwan military cooperation escalates, damaging the peace and stability of the Asia-Pacific], *Jiefang Junbao,* May 20, 2002, p. 9; Wang, "Taijun "Hanguang" Yanxi you Sha Xin Huayang; and *Shijie Zhishi,* July 1, 2002, in FBIS, July 17, 2002. On Taiwan's assessment, see Maubo Chang, China News Agency, June 4, 2002, in FBIS, June 5, 2002.

98. Mark Landler, "Money Might Not Be Able to Buy Political Ties, Either," *New York Times,* December 9, 2001, p. 4; "Taiwan and China Ink Landmark Oil Exploration Pact," Reuters, May 16, 2002; "Mainland to Hire Hi-Tech, Financial Experts from Taiwan," Agence France-Presse, May 24, 2002; "Taiwan Leader Urged to Honour 'Direct Links' Pledge, " *China Daily,* May 22, 2002; and "Taiwan Govt to Submit Bill on Direct China Links," Associated Press, June 4, 2002.

knowledged PRC interests in Taiwan, pursued limited diplomatic and military ties with Taipei, and cautioned Taiwan from moving toward independence. Given long-term U.S. escalation dominance and China's perception of U.S. resolve, this could be U.S. policy for the next ten years and beyond. Rather than needlessly challenge Chinese security, the United States should use its strategic advantage to expand cooperation with China and maintain the security of Taiwan.